

Climate Change and Occupational Health

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World Health
Organization

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Climate change

The ultimate global environmental change

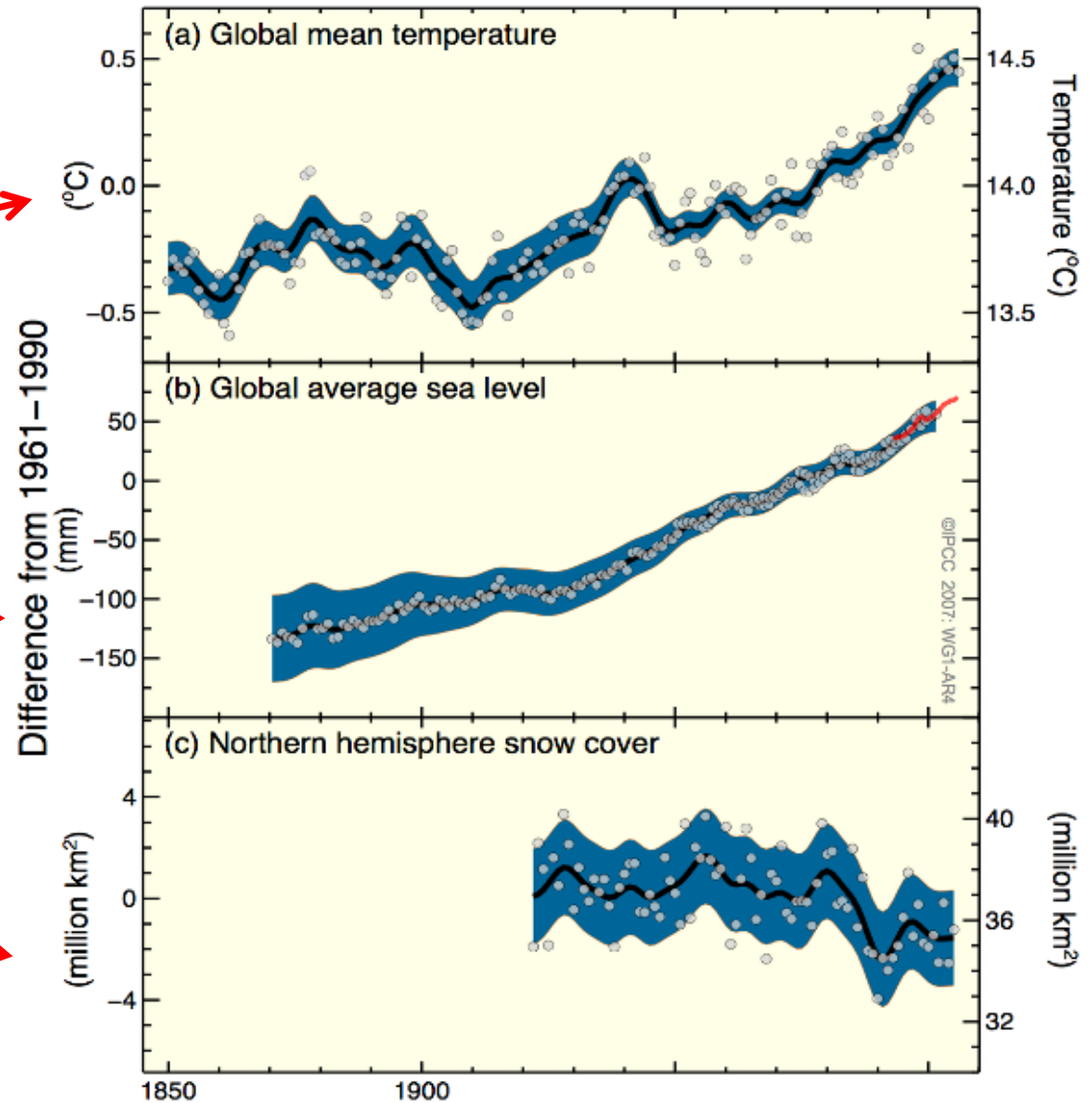
Climate change is unequivocal

Rising atmospheric temperature

Rising sea level

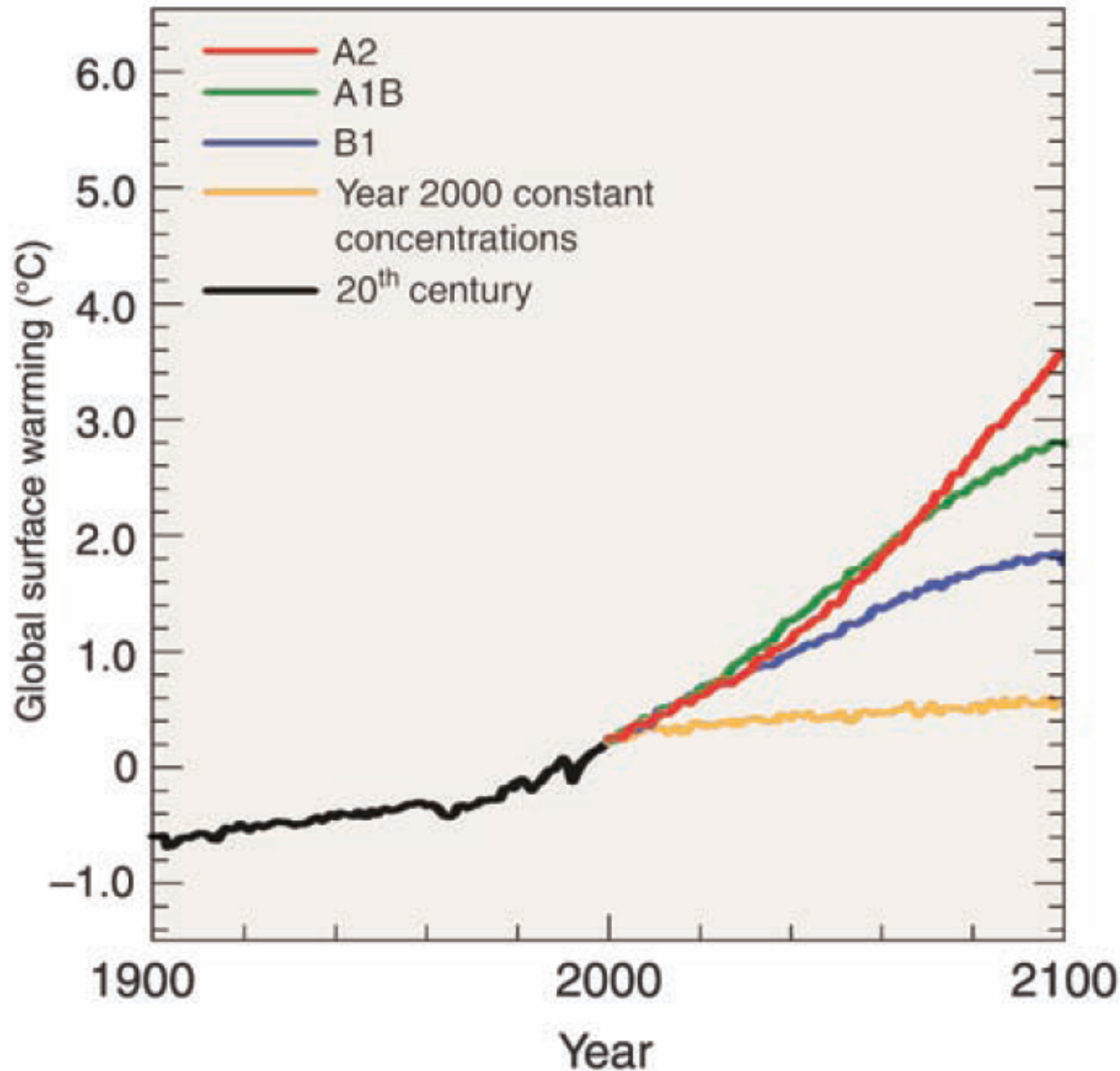
Reductions in North Hemisphere snow cover

Changes in Temperature, Sea Level and Northern Hemisphere Snow Cover

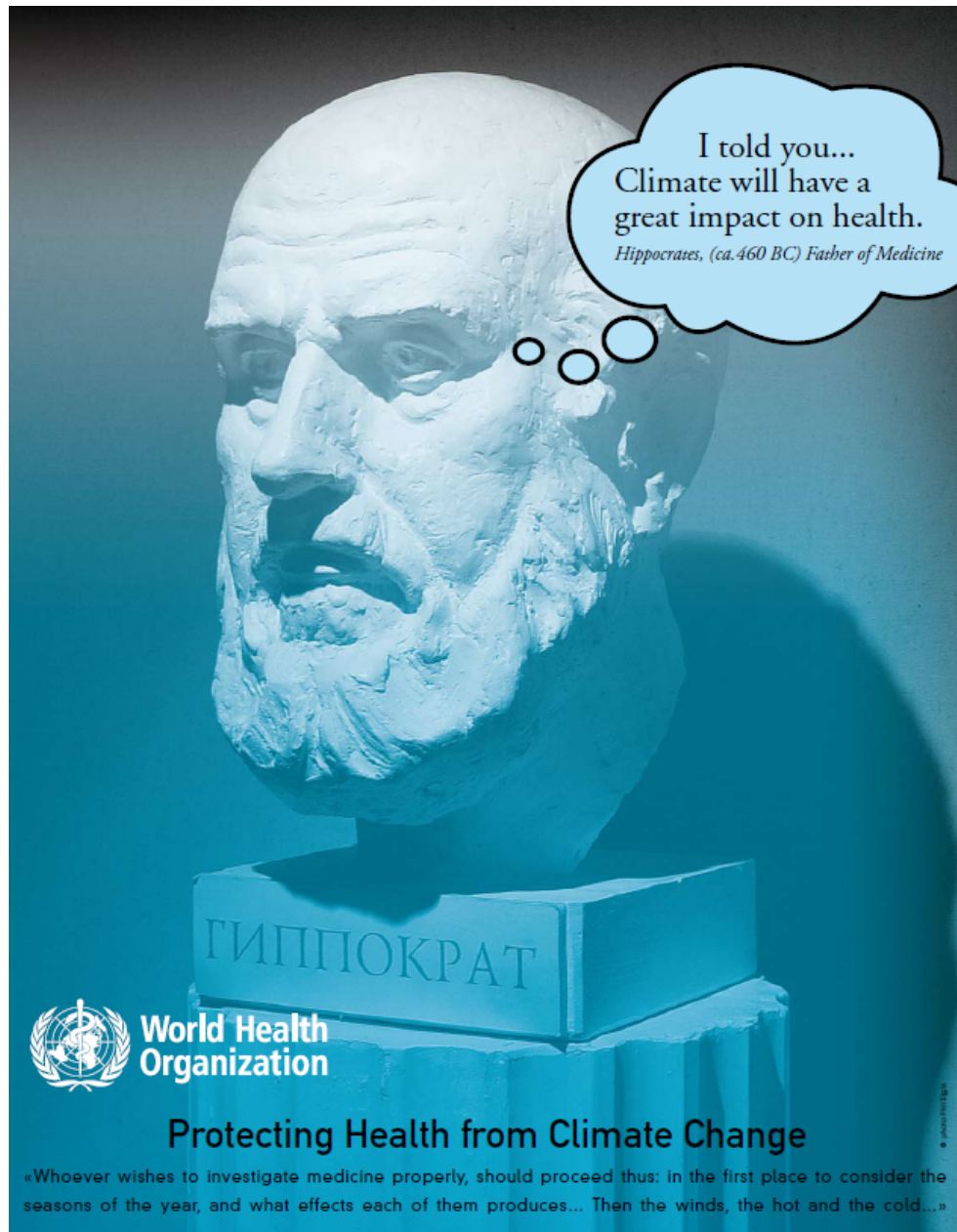


IPCC Summary for Policymakers: WG I (2007).

Warming will continue



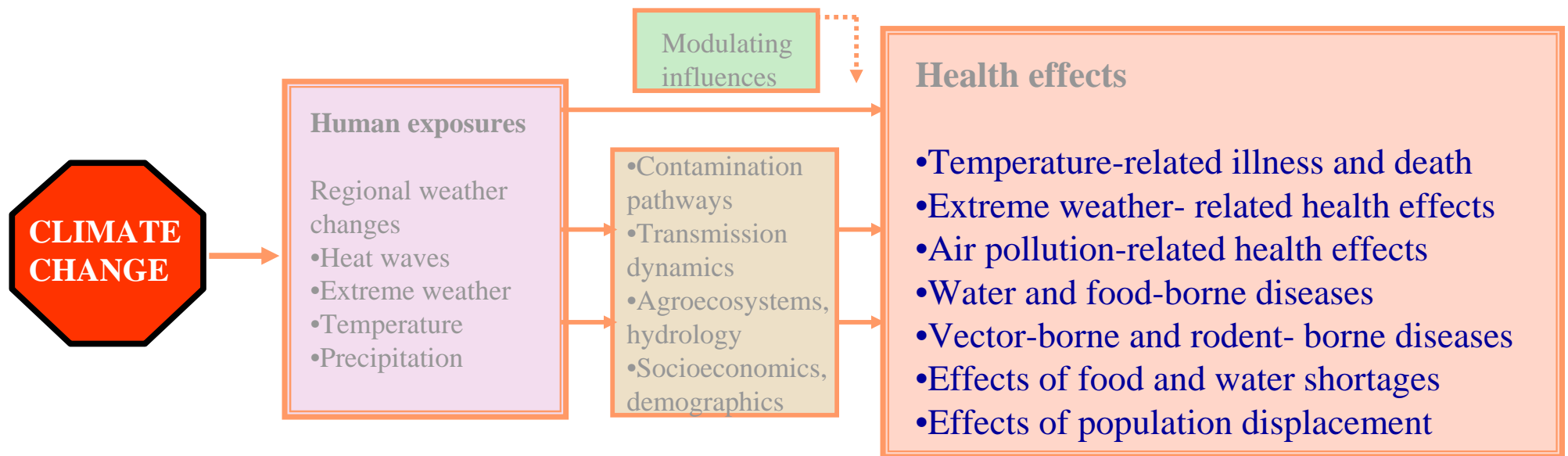
Some warming is now inevitable (so we must adapt), but over the long term we must also mitigate climate change



"Whoever wishes to investigate medicine properly should proceed this: 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..."

Climate change has multiple connections to health

Some expected impacts will be beneficial but most will be adverse. Expectations are mainly for **changes in frequency or severity of familiar health risks**



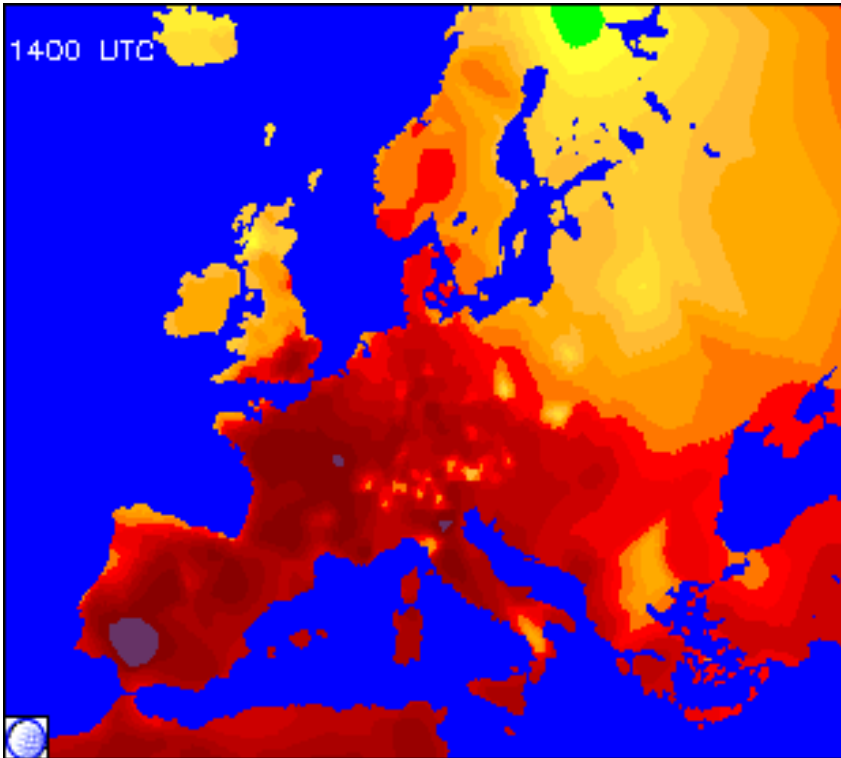
Climate change puts health at risk

- **Each year:**
 - Undernutrition kills 3.5 million
 - Diarrhoea kills 2.2 million
 - Malaria kills 900,000
 - Extreme weather events kill 60,000

These, and others, are **highly sensitive to changing climate.**

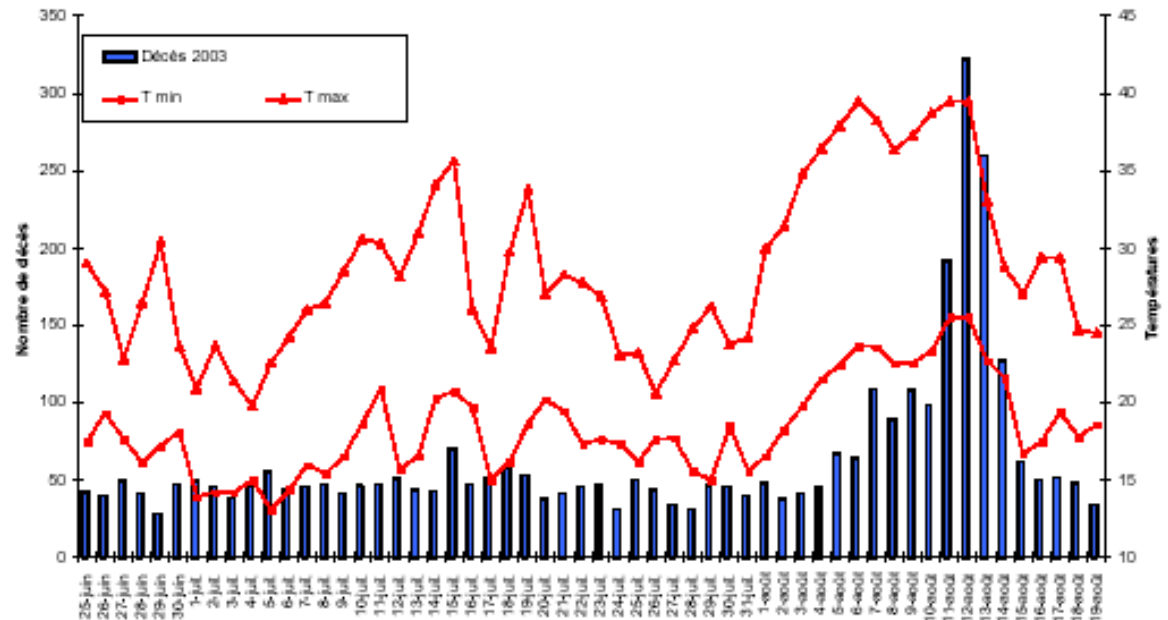


Weather and climate affects health in rich countries as well



European temperatures, Summer 2003

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



Deaths During Summer Heatwave. Paris Funeral Services (2003)

What does this all mean for the health of workers?

- Changes in the outdoor work environment could result in heat stress, air pollution and UV exposure particularly among outdoor workers
- Health consequences range from dehydration, injuries, and heat fatigue to a higher burden of respiratory and cardiovascular diseases, cataract, skin and eye cancer and weakening of the immune system
- Extreme weather events affect workers involved in emergency, rescue and cleanup efforts delivered in high risk situations due to more frequent floods, landslides, storms, droughts, and wildfires



Moving from inconvenient to convenient truths

True Primary Prevention



Greener policies can be healthier policies

Policies that cut greenhouse gas emissions can also reduce:

The 1.2 annual deaths from urban air pollution, and the 1.5 million from indoor air pollution

The loss of 3.2 million lives, and 19 million years of healthy life, from physical inactivity

The 1.3 million deaths and over 50 million injuries from road traffic accidents

The 140,000 annual deaths from climate change



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.



We need a "green economy" to deliver these benefits



- Greening the economy is expected to create a series of health, economic, social and environmental benefits, including a reduction of greenhouse gas emissions and a better adaptation to climate change

What would green and safe jobs look like?



- Climate-friendly and safe constructions
- Sustainable modes of provision of renewable energy, and water
- Reduction or safe management of hazards
- Access to reliable occupational health services.

Reducing environmental impact to benefit health workers

- Moving from fossil fuel to renewable energy would reduce the number of deaths, injuries and diseases among workers in extractive industries
- Organic farming would reduce exposure of farm workers to pesticides
- Some green practices may bring new health hazards – which will have to be managed



Policies and Measures

- WHO Global Plan of Action on Workers' Health 2008-2017 was endorsed by the 60th World Health Assembly, to enhance the capacity of countries to better protect the health of workers worldwide.
- Plan urges countries to incorporate workers' health in climate mitigation and adaptation strategies and in the measures for environmental protection, such as those dealing with environmental preparedness and response.
- The 61st and 62nd World Health Assemblies approved a resolution and a workplan on climate change and health. Improving health protection at the workplace, and supporting a green economy, would help address the challenges of climate change and achieve environmental sustainability.

Promoting greener and healthier jobs in the health sector



Midwife learning to use solar suitcase in Nigeria



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

Transportation

- Transportation – Use alternative fuels for hospital vehicle fleets; encourage walking and cycling to the facility; promote staff, patient and community use of public transport
 - UK Addenbrook hospital with interest-free bicycle loans and bus passes reduced cars on hospital campus by 16% and staff car use by 22%
 - Sweden: « eco-driving » reduced fuel use by 10% among ambulances and 50% less insurance claims



Food, waste, water

- Food – Provide sustainably grown local food for staff and patients
- Waste – Reduce, re-use, recycle, compost; employ alternatives to waste incineration
- Water – Conserve water; avoid bottled water when safe alternatives exist
 - India Bhopal Sambhavna Trust Clinic rainwater harvesting



Conclusions

- Global environmental change will fundamentally affect, and mainly worsen, health
- Adaptation to these changes is the same agenda as public health prevention
- More sustainable energy use could bring big health benefits – this is an important and neglected support for mitigation policy
- Improving health protection at the workplace would help address effectively the challenges of global environmental change and achieve environmental sustainability
- Initiatives include climate-friendly and safe constructions, sustainable modes of provision of renewable energy, reduction or safe management of exposure to chemicals, radiation and waste, sustainable provision of water and access to reliable occupational health services