Web-based information

Safely in the net

The World Wide Web on the Internet is a useful source of information on various issues dealing with safety at sea

Commercial fishing is one of the most hazardous occupations in the world, as borne out by the contents of almost all the websites on the Internet relating to fisheries and occupational safety. In the US, among the most advanced nations in terms of technology and safety, commercial fishing is the single most dangerous profession, according to (http://www.cdc.gov/niosh/97163_58. html). The death rate for commercial fishermen in the US in 1998 was 179 per 100,000 workers. This is 16 times higher than the rate for protective service occupations such as fire fighting and policing, and almost 8 times higher than the death rate for persons operating motor vehicles on land for a living.

In the UK, according to http://www.shipping.detr.gov.uk/fvs/ during 1995-96 there were 77 fatal injuries per 100,000 fishermen, compared to 23.2 per 100,000 employees in the mining and quarrying industry, the next highest category reported that year. There have been no improvements over the past six years. In 1992, from a fleet of 10,953 vessels, 494 fishing vessel accidents were reported. Five years later, in 1997, the accident figure was 485, from a significantly reduced fleet of 7,779 vessels. These statistics do not include personal accidents to fishermen while at sea: it is believed that these are under-reported.

In the developed nations, improvements in safety awareness and legislation, along with satellite and new communication technologies, have led to a decrease in the number of accidents and loss of life at sea. With technological advances, the search-and-rescue operations are also getting more accurate and effective.

In temperate countries, the fishermen at greatest risk of death are those who operate aboard badly maintained or unstable vessels, and those who have insufficient training in onboard safety, especially regarding cold-water survival techniques and the use of lifesaving equipment. The National Institute of Occupational Safety (NIOSH http://www.cdc.gov/niosh/pubs.html) reports that prolonged work hours, adverse weather, and other environmental conditions are important factors contributing to the dangerous nature of fishing. Workers aboard processor vessels also face substantial workplace hazards such as exposure to hazardous equipment and extended work hours.

In most of Asia, the sea is rough during the monsoons, and the small fishing vessels usually do not carry sufficient lifesaving or communication equipment. Whatever equipment is carried on board generally does not meet the basic minimum requirements needed in times of crisis. For many of the developing countries, reliable figures for accidents and casualties are not available. This glaring paucity of reliable data on safety of fishermen at sea is reflected on the Internet too.

In 1977, the first international convention dealing with the safety of fishing vessels, the Torremolinos Convention of the International Maritime Organization (IMO-http://www.imo.org), was signed by 45 countries. The Convention sets out a safety regime for fishing vessels over 24 m in length. However, since not enough signatories ratified the convention, it never entered into force.

Significantly amended

In 1993, through a Protocol, the Convention was significantly amended to raise consensus among the IMO member States. The European Commission

Directive, through its Council Directive 97/70/EC, which came into force on 1 January 1999, harmonizes the safety standards in the EU region for fishing vessels over 24 m long. It must be noted, however, that most of the world's fishermen operate vessels which are less than 24 m in length.

The Marine Coast Guard Agency of the UK has put up a very useful document discussing and analyzing the Directive at http://www.mcagency.org.uk/consult/fv99rial.pdf.

One of the most comprehensive websites on marine boating safety is that of the US Coast Guard at http://www.uscg.mil. The news page of the US Coast Guard's Office of Boating Safety claims that every day it saves 16 lives, assists another 361 people and saves $2.5 million in property. The Canadian Coast Guard's site—http://www.ccg-gcc.gc.ca—is as comprehensive, and its national newsletter can be accessed at http://www.ccg-gcc.gc.ca/echo/111296/111296_1e.htm. Both the Canadian and US sites lack sufficient data on safety of fishermen at sea, as recreational boating safety gets more attention than fishing vessel safety. The US Coast Guard's Fishing Vessel Casualty Task Force Report published in April 1999 is a well-produced report on safety of fishing vessels. It is downloadable in zipped Word 97, HTML as well as PDF formats from http://www.uscg.mil/hq/g-m/moa/docs/fishing.htm/. For hard copies, send an email to fldr-G-MOA@comdt.uscg.mil/ or write to the Commandant (G-MOA), United States Coast Guard Headquarters, 2100 2nd St. SW, Washington, DC 20593-0001.

The website of the Department of the Environment, Transport and the Regions (DETR), UK (http://www.shipping.detr.gov.uk/fvs/) carries a brief of a consultation paper on fishing vessel safety. The Hawaii Commercial Fishing Vessel Casualty Statistics for 1993-1997, published in May 1999, can be found at http://www.aloha.net/~msohono/fishvsl/fishrpt.pdf.

Various private firms offer numerous online boating safety courses on the Internet. These courses are approved by the US National Association of Boating Law Administration and recognized by the US Coast Guard. One such site is http://www.boatus.com. Apart from receiving all study materials, on successful completion of the course (with a score of 80 per cent or better), you can request a certificate to be sent to you or you can print out the certificate yourself!

Risks of divers

Another topic under safety at sea is the safety and health risks of divers. The risks facing scallop and abalone divers from

Warding off evil

Since prehistory, people have employed protective devices—however ephemeral they may have appeared—to give them an edge over the spirits of the sea. Vessels from Christian lands carry offerings to the Virgin Mary or to any of several saints; individual sailors wear medals or lucky charms. Micronesians place ornaments in the bows of their canoes—they may be no more than decorated planks of wood—to ward off bad weather, to guide them across the trackless ocean, and to defend them against their enemies. Inuit hunters sew amulets in their clothing and protect precious charms with waterproof pouches.

There are things not to do, as well, to avoid failure or calamity: Don't carry an umbrella aboard a boat; don't change the name of a vessel; don't open a hatch while at sea. In Scotland and Ireland, don't wear clothes dyed with colors made from sea plants, for the sea will want to reclaim them. In Newfoundland, don't keep the first fish of the day. Spit on it and throw it back, and you will be assured of good fishing.

I remember being in the Turks and Caicos Islands years ago, and finding a tiny 18th-century figurine amid some shipwreck debris. I wanted to bring it home, but our captain's wife, a Bermudan, insisted that I throw it overboard before we set sail. "It sank one ship," she said, "and I won't be party to its sinking another."

—Quote from Peter Benchley at http://seawifs.gsfc.nasa.gov/OCEAN_PLANET/HTML/ocean_planet_book_seafaring_intro.html

decompression are the same as those that face other deep-sea divers. Divers with limb bend decompression sickness have been found to be more prone to bone necrosis in the limbs. Brain lesion is another possible risk associated with decompression sickness. The website at http://www.diversalertnetwork.org/ provides up-to-date information on issues of common concern to the diving community.

The MARIS (MARitime Information Society: http://www.maris.int) initiative of the G8 countries is an ambitious initiative in information technology, which aims, among other things, to develop advanced navigational tools for waterborne transport systems, to ensure safety at sea and to avoid hazards to the environment. The Electronic Chart Display and Information Systems (ECDIS) of MARIS aims to produce electronic navigation chart data in accordance with international standards adopted by the International Maritime Organization (IMO) and the International Hydrographic Organization (http://www.shom.fr/ohi/iho.html). MARIS also aims to provide online weather forecasts, alerts and warnings. These advanced technologies will be used onboard all seagoing vessels, including fishing vessels, and they are expected to improve safety at sea as well as help in search-and-rescue operations. The site http://www.maris.int/proceed/chevr_en.htm carries an article that outlines the possibilities and expectations of the marine fisheries sector from MARIS.

The homepage of the Network of Rescue Coordination Centres is at http://www.rcc-net.org/. It is designed as a forum for aeronautical and maritime search-and-rescue topics. The website at http://www.rcc-net.org/rcc/index.htm/ provides links to the aeronautical and maritime rescue co-ordination centre links of 17 countries. The site at http://www.rcc-net.org/rcc/sarlinks.htm gives links to an assorted list of search-and-rescue links, many of which operate with the assistance of aerospace technology and satellites. A comprehensive list of links to the lifeboat services of the world is at http://www.sea-rescue.de/services.html.

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