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# Caution required with the precautionary principle

The "precautionary principle" has become an established argument in debates on the environment and health. There are various definitions, one of the most frequently used being: "When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not established scientifically". Environmentalists liken the principle to medicine's caveat primum non nocere, and the principle has become an increasingly powerful tool for the environmental lobby to garner political and public support. The principle is now inscribed in various international treaties and agreements, notably the 1992 Rio Declaration on Environment and Development, which states that: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".

The precautionary principle has been invoked several times in the name of protecting the public's health, notably in the various moratoria that were set up to prevent the development and use of genetically modified (GM) organisms. Yet only last week came reports that there are now moves to end the de facto moratorium imposed by the European Commission on GM foods, arguably because of fears that Europe could lose financially and scientifically to the USA if development of GM products continues to be hindered. This change of stance has led to criticisms that the Commission is sacrificing protection of public health to the marketplace (see p 320).

By contrast, in this week's issue, Donald R Roberts and colleagues give an example of how the precautionary principle is being employed, they argue, to the detriment of health. A global and legally binding convention for the elimination of persistent organic pollutants, including the pesticide DDT, is being negotiated under the auspices of the United Nations Environment Programme, as a result of the 1992 Rio Declaration. Roberts and colleagues argue that global elimination of DDT would be a disaster for developing countries already struggling with the burden of re-emerging malaria. They state that such countries need to retain the right to use small amounts of DDT for indoor spraying.

They are not alone in their fears. Earlier this year, almost 400 scientists signed an open letter advocating the continued use of DDT for house spraying. More pertinently, concern was expressed at a February meeting of African countries that are being asked to reduce their reliance on DDT for malaria control. While supporting the elimination of agricultural use of DDT, delegates stressed that indoor residual spraying of DDT continues to play an important part in malaria control in their countries. The delegates also pointed out the responsibility of the global community to provide the financial assistance necessary if their countries are forced to switch to more expensive insecticides. And WHO, delegates said, "should advocate and highlight, at any relevant and appropriate forum, the deep concerns of the participating member states on the possible economic and health implications of any restriction made on DDT use for malaria control". Indeed, the 20th WHO Expert Committee on Malaria report this year reaffirmed the role of DDT house spraying in vector control.

Despite these objections, at the fourth round of negotiations on a global treaty on persistent organic pollutants in March the consensus was to continue to favour elimination of production and use of DDT, but to employ a public-health exemption while countries adopt strategies to reduce reliance on DDT for vector control. Proponents of the ban, mainly environmental protection agencies, have invoked the precautionary principle to push for this global ban on health grounds, despite the fact that, as A G Smith points out on p 267, at likely exposure levels the effects on human beings seem to be very slight.

Whose health is being protected by this invocation of the precautionary principle? And who will benefit if and when malaria-endemic countries are forced to switch to newer, more expensive insecticides? The answer seems to be that the health of people in poorer countries is being put at a very real risk to protect the citizens of wealthier nations from a theoretical risk. The only player guaranteed to benefit if DDT is banned outright seems to be the chemical-manufacturing industry.

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