Health and Climate Change
-Past, Present, Future

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If this was MMR, HIV or tobacco, would we call it a "controversy"?

2008 US Gallup poll of US public and scientists:
Do you think human activity is a significant contributing factor in changing mean global temperatures?

Doran et al, EOS, 2009
Climate change and health - past

(400BC to 2006)
“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 for they are not at all alike, but differ much from themselves in regard to their changes. Then the winds, the hot and the cold, especially such as are common to all countries, and then such as are peculiar to each locality”

Hippocrates (Circa 400 B.C)
Health and climate change – key dates

- IPCC established
- UNFCCC, Rio
- Kyoto Protocol
- Copenhagen, CoP
- IPCC/Gore Nobel
- WHA Resolution
- World Health Day
- CC Burden of disease (>150,000 deaths)
- HQ/Euro CCHH programmes
- 1st WHO assessment

Graph shows the Global Temperature Anomaly (Versus 1951-1980 average) from 1980 to 2010, with key climate change events marked on the timeline.
Early 1990s:
Health (supposedly) one of three pillars of climate policy

Principles of the 1992 UNFCCC – Avoiding adverse effects of climate change

“Adverse effects of climate change”
– changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.
Early 1990s:  
First steps in climate change and health science

First IPCC report (1990) has just a few lines on health:

But

WHO publishes its own preliminary assessment on climate change-health links in the same year.

Climate change and health continues as a growing, but "niche" field throughout the 1990s.
Late 1990s - onwards:
Tensions emerge with some specialist disciplines

Disease specialists react against perceived over-simplification of climate effects, and high media attention:

"Scientific Nostradamuses"

"I would burn this book"

"These people know bugger all about dengue or malaria or anything"

Martens, 1995
Early 2000s:
Improved description of climate and health links

Incidence of diarrhoeal disease is related to variations in temperature and precipitation, over both space and time. In Lima, Peru, diarrhoea increased 8% for every $1^\circ$C temperature increase.

(Checkley et al, Lancet, 2000)
Early-mid 2000s:
Climate change and health becomes more mainstream

Climate change included in the 2002 global burden of disease estimates.

Estimates of >150,000 deaths from climate change generate massive press coverage in 2003.
Early- mid 2000s:
Impacts of extreme weather raise attention

Deaths During Summer Heatwave.
Paris Funeral Services (2003)

Hurricane Katrina, 2005
Climate change and health - present (2007-2010)
WHO places climate change high on the health agenda


- WHA resolution (2008), and Executive Board endorsement of WHO action plan (2009).

"With impoverished populations in the developing world the first and hardest hit, climate change is very likely to increase the number of preventable deaths. The gaps in health outcomes we are trying so hard to address right now may grow even greater. This is unacceptable."
**World Health Assembly Resolution (2008)**

**WHO action plan (2009)**

- Countries strongly endorse greater WHO and health sector engagement

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**Climate change and health**

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

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¹ From the WHA51.29 resolution.
WHO is now more applied, across all regions

- WHA resolution matched by regional committee resolutions and action plans
- 16 pilot adaptation projects, each with >US $600K, covering all regions
- Practical tools, led by regions: Training course (SEARO), Guidance on vulnerability assessments (PAHO)
- Guidance on greening health sector, including WHO operations
On the environment side, momentum and rhetoric builds
Health was cited in the first paragraph of the draft text of the proposed Copenhagen agreement.

- but that is the last time it appeared.

All (41/41) of the LDCs identify health as a priority within their National Adaptation Programmes of Action

- but only 7% of funding applications ask for money for health.

- less than 1% of UNFCCC funding so far has gone to health.
"We are not going to get one beautiful agreement right away."

- WWF executive director and US mission environment chargé d'affaires, speaking at Geneva climate change forum, 2.3.2010
Health and Climate change - Future (2010 - )
"I have a dream"
A new approach to climate change and health

Less
• Environmental
• Single-issue
• Bureaucratic
• Apocalyptic

More
• Public-health
• Diverse
• Practical
• Positive-Action oriented
Some basic principles

Replace health at heart of climate discussions. "Lip-service" needs to be replaced by real engagement with health community and their challenges.

Prioritize "no regrets" preventive interventions. Climate is just one determinant of health. Many "good deals now" (e.g. water and sanitation) will protect health immediately - and reduce vulnerability to climate change.

Take opportunities to promote healthy climate mitigation. The health sector needs to describe the health implications of climate change mitigation decisions, e.g. in energy and transport.
Responding to climate change is just one part of preventive environmental health.
Convenient Truth Number 1: Linking climate and health solutions can be simple

THE instrument for regulating US greenhouse emissions is an "endangerment finding" for human health, enforceable under the clean air act.

Lisa Jackson, USEPA Administrator, UNFCCC CoP, 2009
Convenient Truth Number 2: "Adaptation" to climate change – is basic public health

- We have proven, cost-effective interventions against every climate-sensitive health impact.

- Clean water and sanitation, vector control, disaster risk reduction, early warnings, humanitarian aid…

- All of these can save lives now, and reduce vulnerability to climate change – IF health protection is prioritized, and IF "climate adaptation" is additional to current ODA
"Health benefits from reduced air pollution as a result of actions to reduce greenhouse gas emissions… may offset a substantial fraction of mitigation costs" – IPCC, 2007

"while the climatic effects of mitigation measures are long-term and dispersed throughout the world, the health benefits are immediate and local" – M. Chan, 2009
Health benefits from more sustainable living

- Sustainable urban transport – could cut heart disease and stroke by 10-20%, breast cancer by 12-13%, depression and dementia by 5-8% in developed countries - greater gains in developing countries

- 30% reduction in animal fat consumption could reduce heart disease by 15-16% in high-consumption populations, and cut GHG emissions

- Clean household energy: Improved stoves in India could save 2 million lives over 10 years, and reduce warming from black carbon.

All estimates from Lancet, 2009.
**True Primary Prevention**

- **↓ CO₂**
- **↓ Air pollution**
- **↓ Cardiovascular diseases**
- **↑ Physical activity**
- **↓ Obesity**
- **↓ Depression**
- **↓ Injuries**
- **↑ Social capital**
- **↓ Infrastructure costs**
Convenient Truth Number 4: Health can show leadership by "greening" itself

Midwife learning to use solar suitcase in Nigeria

Environmentally-designed hospital saving over 1/3 of energy costs, Italy.
The bottom line

- Energy independence
- Preserve rainforests
- Sustainability
- Green jobs
- Livable cities
- Renewables
- Clean water, air
- Healthy children
- Etc. Etc.
Thank you for your attention

Public Health and Environment
http://www.who.int/phe/

Health and climate change:
http://www.who.int/globalchange/climate