Hazards of commercial fishing

The nature of their work exposes commercial fishermen, and their families, to exceptionally high risks of accident and illness. Increased efforts should be made to improve the health and safety record of the world’s fishing industry.

Mortality and morbidity among workers in the fishing industry continue to be unacceptably high. Action is needed at the local, national and global levels in order to bring about general improvements in the health and safety of fishermen.

For various reasons, accidents involving fishing vessels may not be investigated formally. Some vessels are registered under flags of convenience, and crews may not be nationals of the countries of registration. Accidents may occur in jurisdictions other than those of either the flagging countries or the countries of which the crews are nationals. Events occurring in international waters present special problems. Alterations to fishing quotas, the introduction of close seasons, and the prohibition of certain fishing methods can result in vessels putting to sea for extended periods and at inappropriate times. Unnecessary risk-taking may follow, associated with fatigue, stress and dubious working practices.

The long-term effects of employment in the industry on fishermen and their dependents may be severe. Fishermen and their families are often not covered by the usual administrative mechanisms, and consequently even where data exist they may not be readily available for examination and comparison with those relating to other groups of people.

Mortality

A high proportion of the deaths that occur in the fishing industry are preventable. Many deaths result from drowning, associated with incidents of stranding, collision and foundering. Although a correlation between deaths of fishermen and adverse weather conditions might be expected, in the United Kingdom this has been shown not to be the case. Fishermen work all the time in a hostile environment on unstable surfaces, and consequently are always in danger. Occasionally they may even be at risk of asphyxia, caused by poor ventilation and the accumulation of toxic gases from decomposing fish cargoes.

The author is Medical Officer of Health, Community Health Services, Le Bas Centre, St Helier, Jersey JE3 4LA, Channel Islands, United Kingdom.
There are certainly grounds for believing that action could be taken to reduce mortality levels in the industry.

**Morbidity**

Fishermen may be injured in various ways and are commonly affected by gastrointestinal, respiratory and skin diseases. Even when certified unfit, many men continue to go to sea, to the detriment of themselves and their colleagues.

During the period 1986–88, data on 395,241 fisherman-days were collected in respect of 2468 fishermen on 30 Polish vessels. Illness and injury had an incidence of 2835 per 1000 men; the incidences of injury and acute infection were 545 and 537 per 1000 men, respectively; 188 men were put on sick leave, 22 were repatriated and there was one death.

Occupationally determined morbid conditions, including allergic reactions to cuttlefish manifesting as bronchial asthma, dermatitis or conjunctivitis, and contact allergy to iodine, have been described.

Morbidity associated with fishing ranges in severity from very slight to life-threatening. Many fishing communities function far below their potential because of the prevalence of chronic illnesses that could be treated without heavy investment; this is true, for instance, of intestinal parasitism.

**Injuries**

Sting rays and other fish may injure fishermen handling them. Serious injury may result from dangerous working practices, for instance if unwanted fish, carelessly thrown aside, strike crew members. Dangerous objects are sometimes hauled aboard. Exposure to dichlorodiethyl sulfide, ammonia, radioactive fallout, and mustard gas has been reported.

New technologies bring new hazards, such as repetitive strain injury, but it would undoubtedly be possible to reduce accidents without making the industry uneconomical. The adoption of best practice by those not yet using it would significantly diminish the risks of injury and disability in fishermen.

**Ingestion of toxic substances**

There have been many instances of fishermen and their families becoming ill through eating fish or shellfish containing natural toxins. The consumption of puffer fish can have fatal consequences, and paralytic shellfish poisoning has recently been reported.

In the Seychelles, dogtooth tuna were found to contain mercury at up to 4.4 parts per million. No symptoms of mercury poisoning were detected, but some hair samples taken from babies contained high concentrations of the metal. The worst recorded instance of methyl mercury poisoning in fishermen.
and their families was caused by industrial effluent in Minamata Bay, Japan. In the Baltic Sea, fish with a high fat content carry high levels of polychlorinated dibenzo-dioxins and dibenzofurans, which are potentially toxic. Corresponding levels of the compounds occur in people who consume large quantities of the fish.

There is evidence that fishermen and their families may be especially vulnerable to exposure, mainly through ingestion, to a wide range of toxic materials, including radioactive substances in the vicinity of nuclear power stations.

**Life-style**

Long fishing trips may place strains on family life and marriage, thus producing adverse effects on physical and mental health. Personality changes may occur, alcohol and tobacco consumption may increase, and illicit drugs may be used. A survey in north-east Scotland revealed that the frequency of treatment for alcoholism was higher in fishermen than in other people. Comparatively high rates of cirrhosis of the liver occur among fishermen because of chronic overconsumption of alcohol. Drunkenness is a major contributory cause of accidents, including drownings, to fishermen when they go ashore.

***

Information on the health and welfare of fishermen and their families should be collected and presented in such a way as to attract the attention of decision-makers.

On the basis of real examples, good practice should be taught with a view to reducing preventable ill-health to the greatest possible extent. Training programmes should be sensitively handled and interesting to the participants.

Apathy can seriously hinder progress towards reducing the numbers and severity of accidents and improving the health of fishermen and their families. Many fishing communities belong to ethnic minorities and are economically and socially under-privileged, and consequently they need strong support.

International comparisons of health statistics relating to fishing communities are desirable, but the collection and analysis of data are within the capacity of only a limited number of organizations. Research on this scale is likely to encounter national sensibilities; the effort, however, is undoubtedly worth making.