

Safety at sea

SOS**A recent one-day consultation discussed sea rescue systems for fishermen of Kerala**

A workshop on “Sea Rescue Systems for Fishermen” was organized by the South Indian Federation of Fishermen Societies (SIFFS) at the Institute of Management in Government (IMG), Trivandrum, Kerala, India on 18 June 2002.

Inaugurating the workshop, P C George, former Fisheries Development Commissioner, Government of India, stressed the importance of matching technology with needs and affordability. He said that the protection of life and property and ensuring safety at the workplace is the responsibility of the government. However, various practical, financial and organizational problems make this objective difficult to achieve. Though technologies are available in other countries, it is not easy to use them for the kind of small motorized boats that dominate the Kerala fisheries. Various adaptations are required to suit local needs.

Raveendran Nair, Deputy Director of Fisheries for the Marine Enforcement Division (MED), made a detailed presentation on the current sea rescue methods and operations of the Kerala State government. In the last five years since 1997, 418 accidents were reported, in which 72 fishermen died and another 22 were missing. The rescue operations of the MED, in co-operation with other agencies and the fishermen themselves, led to the rescue of 1,150 fishermen. Nair, however, stressed that many accidents were non-fatal, and the rescue operations conducted by the local communities were not reported to the MED.

According to Nair, the existing sea rescue system works under the co-ordination of the District Collector and involves nine departments, namely, Revenue,

Fisheries, Ports, Police, Navy, Coast Guard, Meteorology, Fire Force and Health. Kerala has five fisheries stations at Vizhinjam, Neendakara, Vypeen, Beypore and Kannur, from where sea rescue operations are launched. The five speedboats that were being used for sea rescue operations have been scrapped and put up for auction as they were found to be unsatisfactory. At present, the MED has hired 11 mechanized boats, over 43 ft in length, which are stationed in different locations.

The MED’s major initiative has been to develop a Fisheries Information Network (FIN) based on the use of Very High Frequency (VHF) radio sets. The State government has established base stations at places like Vizhinjam on the coast, and set up hill-top repeater stations at places like Ponmudi. The current coverage extends from Vypeen in the north to Vizhinjam in the south, and 200 handsets have been distributed to selected fishermen on an experimental basis. Feedback indicates that the system is quite useful and has a range of 40-50 km in the sea. Fishermen are also able to use the walkie-talkie to communicate important messages to the shore, to enquire about fish prices, and so on. The government has already sanctioned Rs4.3 mn to extend the FIN to the northern parts of the State, which will mean setting up hill-top repeater stations at Ezhimalai and Palakkad.

Technological options

Krishna Warriar, Joint Director, Electronic Research and Development Centre (ER&DC), Department of Electronics, Government of India, explained the various technological options available for fishing boats to send distress signals and for shore-based systems that are needed for picking up the signals and

locating the fishing boats at sea. He elaborated on a low-cost radio beacon that had been developed by the ER&DC some years back.

However, the project could not be completed due to the failure to develop a low-cost direction finding equipment to be used on the rescue vessel to locate the boat in distress. The change in government policies that led to the closure of the Department of Rural Electronics in the ER&DC led to the premature closure of the project. Warriar also felt that since technology options have now widened due to the easy availability of imported equipment, a fresh review of all options should be considered. He stressed that multifunctional devices will be more useful and better accepted among fishermen than the simple radio beacon. Warriar suggested combining a radio beacon with voice communication facility or a Global Positioning System (GPS).

Local fishermen, who had experience using the VHF handsets as well as mobile phones, shared their experience at the seminar. Fishermen using nets found the range of the communication adequate for their needs, but those who are involved in hook-and-line operations in places like Vizhinjam, Poonthura and Marianad, found the range grossly inadequate. In general, it was accepted that the VHF communication system would be suitable

for most fishing grounds in Kerala and needs to be further promoted. The problem of non-functioning for a large number of handsets distributed by the government was raised. As the handsets are owned by the government and given to the fishermen on a nominal rental basis, it is up to the government to maintain them.

Unfortunately, no system is in place to ensure prompt repairs and maintenance of the handsets. This has led to a majority of them getting shelved. It was, therefore, recommended that the government seriously move towards a policy of allowing handsets to be owned by individual fishermen. This would ensure that only those who are in genuine need would acquire the handsets; it would also ensure that they are maintained properly. The private companies distributing the handsets would have to create a proper after-sales network. The government needs to promote such a scheme by providing subsidies for fishermen who wish to acquire handsets.

Waterproof handsets

It was also pointed out that the widespread use of walkie-talkies led to airways getting jammed, in the absence of discipline and restraint in the use of the handsets. It was also pointed out that the existing handsets are not waterproof; only waterproof handsets will be really useful in marine operations.

What's at stake

Each year, the southwest monsoon is a testing time for the fisheries sector of Kerala. The trawl ban and coastal erosion are two regular problems. To these is added the perennial problem of loss of lives at sea and the difficulties in sea rescue. No year goes by without some fishermen and boats going missing and the resultant hue and cry about the failure of the government machinery. However, we believe that it is not a simple matter of government apathy. The problem appears to be one of lack of appropriate technologies, systems and procedures.

The problems of sea rescue can be summed up under the following three points:

1. There is no mechanism for immediate information to reach the shore when an accident occurs at sea. Given the uncertainties in fishing, a long period is allowed to elapse before the families concerned can even be sure that fishermen are missing at sea. By the time the alarm is raised it may be too late.
2. The actual location of the boat or fishermen is difficult to ascertain and it is like searching

for a needle in a haystack. Without precise information, it needs a lot of luck to locate the fishermen or boats in the vast sea, especially in conditions of lashing rains and high waves.

3. The rescue system is also weak with so-called 'speedboats' that are not suitable for rough sea conditions and whose maintenance is an expensive affair. Given the government's normal procedures for getting some equipment repaired, the problem is further aggravated. Equally problematic is that government staff on board rescue vessels may be unsuitable for the risky operation of sea rescue.

We, therefore, need a totally new approach and system for sea rescue with appropriate technologies, systems and procedures. Some of the questions that need to be explored are:

1. Which categories of boats are most vulnerable? Which centres, areas and regions are more vulnerable?
2. What are the technological options available for communication and signalling in the case

The workshop participants were quite critical of the sea rescue systems. They narrated a number of experiences where the rescue boats were not pressed into service promptly due to lack of fuel and poor maintenance of vessels as well as unwillingness and lack of capability on the part of the staff. It was suggested that greater community control of the sea rescue system could ensure its proper functioning.

Cleetus, a third officer in the merchant navy, expressed strong reservations about the various approaches that are currently in vogue with respect to sea rescue systems for fishermen. He felt that sea rescue systems should be linked to the marine rescue co-ordination system that exists for larger vessels. He said that the rescue co-ordination centres are currently functioning at Mumbai and Visakhapatnam. There are no such centres further south. He felt that lobbying was necessary at the level of the Central government to bring a sea rescue co-ordination centre to Kochi and Tuticorin. Once the fishing boats are

covered under the system, the passage of information will be quick and the sea rescue system prompt. All ships at sea can then be easily identified and those in the vicinity of the distressed fishing boat can be directed to conduct prompt rescue operations. Cleetus also felt that the rescue vessels need to be much larger, better designed and equipped. He proposed vessels about 25m long for rescue operations, as the small mechanized boats currently used are incapable of operating under adverse sea conditions.

After wide-ranging discussions among the participants, who included government officials, the following recommendations were accepted:

1. The government should encourage fishermen to acquire VHF handsets on an individual basis by providing adequate subsidies.
2. The handsets for marine operations need to be well selected or else the existing handsets should be made waterproof.

of an emergency, on small boats that are used by artisanal fishermen? Are the mechanized boats properly equipped?

3. What are the investments needed for such technologies to be used? What are the investments in common facilities and what are the investments on individual vessels? Can the State and the fishermen afford these investments?
4. The Fisheries Department is already experimenting with radio communication at Vizhinjam. What has been the experience so far? Is the range of the equipment adequate, given the long distances motorized boats go nowadays? Is the technology and its economics suited for universal use on all artisanal boats in Kerala?
5. SIFFS and ER&DC had experimented 10 years ago with a low-cost radio beacon and tracking system. This was given up due to lack of funding. Is this idea still relevant? Has easy access to imported technology and new technologies made this obsolete?
6. What about satellite-based surveillance and rescue systems? Are they affordable?


7. What are the limitations of the current sea rescue system of the government? Are their vessels suitable? Are their staff capable of what is expected of them? What are the problems of information, co-ordination and decision-making? Is the amount spent on the current system worth it?

8. What kinds of vessels are suited for sea rescue? Is it feasible to hand over the rescue operations to fishermen themselves? If so, how would such a system look like?

Perhaps one can argue that fishermen can avoid some of the accidents if they take proper precautions. The motorized boats are no more interested in taking along sails, just for emergency situations. Often the problem is engine failure and this can be avoided by proper preventive maintenance. The issue of accident prevention or avoidance is an important issue and SIFFS is itself working on some of these issues and will conduct a training programme for fishermen soon.

This background note was prepared for the workshop by V. Vivekandan, Chief Executive, SIFFS.

3. For fishing boats that go beyond the 40km range, especially for hook-and-line fishing, the technological options need to be carefully reviewed and different schemes developed.
4. The State government needs to discuss with various Central agencies, including the Indian Space Research Organization (ISRO), the possibility of bringing the small fishing boats of Kerala under the sea rescue co-ordination centres.
5. There should be a complete revamp of the existing system of sea rescue based on the boats managed by the Fisheries Department. A proper review of the type of boats that are required, their staffing and control need to be done before a new system is put in place. Subsequently, the scope for community participation and control over the rescue vessels needs to be looked into.

6. It was recommended that SIFFS should set up a small study group to go into all the issues raised at the workshop and to develop greater clarity on the various technological and organizational options that are available.
7. NGOs like SIFFS and the government need to build greater awareness among the fishermen about the various ways of reducing accidents and also the impact of such accidents. 

This report is based on a summary by V. Vivekanandan (vivek@siffs.org), Chief Executive, South Indian Federation of Fishermen Societies (SIFFS)