

# Doctors and the “environment”

A “call to arms” for medical practitioners in Australia

During the past decade, and particularly since the 1992 United Nations Conference on Environment and Development (Rio de Janeiro), the meaning of the word “environment” in relation to human health has widened considerably. Questions of environment now reach far beyond local pollution, to encompass ecological sustainability — the long-term capacity of the biosphere to maintain its life-supporting functions.<sup>1</sup>

As this century ends, there are serious concerns about the social and population health consequences of our continuing erosion of the biosphere. We are now depleting nature’s “sources” and overloading its “sinks”.<sup>2</sup> The depletion of ocean fisheries, of freshwater aquifers and the loss of biodiversity<sup>3</sup> attest to the former, while the destruction of stratospheric ozone (with its particular consequences for southern Australia) and the incipient change in world climate attest to the latter. In Australia, the loss of topsoil, the widespread salination of farmland and the deterioration of the Murray–Darling Basin’s water quality represent massive losses of natural capital, and a diminution of sources of food and fibre. Those “sinks” into which we variously discard gaseous and liquid wastes are clearly now becoming overloaded. Thus, we have begun to change the structure and function of the planet’s life-support systems.<sup>2,4</sup>

The idea of “environment” is elastic and expanding. It includes the social environment of both urban and rural living, the workplace and changing family structures, and the physical, chemical and biological environments (air and water quality, noise, chemical residues in food, infectious agents, etc). These factors have changing local, regional and global dimensions. This necessitates prediction of possible outcomes and the precautionary principle in medical, administrative and political decisions. Considering all these phenomena allows us to appreciate that the loss of natural capital and the decline of ecological sustainability result in a fundamental erosion of our life-support systems.

The recent report of the UN Environment Programme, *Global Environmental Outlook 2000*, underscores the seriousness of this decline, a decline which is now evident in most indicators for the globe as a whole.<sup>5</sup> Similarly, the detailed report of the World Wide Fund for Nature, in 1998, estimated that the “living planet index” — a measure of the natural wealth of the Earth’s forest, freshwater, and marine environments — had declined by 30% over the final quarter of the 20th century.<sup>6</sup> If these assessments are correct then there is reason for concern over the sustainability of human health during the coming century.

Medical scientists and practitioners should be seeking to understand the ways in which these various environmental changes do, or could, impinge on human health. It is quite clear that increased exposure to ultraviolet radiation, altered intensity of extreme weather events, changes in the geographic range and seasonality of various infectious diseases, reduced

productivity of agriculture and fisheries, and the socioeconomic disruption and population displacement that result from large-scale environmental changes, will all have adverse effects upon health.<sup>7</sup> However, this requires a larger viewing frame than the one we usually apply to assessment of health risks.

Responses to these risks include denial, fatalism or, now perhaps most prevalent, complacency. Many would like to believe that humans are sufficiently inventive and societies are adaptable so that new technologies will relieve environmental problems. Such complacent optimism is unsound. Although we cannot be certain of the emerging processes and their range of consequences (eg, the altered distribution and severity of vector-borne disease in response to global warming), the bottom line is not negotiable. We cannot continue to increase the pressure on finite natural systems without eroding environmental “carrying capacity” and thereby impairing the prospects for sustained good health.

The policy discussion about these matters is now maturing in various countries and international forums. Considerations of global climate change, for example, now widely recognise the likely impacts on food production, human settlements and human health. In aggregate, these effects will probably be adverse. During 1999–2000, the governments of Canada, the United States and the United Kingdom are formally assessing the likely health impacts of climate change upon their populations. The health sector in those countries is centrally involved, and epidemiologists and other health scientists are conducting commissioned research and health risk assessments. In Europe, during 1998–1999, the World Health Organization (Rome) Office on Environment and Health convened a scientific panel to assess the early health impacts of climate change in Europe.<sup>8</sup> Together with stratospheric ozone depletion, climate change was accorded high priority in the quinquennial European Ministerial Conference of Environment and Health, in London in June 1999, as one of six designated environmental health issues warranting urgent research and policy attention.

In Australia, the debate is less mature and less in touch with some of the emerging international priorities — including consideration of health consequences. While recent policy and research funding initiatives<sup>9,10</sup> may help to bring global environmental concerns into focus in Australia, it would make a difference if Australian medical practitioners and health scientists were more effective participants in the public discourse here. The medical profession has natural leverage in this discussion: after all, societies everywhere want to understand the sources of risks to health. There are immediate opportunities for doctors and health researchers to participate via informal networks and non-government organisations.

Doctors’ participation could relate to any of the several dimensions of the “environment” mentioned above. The distinctions between local and global, between toxicological and ecological, and between the present and future decades, are



not absolute. There are important connections to be made. Indeed, there are several common underlying causes of all of our existing and impending environmental problems. These causes include the prevailing consumer-oriented social priorities; high-throughput, non-conserver technologies; deregulated, market-driven economies; and the widening of the gap between rich and poor within and between nations.

One such organisation which allows the medical profession to engage on flexible terms is the International Society of Doctors for the Environment (ISDE). Initiated in Europe in 1990, and with a full-time secretariat in Switzerland, ISDE now has national affiliates in 38 countries, and strengthening connections with international agencies, including WHO, and with scientific networks (see the ISDE website for details <<http://www.gn.apc.org/noharm/isde/>>).

Medical doctors can make a difference through such environmental organisations by:

- contributing their expertise on health issues to the public discussion of these local and global questions;
- helping to identify indicators that promote effective linkage between health, environment and sustainable development;
- gaining an appreciation of the complexity of environmental health matters from others;
- promoting communication and participation, now greatly facilitated by the Internet; and
- convening satellite meetings and workshops on relevant aspects of health and environment in conjunction with major international scientific and professional conferences.

Medical organisations such as the International Physicians for the Prevention of Nuclear War (with its Australian affiliate, the Medical Association for the Prevention of War<sup>11</sup>), and Médecins Sans Frontières, have made contributions to

world peace that have been recognised by the awarding of the Nobel Prize. These efforts have continued over many years. Peace and the sustainability of the global environment are intertwined. On environmental matters, no less an effort is required by our profession.

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