Secretariat of the Pacific Community

2nd SPC Heads of Fisheries Meeting
(Noumea, New Caledonia, 23–27 July 2001)

Information Paper 12

Original: English

FAO Programme on Fishermen's Safety at Sea

Programme outline on fishermen's safety at sea

Introduction

Fishing at sea is probably the most dangerous occupation in the world. Data from those countries who collect accurate accounts show that occupational fatalities in their fishing industries far exceed their national average. For example, in USA the fatality rate at an average of 160 per 100,000 is 25 - 30 times the national average[1]; in Australia, the fatality rate for fishermen is 143 per 100 000 compared with 8.1 per 100 000 nationally[2]; following a recent spate of accidents in South Africa, the casualty rate has risen from 62 deaths per 100 000 fishermen in 1995 to 585 deaths per 100 000[3] in 1999 ; in 1995/96 in the UK, there were 77 fatal injuries per 100,000 fishermen as opposed to 23.2 per 100,000 employees in the mining and quarrying industry (the next highest category in that year) without evidence of the improvements that are apparent in most other industries over the past six years[4]. In Samoa, casualty rates have dropped dramatically from 850 per 100,000 fishermen in 1997 to 350 per 100,000 in 1998 to 150 per 100,000 in 1999 following the introduction of safety regulations for vessels, equipment and training. However, very few countries are able to supply this data; although the members of IMO decided that the collection and analysis of statistical information on casualties, including fishing vessels and fishermen, should be prepared on an annual basis[5], they acknowledged in 1999 that there has been a very limited response[6].

FAO estimates that of the 36 million engaged in fishing and fish-farming, roughly 15 million fishers are employed aboard decked and undecked fishing vessels operating in marine capture fisheries, of whom more than 90 per cent are working on vessels less than 24 metres in length. It seems plausible that the fatality rate in countries for which information is not available might be higher than those mentioned above. Thus, the number of global fatalities might be considerably higher than the figure of 24 000 deaths world wide per year estimated by ILO.

The consequences of loss of life fall heavily on the dependents. In developing countries, these consequences can be devastating: widows have a low social standing, there is no welfare state to support the family and with lack of alternative sources of income, the widow and children may face destitution.

Background and justification for assistance

The evolution of the fishing industry over the centuries has been accompanied by the development of skills and experience in vessel design, construction and equipment, as well as in fishing operations and safety at sea. Until the middle of the last century, these developments were almost invariably gradual and steady, largely unaffected by external influences. Technical developments from 1945 to 1970 drastically accelerated this evolutionary process; widespread use of outboard engines, the use of hydraulics for hauling gear and catches, synthetic nets and lines, fish finding electronics and refrigeration equipment led to massive leaps forward in productivity and profitability. Under the free-for-all access to fisheries together with the market's insatiable demand for fish, the harvesting capacity of the fleets was bound sooner or later to reach or even exceed the maximum yield of the fishable stocks.

Overexploitation of coastal resources and advances in vessel and fishing technologies are probably the major underlying factors which have negated the results of parallel efforts to improve safety at sea. Excessive fishing effort; increased competition; reduced profitability; economies in vessel maintenance, equipment and manpower; fatigue; recklessness; fisheries management measures (which do not take sufficient account of the human element or fishermen safety into consideration); diversified fishing operations unaccompanied by training, traditional experience and skills; these are some of the factors which have resulted in fishing being the most dangerous occupation in the world.

Governments have recognized that they need to be better aware of the state of their fisheries, to implement effective policies to prevent resource depletion and the wastage of fisheries inputs and, increasingly, to facilitate stock rehabilitation. While the extent and effect of fisheries management

[1] USA Bureau of Labour Statistics, 1998
[2] ILO Yearbook of Labour Statistics, 1998
[3] Fish Safe Foundation, South Africa, 2000
[4] UK Government http://www.shipping.detr.gov.uk/fvs/index.htm
[5] IMO MSC/Circ.539/Add.2 and FSI 6/6/1
[6] IMO FSI 7/6/2

measures put in place around the world vary widely, they tend to be more concerned with the long-term conservation and sustainable use of fisheries resources than with the welfare of those who harvest them.

Maritime administrations on the other hand, have safety of seafarers as one of their overriding concerns. However, they frequently have difficulty in addressing the safety aspects of the fishing industry adequately because the nature of fishing operations is so different from the cargo handling and transport activities encountered in merchant shipping. Fishing vessels are excluded from the vast majority of provisions of international shipping conventions, and to this day, there is no international instrument in force dealing with the safety of fishing vessels or the training of their crews. The effect of this dilemma is that in many countries, the issue of fishing vessel safety is falling between the fisheries and maritime administrations.

The Role of FAO

The International Maritime Organization (IMO), the International Labour Organization (ILO) and the Food and Agriculture Organization (FAO) are the three specialized agencies of the United Nations system that play a role in fishermen's safety at sea. IMO is the agency responsible for improving maritime safety and preventing pollution from ships; the adoption of maritime legislation is still IMO's best-known responsibility. ILO formulates international labour standards in the form of Conventions and Recommendations, setting minimum standards of basic labour rights. It also promotes the development of independent employers' and workers' organizations and provides training and advisory services to those organizations. ILO has adopted seven instruments specifically applying to fishermen: five conventions and two recommendations. These instruments cover the issues of minimum age, medical examination, articles of agreement, competency certificates, accommodation, hours of work and vocational training.

By virtue of their working methods, the results of IMO and ILO tend to have little impact on the safety of artisanal and small-scale fishermen. Most of the recommendations and conventions are aimed at large vessels, primarily the merchant fleet on international voyages. Some conventions explicitly exempt fishing vessels, and most do not apply to vessels under 24m thus leaving out the majority of fishing vessels and transport boats in the developing countries. The average size of decked vessels in 1995 was about 20GT. Those larger than 100GT (roughly equivalent to longer than 24m) amounted to about 37,000 or just about 1% of the entire world fishing fleet of both decked and undecked vessels.

FAO has the mandate to raise levels of nutrition by improving productivity and distribution of food, and to raise the standards of living and better the conditions of rural populations. On average, FAO has some 1,800 field projects operating at any one time, and since its inception, has implemented hundreds of fisheries projects in the field directly related to the establishment of fisheries training institutions, improving the quality of design, construction and equipment of fishing vessels, and above all, working directly with fishing communities. It is the contexts of artisanal fisheries that are especially problematical for the promotion of responsible fisheries operations, and in which sea safety regimes are weakest. Fishing fleets tend to be inadequately registered and consist mainly of small and simple vessels. Units are mostly unmotorised and poorly equipped for purposes of navigation, communication and safety. Their crew tend to have little or no training in maritime safety. Moreover, national fisheries and maritime authorities are rarely able to maintain effective search and rescue services. Fishing communities are often dispersed, there are few harbour facilities, and existing institutional arrangements and legal frameworks are lacking or ineffective. In the face of difficult logistical conditions, fisheries and maritime authorities generally must contend with serious budget impediments and shortages of qualified personnel.

In 1995, FAO completed the Code of Conduct for Responsible Fisheries, which encompasses the main elements of the various international conventions and legislation concerning fisheries and related environmental issues. The Code contains many references to the obligations of States concerning safety at sea, and in particular, to safety requirements for fishing vessels, working and living conditions on fishing vessels, health and safety standards, education and training programmes and flag and port state control (Articles 6.17, 8.1.5, 8.18, 8.2.5, 8.3.2 and 8.4.1). Notwithstanding these obligations, loss of life amongst fishing vessel crews continues to increase, and while there is no lack of regulations and administrative guidelines at the international level, they are rarely regulated or implemented effectively at national level.

Although the basic problems of safety at sea are common to the many developing countries, the local conditions and complexity of the problems vary considerably. Therefore safety measures need to be tailored specifically for each country, preferably in cooperation between legislators, vessel-owners, fishermen and other stake-holders. FAO has the experience and expertise to provide the required guidance and advice not least as a result of its long tradition of co-operation with local people in developing countries from the community level to the highest authorities in civil service and government. These local networks and the knowledge of local conditions in different developing countries and regions are of supreme importance, and should be regarded as a valuable resource that has been built up through the efforts of FAO over more than half a century.

Role of the Fisheries and Marine Institute

The Fisheries and Marine Institute of Memorial University of Newfoundland (Marine Institute) is North America's most comprehensive institute dedicated to education, training, and industrial support in oceans industries. MI has played an integral role in the training and technological development of East Coast fisheries for the past four decades. As a world class training center, the Institute has used innovative delivery systems including extensive community based training and industry specific instruction to support the changing needs of fishers. The Marine Institute is well recognised both provincially and nationally for its extensive involvement in the delivery of community-based education and training. Such outreach training represents a full 65 per cent of activities of the Marine Institute's School of Fisheries. In the last year alone more than 1300 Newfoundlanders benefited from community-based training programs. Training includes a variety of programs such as safety at sea, fishing masters, marine emergency duties, masters limited, as well as other courses in the harvesting and processing areas. The Marine Institute also works in partnership with training institutions around Canada to deliver courses in British Columbia, the Maritimes, Nunavut and Nunavik.

The Canada's east coast fishery has undergone considerable change during the later half of the 20th century. The Newfoundland inshore fishery has traditionally been a small boat fishery and each successive decade has brought an increase in fishing effort and mechanization in both the inshore and offshore sectors. The biological collapse and the subsequent closure of most traditional groundfish stocks in the early 1990's resulted in fishers immediately turning to more distant waters and focussed on the harvesting of lucrative shellfish stocks such as crab and shrimp. However, these new fisheries did not develop without a price. Canadian Coast Guard statistics reveal substantial increases of greater than 50% in accident and fatality rates as well as an increase in vessel founderings. These findings occurred during the late 1990's at a time when the industry actually experienced a dramatic reduction in the number of active vessels. Currently in Canada there is a nation wide consciousness of the increasing dangers associated with fishing. The Canadian Marine Advisory Council has set up a separate sub-committee to investigate and improve safety standards in the fishing industry and which many agree is a first step in addressing the looming crisis in Canada's East Coast Fisheries.

As a result of the current safety needs, the Marine Institute is developing and delivering industry specific occupational health and safety courses to meet the needs of both small and large vessel fisheries. The Institute has taken a leadership role with these issues and is currently working in a participatory manner with various industry stakeholders to create a safer, more professional working environment for fishers.

The international activities at the Marine Institute are led by MI International, a dedicated professional unit with over 15 years experience managing and implementing international development projects focusing on fisheries and sustainable aquatic resource utilisation. Through MI International the Marine Institute has been extensively engaged in relevant projects including safety at sea for fishers, community-based training programmes and participatory development. This has involved more than 60 projects in over 30 countries including India, Sri Lanka, Maldives, Indonesia, Thailand, Burma, Malaysia, Singapore, Seychelles, Tanzania, Malawi, Vietnam, Cambodia, Philippines, Yemen, Gaza, St. Vincent and the Grenadines, Anguilla, Dominica, Guyana, and several South Pacific states. Funding sources have included government agencies, private industry, and development agencies such as CIDA, ADB, and the World Bank.

Possible solutions

There are a number of areas where improvements can be made: more effective and holistic fisheries management, safety regulation and enforcement; increased collaboration between fishermen,

fishermen's organisations and government; provision and analysis of data identifying the cause of accident; education and training of trainers, extensionists, fishermen and inspectors.

Target group

The beneficiaries of the assistance will be the fishermen and their families who depend on fisheries for a livelihood, and who will benefit from enhanced sea safety systems, and from training and awareness programmes. Industry representatives, fishworker organisations, and other stakeholders and relevant NGO's will also benefit under the programme through enhancement of their capabilities to assist in the implementation of the Code. The ultimate beneficiaries will be future generations who will benefit from responsible fishing operations that will contribute to fisheries sustainability over the long term.

However, the programme recognises that sustainable results will not be achievable without political will, motivation and commitment. Thus the initial target beneficiaries will be the fisheries policy-makers and managers in developing countries and in the regional fisheries bodies whose capabilities will have been enhanced to make use of improved sea safety information and administrative and legal frameworks within which to carry out their functions.

Rationale

The key and logical strategies to sustainable results of such a programme are deemed to lie in three phases:

- Political support and commitment
- Highly participatory and progressive programme design
- Implementation and evaluation of activities by the beneficiaries, corresponding to their own needs and aspirations

Phase 1: Awareness raising and adoption of strategy

Often too little attention is given to generating sufficient political support and lasting commitment for effecting necessary social, technological, legal, and institutional changes needed to improve working conditions within the fisheries sector. It will be important to raise levels of awareness for sea safety issues amongst relevant senior government decision-makers. Phase 1 will achieve this through a workshop which will include efforts to raise awareness of the problem and of the measures (and their implications), and to promote preparation and adoption of a Fisheries Management Policy Statement (or Strategy) that includes provision for Safety-at-Sea concerns.

The Workshop will raise awareness that (i) a significant and growing problem exists and (ii) that the problem is not insurmountable ie that procedures and methodologies for improving sea safety have been practised in some countries with demonstrably effective results. These might include effective and holistic fisheries management, mandatory requirements, regulatory frameworks, community involvement, training and education, prevention v survival strategies, insurance, mutuals, etc

Phase 2: Programme formulation through consultative and participatory management constraints and needs analysis.

Following the principles and guidelines of the Code of Conduct, the Programme will use a "process-approach", i.e. the beneficiaries will be encouraged, in a participatory and progressive manner, to identify (and eventually in Phase III to implement and evaluate) activities which correspond to their own needs and aspirations. With this active participation of the stakeholders themselves, their interest and ability to contribute to effective development of sea safety programmes will ensure a sense of "ownership" in the outputs, leading to greater effect and impact of the Programme in which it is envisaged that there would be many opportunities to establish close collaboration with other partner organisations during its implementation.

Initial situation appraisals would involve policy makers, administrations, industry representatives, fisher organizations, and other stakeholders as well as relevant fisheries authorities. External factors such as macro-economic and social influences and the impacts of other users of the coastal zone will be examined along with specific fishery sector features.

Activity 1	Provide technical guidance as needed for participatory appraisals of major constraints to responsible fisheries operations in relation to sea safety issues, to be undertaken by relevant fisheries and maritime agencies, industry representatives, fisher organizations, and other stakeholders.
Activity 2	In concert with the above, provide technical guidance as needed for participatory appraisals to identify capacity and skill development needs for

government authorities, fisheries managers, and decision makers for promotion of responsible fisheries operations practices and their applicability.

Activity 3 Based on the above activities, determine constraint intervention priorities and develop appropriate plans for provision of advice, training, and preparation of a major follow-on remedial programme.

Activity 4 On the basis of the three above mentioned activities, formulate and finalise a programme proposal.

Phase 3: implementation of programme as formulated above

Given the need for a flexible approach in implementing the programme with a minimum of prescription from the outset, the nature of activities can only be scheduled in any detail following phases I and II as above. Indeed, given the importance to the process approach within the programme, it is understood that the workplan must be flexible if it to remain relevant. **For illustrative purposes**, the types of activity envisaged in setting up sea safety programmes at national level might include for example:

Voluntary and community organisations playing an active role in fisher safety through co-management arrangements that include mechanisms of revenue generation to support local sea safety assurance systems on a sustainable basis, as for example through allocation of dedicated portions of vessel license fee collections.

Introducing more effective and holistic fisheries management measures which recognise the linkages between the sustainable utilisation of resources and their effects on sea safety

Development and implementation of a set of standards for the safety construction of small fishing vessels, equipment for small fishing vessels and safety requirements.

Draft legal text setting the requirements in fisheries regulations for crew certification, minimum standards for the design and construction for small fishing vessels and for safety equipment.

Training workshops held for fishing vessel inspectors and boatbuilders.

National and regional seminars for senior officers concerned with the administration of fishing vessel inspection units.

Identification of the needs of the private sector (boat building) for practical and theoretical training in the long and short term.

An analysis of the financial and economic feasibility of fishers to invest in the improved vessels, either individually or in groups through their associations, as applicable, including an analysis of the availability and conditions of credit.