

## ADAPTING TO CLIMATE CHANGE - WHAT SHOULD THE HEALTH SECTOR BE DOING?

The heat wave that occurred in August 2003 in Europe was unprecedented. The huge impact on the health of Europeans caused health policy makers to seriously consider this environmental hazard, in many countries for the first time. As well as driving some changes in public health practice, the event triggered a wealth of research on how heat waves and hot weather affect our health. As an increase in heat waves is one of the most certain impacts of climate change in Europe, the heatwave research and practice has also been engaged in the wider climate change debate. Policy is often driven by disasters and it is interesting to speculate what climate change actions would have been undertaken had the heat wave not occurred. The articles in this journal on climate change (1, 2) are timely, as we are six years on from the European heat wave and climate change is now accepted as a risk to human health.

The EuroHEAT project was a successful collaboration between scientists and public health practitioners to address the health impacts of heat waves following the 2003 event. The paper by Matthias and Menne (1) summarises the key findings and recommendations of the EuroHEAT project. Funded by the European Commission, the project was able to review the most recent scientific evidence (from epidemiology, public health, physiology, building science and meteorology) to inform decision-making at the national and local level. The

key message to decision makers was that a range of measures need to be put in place to prevent heat wave mortality. Most countries in Western Europe now have heat wave plans, but as yet, there is little preparedness in the northern European countries for increases in hot weather.

As with many environmental health problems, the technology to combat heat wave mortality (space cooling, health surveillance) is available. It was not possible within the EuroHEAT project to undertake formal evaluation of the effectiveness (or cost-effectiveness) of individual heat health response measures. However, several systems are currently being evaluated, such as those in England and Rome and this will further inform policy makers. Many barriers remain to the effective use of heat protection measures, especially those related to our infrastructure such as improvements in building design.

Heat waves are a direct impact of climate change on health. The second paper on climate change in this special issue addresses the wide range of "indirect" pathways through which climate change may effect health. Parkinson and Berner (2) report on a workshop that was held to address health concerns in Arctic populations. Evidence for the early effects of climate change is strongest in Arctic areas where the rate of warming is most rapid. Evidence from local experience needs to be supported by scientific investigation to show that climate

change may already be affecting the health of populations in the Arctic regions.

Several frameworks are currently used for climate change and health impacts assessment but these are often not sufficiently policy relevant. The workshop gave due attention to the social impacts of climate change and the need to engage local people and stakeholders in developing adaptation strategies. There is a need to adapt the established health-environment decision-support tools to the particular characteristics of health risks from climate change, including long-term, wide-ranging and uncertain, and non-linear, impacts. The current (second generation) of climate impact assessments are now addressing adaptation in a meaningful way. The recent climate change assessment from Canada evaluated the adaptive capacity of the health sector, which needs to maintain current efforts to protect health from climate related risks (3). The Alaskan Climate Change Strategy is also current evaluating adaptation options in the health sector (4).

There is a need for more and better health impact assessments of climate change, particularly in the most vulnerable communities, such as those in Arctic regions. The resident indigenous populations of the Arctic are uniquely vulnerable to climate change because of their close relationship with, and dependence on, the land, sea and natural resources. Many communities will be vulnerable to the health impacts of climate change and it is the responsibility of scientists to better describe those risks.

## REFERENCES

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*R Sari Kovats  
Centre on Global Change and Health  
London School of Hygiene and Tropical Medicine  
Keppel St, London WC1E 7HT  
United Kingdom  
Email: sari.kovats@lshtm.ac.uk*