



## CPME/AD/EC/220409/021 final/EN

On 22 April 2009, CPME Executive Committee adopted the following document "**Global Warming and Health**" (CPME 2009/021 final EN/Fr)" (referring to CPME 2009/021 EN/Fr)

### GLOBAL WARMING AND HEALTH

#### The Issue

There is a plethora of studies and reports nationally and internationally about the consequences of climate change. Whatever the relative causal significance of a naturally occurring cyclical increase in global temperature and of human activity emitting greenhouse gases (GHGs)- especially CO<sub>2</sub> from the combustion of fossil fuels, the phenomenon demands a response from every individual and from society as a whole. The current global financial crisis risks distracting attention from the urgency of taking action to arrest - or, at least, to mitigate climate change and its effects. This crisis must focus attention upon the priority for global health of sustainable, prophylactic policies to secure the future of mankind.

#### Primary Consequences

The principal predicted primary consequences of climate change are:

- "Polar drift" with an extension of tropical and sub-tropical zones towards the poles in the north and south hemispheres, raising temperatures over most of the globe. Paradoxically, some areas of the globe may experience cooling e.g., due to the shutting down by melted ice water of the Gulf Stream in the north Atlantic.
- A rise in sea levels inundating low-lying islands, estuarial cities and coastal areas;
- Changes in rainfall patterns causing droughts in some places and flooding in others;
- An increase in extreme weather conditions - tropical storms, hurricanes, typhoons, tornados and tsunamis, affecting previously temperate countries;
- The likelihood of cataclysmic volcanic eruptions such as that in Krakatoa in Indonesia in 1883 which would chill the atmosphere and damage health and food production by ash obscuring the sun. Increasing seismic activity under the Yellowstone National Park in the USA is ominous.

These projected trends are inter-related.



## Secondary Consequences

Depending upon the scale and rate of changes, secondary consequences include:

- Displacement and migration of populations from permanently flooded or contaminated areas leading to over-crowding and the risk of ethnic conflicts
- Loss of productive agricultural land and crop failures causing food insecurity and forfeiting the livelihood of subsistence farmers
- Contamination of water supplies by sewage due to infrastructural damage
- Conflict over land, water, food supplies and habitable housing boosting migration and socio-economic inequalities.

## Impact on Health

The implications of all these factors for human and animal health are only too obvious, but specific health hazards include:

- An increase in deaths, injury and disability especially in the elderly and those with chronic disease, from extremes of heat (mostly) and cold
- Deaths and injuries from flooding, notably in tsunamis due to rises in sea levels
- Water stress arising from the dislocation and scarcity of fresh water supplies. Affecting particularly the rural poor
- Hazards arising from sewage and chemical pollution
- Famines and malnutrition
- Water- and food-borne diseases
- Respiratory problems from the effects of surface ozone in summer and mould growth in houses
- Skin cancers and cataract
- An increase in communicable disease from the "mixing bowl" effect of different populations crowded together.
- Most alarmingly, the spread - particularly by insect vectors, the migration of animal hosts and an increase in the number of human carriers - of tropical diseases such as dengue fever, leishmaniasis, chikungunya, viral encephalitis, trypanosomiasis, Lyme disease and west Nile disease in countries with little or no experience of them.

Following major environmental catastrophes, epidemics of the traditional quarantinable diseases such as cholera, plague, yellow fever and typhoid fever cannot be discounted.



## ACTION POINTS

### Health care administrations

Marc Danzon, WHO Regional Director for Europe, in his foreword to the document "Protecting Health in Europe from Climate Change" prepared for World Health Day 2008, wrote "health systems have a pivotal role to play in protecting health from the consequences of climate change".

The discharge of that pivotal role requires that healthcare systems:

- Identify problems , especially those affecting the most vulnerable populations, by establishing systems of surveillance , reporting and epidemiological analysis
- Ensure adequate training of the personnel who have to confront new threats to health and to manage the diagnosis and treatment of patients with unfamiliar diseases.
- Adapt interventions within their jurisdiction to address climate change issues by disease surveillance and management, immunisation and disaster preparedness
- Apply - or, if outside their control - advocate for environmental measures to secure the provision of clean water; disposal of waste; sanitary housing and shelter; safe, appropriate nutrition; and good animal husbandry
- Communicate adequate and timely information within their own organisation, to government and to the general public
- Strengthen cross-border collaboration to enforce International Health Regulations and to cope with global crises and emergencies
- Advocate action in other sectors of the economy to minimise the emission of GHGs, especially in transport and the energy industry:
- Set an example in tackling the root causes of climate change by reducing the system's "carbon footprint" e.g., by planning new buildings and modifying existing ones to achieve carbon neutrality through on-site generation of electricity by installing solar panels and wind turbines
- Recognise that the optimum use of advanced technology drives the provision of fewer, highly specialised hospital services which are increasingly remote from patients' homes, necessitating recasting of the skills profile of primary healthcare teams and the exploitation of IT to limit the carbon footprint of longer journeys by patients and staff.
- Promote family planning services, especially in vulnerable populations, to mitigate overcrowding and thereby reduce the risk of conflict for limited resources. Mutual concern should prompt Europe to assist developing countries to enhance such services.



## The Medical Profession

Arguably since the beginning of organised society and certainly since the Hippocratic treatise "Airs, Waters and Places", medical practitioners have been aware of the adverse effect of pollution of the environment on human health. The development of modern, scientific medicine since the Industrial Revolution in Europe in the late 18th and the 19th centuries was spearheaded by public health in which physicians were notable pioneers and continue to provide leadership in health promotion and disease prevention worldwide. The contribution to global warming of the emission into the atmosphere of unsustainable quantities of GHGs therefore presents a classical and historic challenge to public health and to all medical practitioners.

Clinicians are in the forefront in observing adverse events because they affect their patients. They will observe any unusual increase in mortality and morbidity in their practice population e.g., from heatstroke, the influx of exotic, tropical diseases or malnutrition. It follows that they have a crucial role in recording and reporting their findings and notifying the incidence of communicable diseases. They are also strategically placed to reduce risks to vulnerable patients by health promotion and disease prevention.

Public Health physicians and medical managers should provide professional leadership within healthcare systems, in:

- Monitoring the overall health scene, with particular attention to the epidemiological surveillance of populations at high risk of such markers of mischief as heatstroke, unusual infections and poor nutrition;
- Entomological surveillance of vectors of infections;
- Promoting preparedness for emergencies, including the stocking of vaccines and drugs, and the training of ambulance crews.

All doctors should:

- Set an example to their patients and to their local community by limiting their carbon footprint;
- Obtain for themselves and advocate for their healthcare colleagues and students; comprehensive up-to-date education about the issues and their management
- Contribute to research locally, nationally and internationally;
- Use their knowledge and insights to advocate the actions required by policy-makers in government, health and healthcare administrations and the general public;
- Inform patients about the double positive effect that small changes in exercise and diet can have on their health and the environment;
- Promote family planning to enable individuals and families to control their reproduction and thereby contribute to the control of unsustainable population growth;



- Be prepared to contribute to the management of crises and emergencies.

The challenge is nothing less than the salvation of planet Earth and all life on it