

How fishing quotas affect the bird life of the oceans

The discarding of an increasing proportion of fishing catches in order to meet the requirements of landing quotas is having strange effects on the bird life of the oceans, according to a paper published in *Nature* for 19 February.

Current fishery practices result in vast quantities of waste. Much offal is produced, and an estimated 25–30 million tonnes of undersized fish are discarded. There is evidence that the populations of scavenging seabirds have increased substantially in areas where discards are plentiful. Only a few species in these communities feed on discards and they tend to be large birds, including, in the North Sea, the northern fulmar, northern gannet, great skua, lesser black-backed gull, herring gull and great black-backed gull.

The great skua is at the top of the chain of predators in marine food webs, feeding on discards as well as on sand eels and other sea birds. A decline in the biomass of sand eels is considered to have exacerbated the preying of great skuas on other marine birds whenever the discard rate falls. This phenomenon has resulted, for example, in the reduction of numbers of kittiwakes seen in Shetland



between 1981 and 1995 by 54–85 per cent. There has also been a decline in northern fulmars, attributed to the same phenomenon. It is predicted that the populations of storm petrels, guillemots and puffins will also decline under the assault of the skuas.

It is thought that further dramatic cuts in white fish catches in the North Sea imposed by regulations might exacerbate the problem of great skua predation in the short term and cause further losses of other sea birds. However, if stocks of sand eels can be maintained, it is possible that the skuas might turn their attention away from other birds.

Fishing quotas are one striking example of how dangerous it is to regulate the balance of nature in favour of human requirements.

Policy makers are failing to meet public health challenges

An editorial in *The Lancet* for 6 March laments what it calls “the catastrophic failures of public health”.

Despite the advance of the 19th and 20th centuries, it comments, at the beginning of the 21st century there are frequent reports of an exploding threat to public health which promises to reverse many of the earlier gains. It is not the emergence of new infections, although there are some of these, nor the potential for exposure to chemical or biological weapons, but a simpler problem which promises to become difficult to combat. Simply, people are growing fatter and less physically active. These tendencies render them more prone to lethal chronic diseases such as cardiovascular diseases, diabetes, stroke and cancer.

Alarming figures are that in the US more than 60 per cent of adults are overweight or obese and 39 per cent engage in no physical activity in their leisure time. Even young children are also overweight and less active than they were 10 to 20 years ago. Moreover, there are indications that poor and less well educated individuals are more severely affected by disabilities.

According to *The Lancet*, public health physicians and government policy makers are failing to meet the challenge. “Properly thought out prevention strategies implemented now, especially targeting young adults, will save the resources necessary for treatment of chronic diseases later.” Yet the authorities remain complacent. Suggested measures would include reduction of poverty, and better urban planning for health needs. Cities and towns should be rendered safer places for pedestrians, cyclists and children, so that walking, cycling and playing in the open can be incorporated into daily activity. Adults should undertake physical activities for 30 minutes daily, children for 60 minutes daily.

Regrettably, health ministries are too subservient to professional and commercial interests and unready to tackle the real causes of unhealth. “Our public health leaders must replace prevarication with imagination.” Strong words, but wise ones.

Grim legacy of US army’s chemical weapons

A report published in the March issue of *Chemistry World* draws attention to another issued by the US National Academies’ National Research Council regarding vast stockpiles of chemical weapons in the US. They have been stored in eight military depots for some 50 years, and no one is sure how far they have degraded and whether they constitute a hazard to surrounding communities. The research council has recommended that the US army should improve the monitoring of its chemical stores and investigate how some of the compounds involved may have degraded during prolonged storage.

The materials that raise serious questions include the blistering agent dichlorodimethyl sulphide (mustard gas) and the nerve agents isopropyl methylphosphonofluoride (sarin) and ethyl S-[(diisopropylamino)ethyl] methylphosphonothioate (VX). Although some of these stocks have been disposed of satisfactorily, it is feared that the remainder have reached the stage in which they have

degraded so far as to render them capable of leaking from their containers to contaminate the environment.

Strange though it may seem, there are no records of how long these dangerous substances have been stored and little is known of how rapidly or in what manner they may degrade over the course of time. Critical to the argument is the possible effect of changes in temperature on the compounds. The possibility exists that liberated hydrogen might lead to explosions, with the wide distribution of the materials. The stabilising additives included may deteriorate and so accelerate the decomposition of the toxic agent. According to the report, the only effective way to reduce the risk to the public is to ensure that these munitions are destroyed as swiftly as possible.

It is disturbing to reflect that many developed nations have a similar problem in their own territories. When they talk about weapons of mass destruction still to be discovered elsewhere, it is far from reassuring.

There's work and work

“Work is of two kinds: first, altering the position of matter at or near the earth’s surface relatively to other matter; second, telling other people to do so. The first kind is unpleasant and ill paid; the second is pleasant and highly paid.” — Bertrand Russell: ‘In praise of idleness’ (1932).