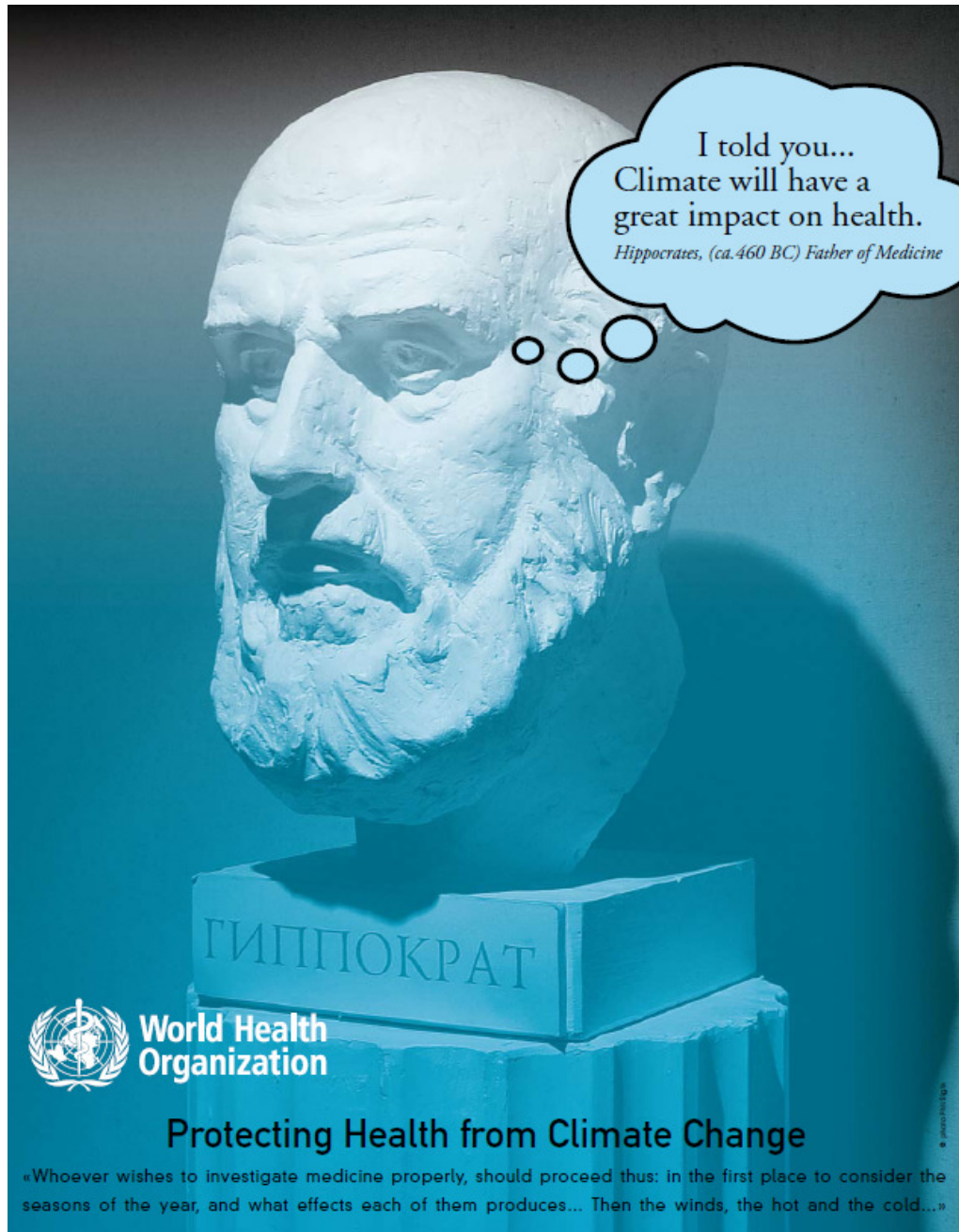


Weather, climate, the air we breathe and health

**Dr. Maria Neira
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**World Health
Organization**



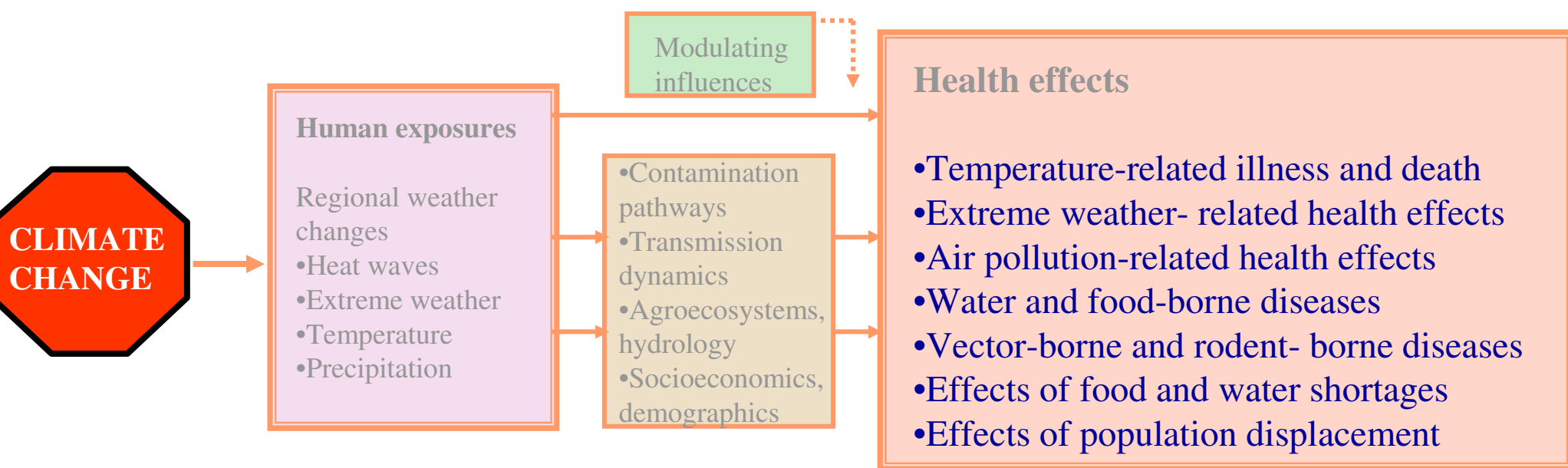
I told you...
Climate will have a
great impact on health.
Hippocrates, (ca.460 BC) Father of Medicine



Protecting Health from Climate Change

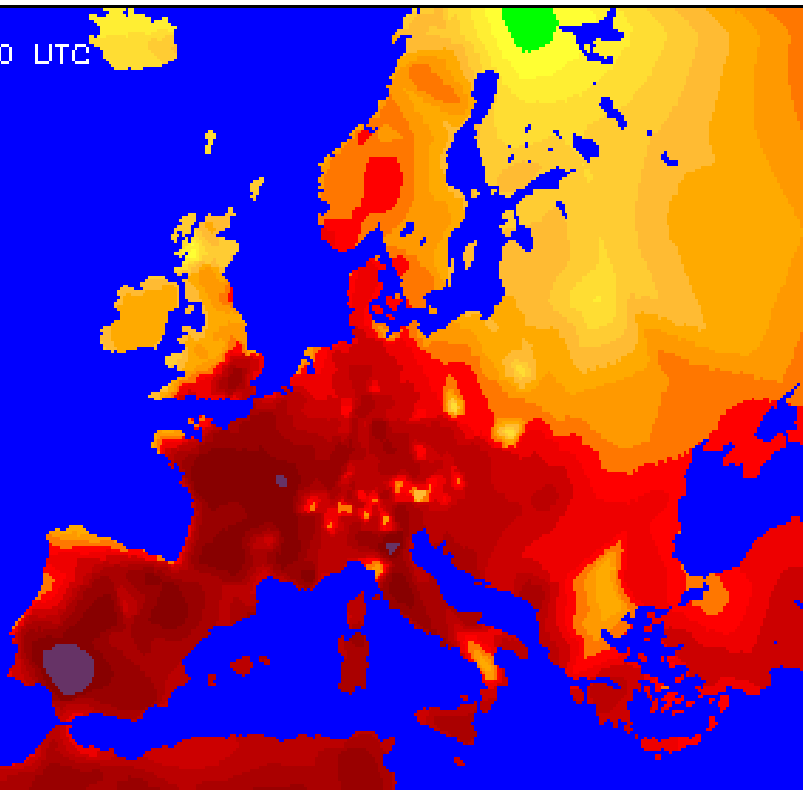
«Whoever wishes to investigate medicine properly, should proceed thus: in the first place to consider the seasons of the year, and what effects each of them produces... Then the winds, the hot and the cold...»

Weather and climate affects health both directly and indirectly

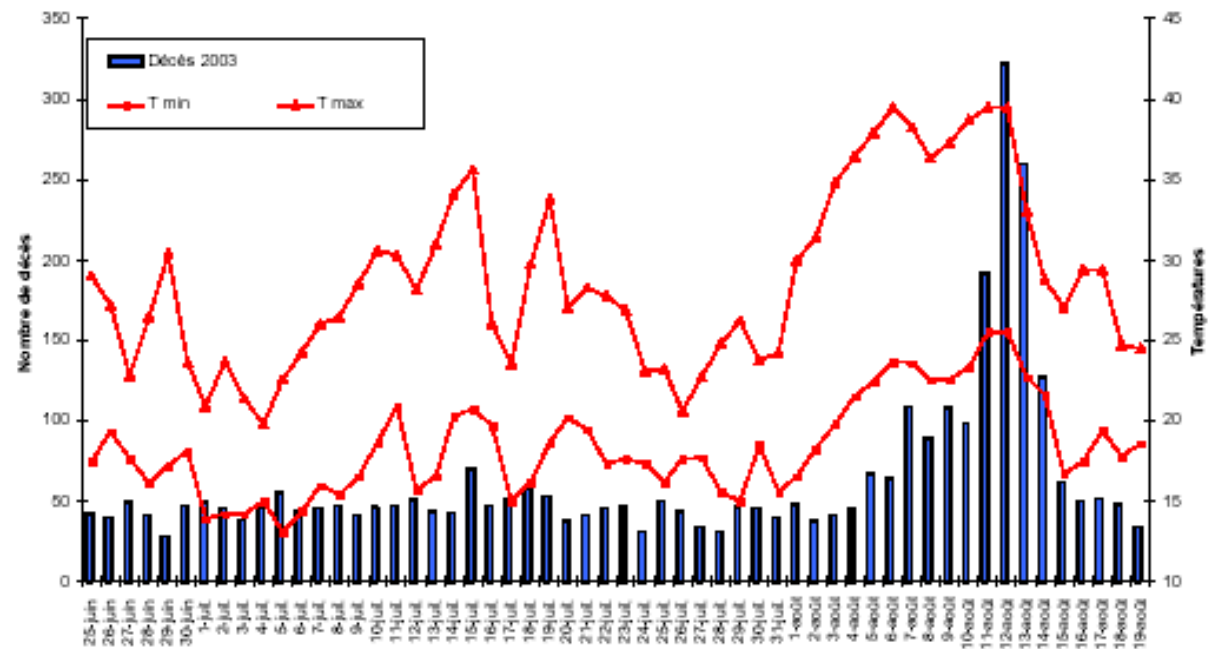


Based on Patz et al, 20

Direct effects: Health Hazards of extreme air temperatures



Graphique n°1 : Nombre de décès journaliers à Paris et températures minimales maximales entre le 25 juin et le 19 août 2003



Deaths During Summer Heatwave. Paris Funeral Services (2003)

Indirect effects: Major disease burdens are climate sensitive

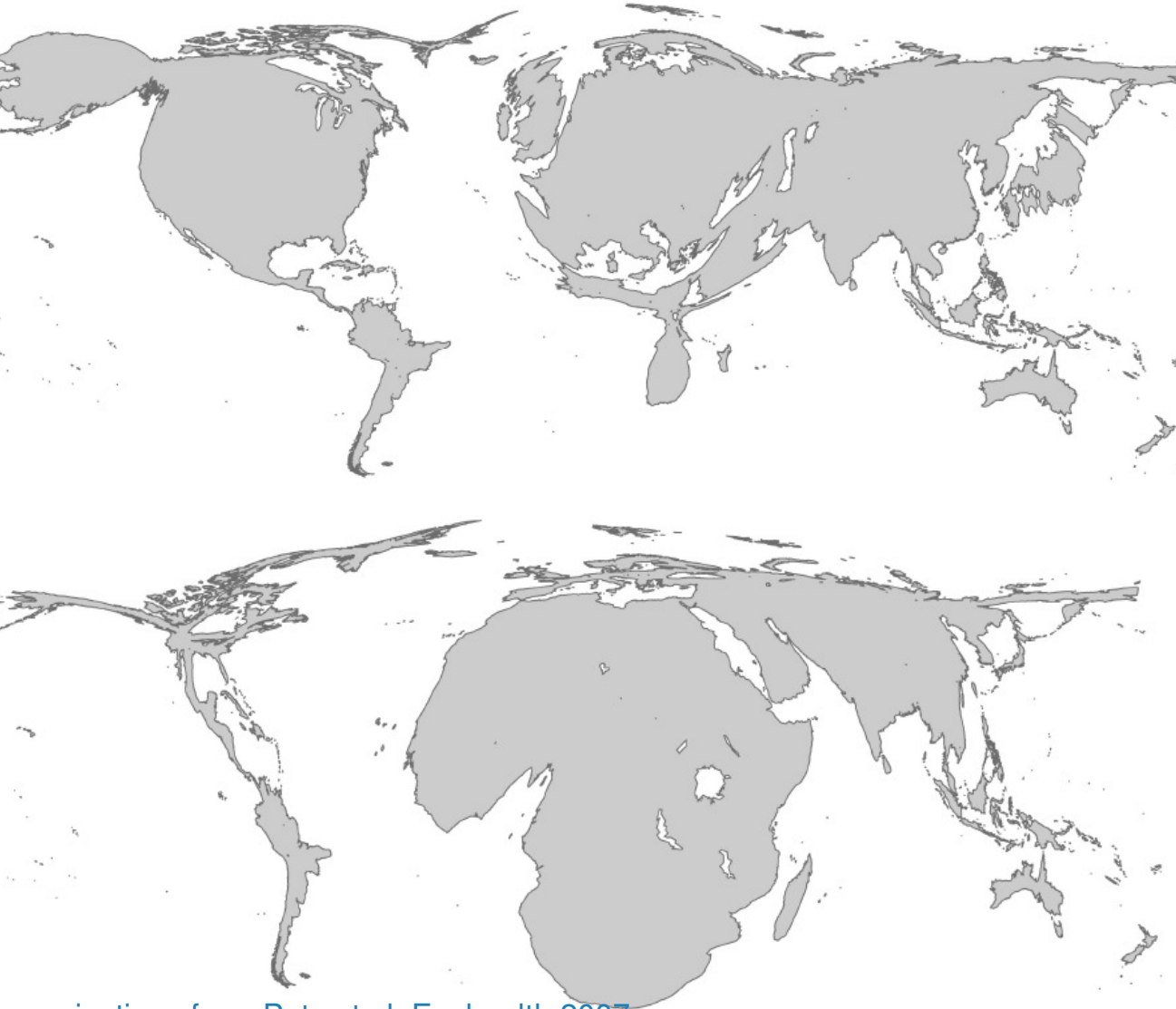
- Each year:

- Undernutrition kills 3.5 million
- Diarrhoea kills 2.2 million
- Malaria kills 900,000



- Each of these is highly sensitive to temperature and precipitation:

Climate change is already affecting health globally



Cumulative emissions of greenhouse gases, to 2002

WHO estimates of *per capita* mortality from climate change, 2000

projections from Patz et al, Ecohealth 2007.

Shared risk factors for climate and health

Energy production, transport and industry:

- Create outdoor air pollution that kills about 800,000 people per year
- Release most of the carbon dioxide that drives long-term climate change



Burning of coal and biomass in poor households

- Kills approximately 1.5 million people a year from indoor air pollution.
- Produces black carbon and other pollutants with powerful warming effects



Climate change and health

**Countries are
requesting action:
193 Nations agree
on actions to
protect health from
climate change**

The Sixty-first World Health Assembly,

Having considered the report on climate change and health;¹

Recalling resolution WHA51.29 on the protection of human health from risks related to climate change and stratospheric ozone depletion and acknowledging and welcoming the work carried out so far by WHO in pursuit of it;

Recognizing that, in the interim, the scientific evidence of the effect of the increase in atmospheric greenhouse gases, and of the potential consequences for human health, has considerably improved;

Noting with concern the recent findings of the Intergovernmental Panel on Climate Change that the effects of temperature increases on some aspects of human health are already being observed; that the net global effect of projected climate change on human health is expected to be negative, especially in developing countries, small island developing States and vulnerable local communities which have the least capacity to prepare for and adapt to such change, and that exposure to projected climate change could affect the health status of millions of people, through increases in malnutrition, in death, disease and injury due to extreme weather events, in the burden of diarrhoeal disease, in the frequency of cardiorespiratory diseases, and through altered distribution of some infectious disease vectors;

Noting further that climate change could jeopardize achievement of the Millennium Development Goals, including the health-related Goals, and undermine the efforts of the Secretariat and Member States to improve public health and reduce health inequalities globally;

Recognizing the importance of addressing in a timely fashion the health impacts resulting from climate change due to the cumulative effects of emissions of greenhouse gases, and further recognizing that solutions to the health impacts of climate change should be seen as a joint responsibility of all States and that developed countries should assist developing countries in this regard;

Recognizing the need to assist Member States in assessing the implications of climate change for health and health systems in their country, in identifying appropriate and comprehensive strategies and measures for addressing these implications, in building capacity in the health sector to do so and

Objectives for Health Protection from Climate Change

I. Awareness raising

Making clear that the ultimate justification for action on climate and the environment is **to improve human wellbeing**

Informing policy makers and the public on practical actions to protect populations from weather related hazards, and to reduce climate change

WHO SEARO. © Shehzad Noorani/Still Pictures



II: Generating evidence

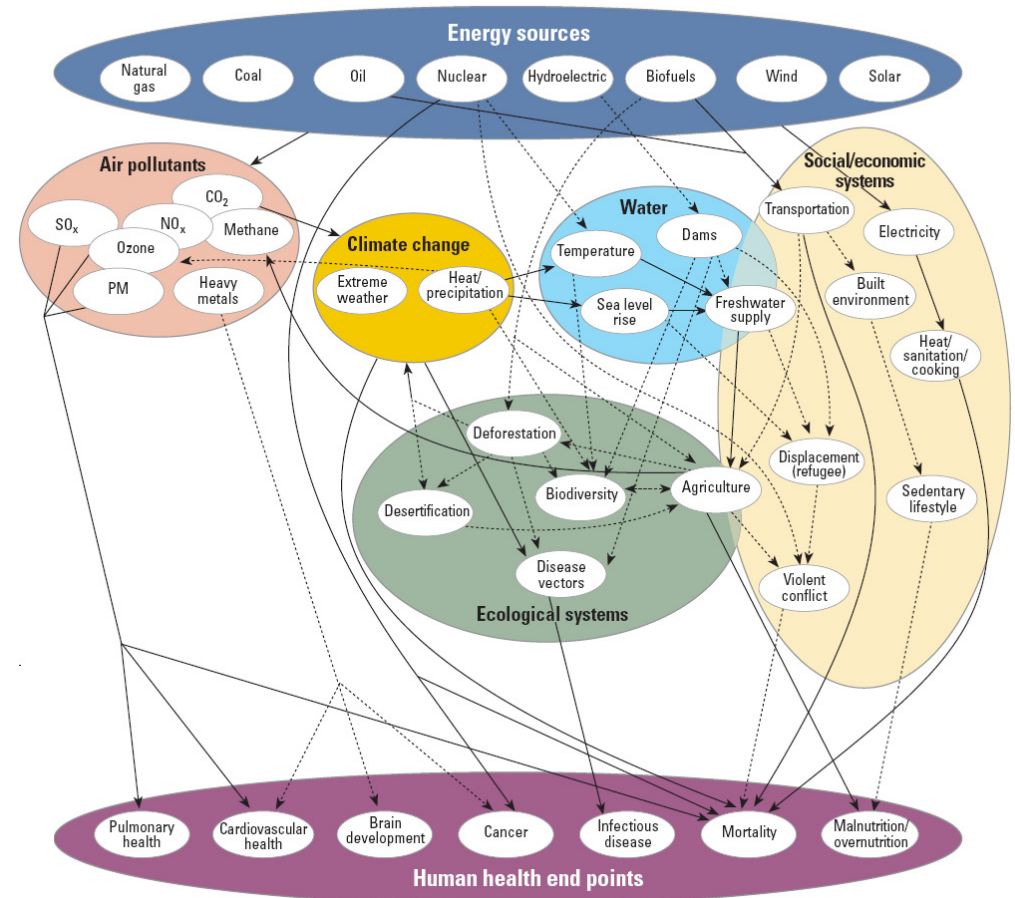
Assessing the health **risks** from climate change

Identifying effective **interventions**

Measuring health- effects of decisions in **other sectors**

Supporting improved **decision-making**

Evaluating the necessary **resources**



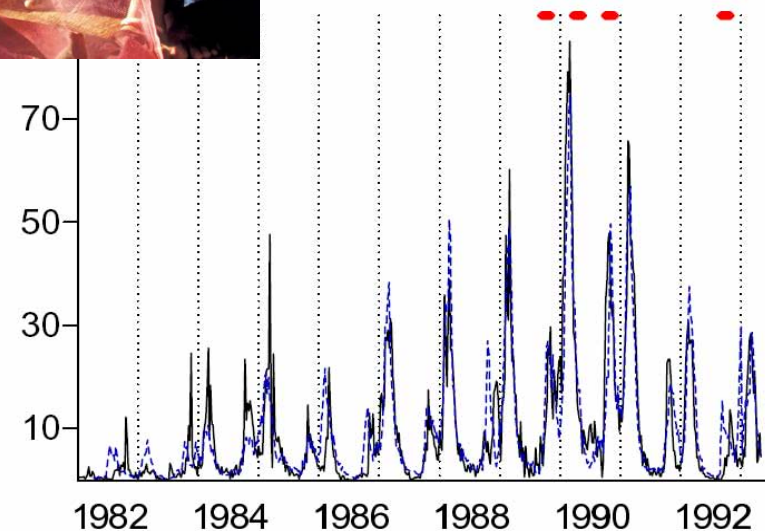
Connections between energy and health; Quantified links shown as solid lines
Gohlke et al, Environmental Health Perspectives, 2007.

III: Strengthening health systems

Strengthening public health systems to cope with additional threats posed by climate change



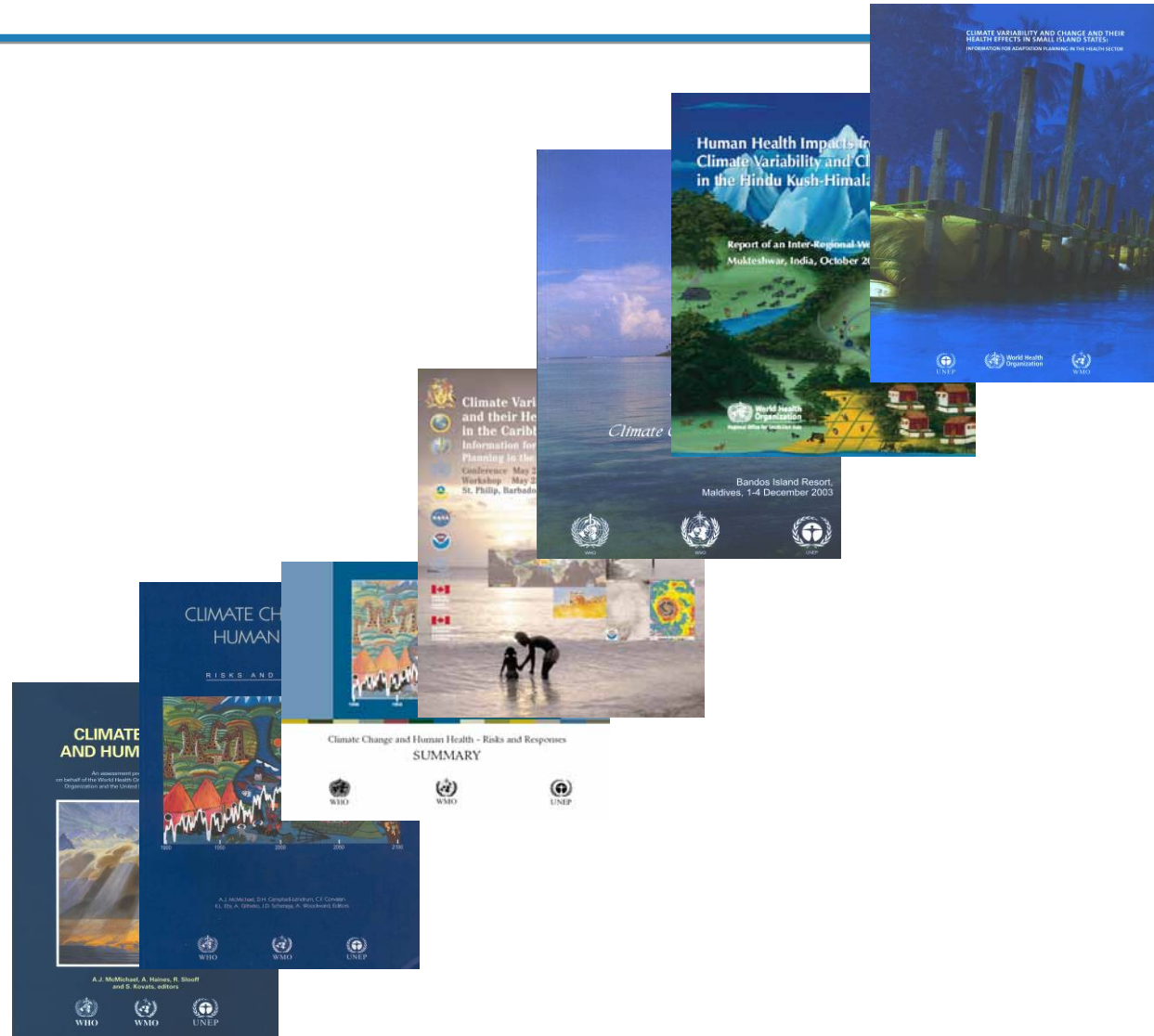
From basic health interventions to climate-based early warnings for heatwaves, pollution events and infectious disease outbreaks



IV: Building partnerships

Working together across sectors to protect health from climate and other environmental hazards

WHO and WMO have collaborated on reports, capacity building and application projects for many years



Summary

- Weather, climate, air and health are inextricably linked
- Protecting the global atmosphere, local air quality and health are part of the same agenda
- Governments are asking the health sector to work closely with the climate and environmental communities
- WMO and WHO are already close partners
- Long may this continue



More information:

World Health Organization

<http://www.who.int/>

Public Health and Environment

<http://www.who.int/phe/en/>

Global Environmental Change

<http://www.who.int/globalchange/>

Climate Change

<http://www.who.int/globalchange/climate/>

