

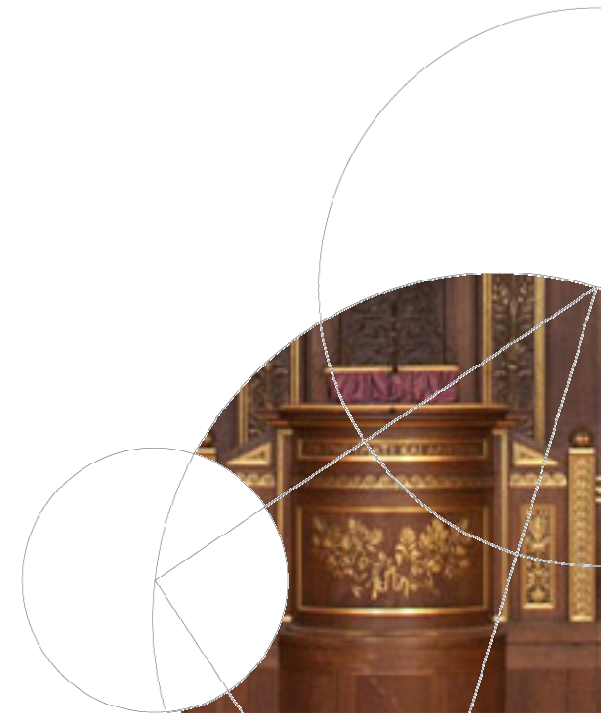


Human Health and Climate Change Adaptation

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HUMAN HEALTH IS 'THE' BOTTOM LINE

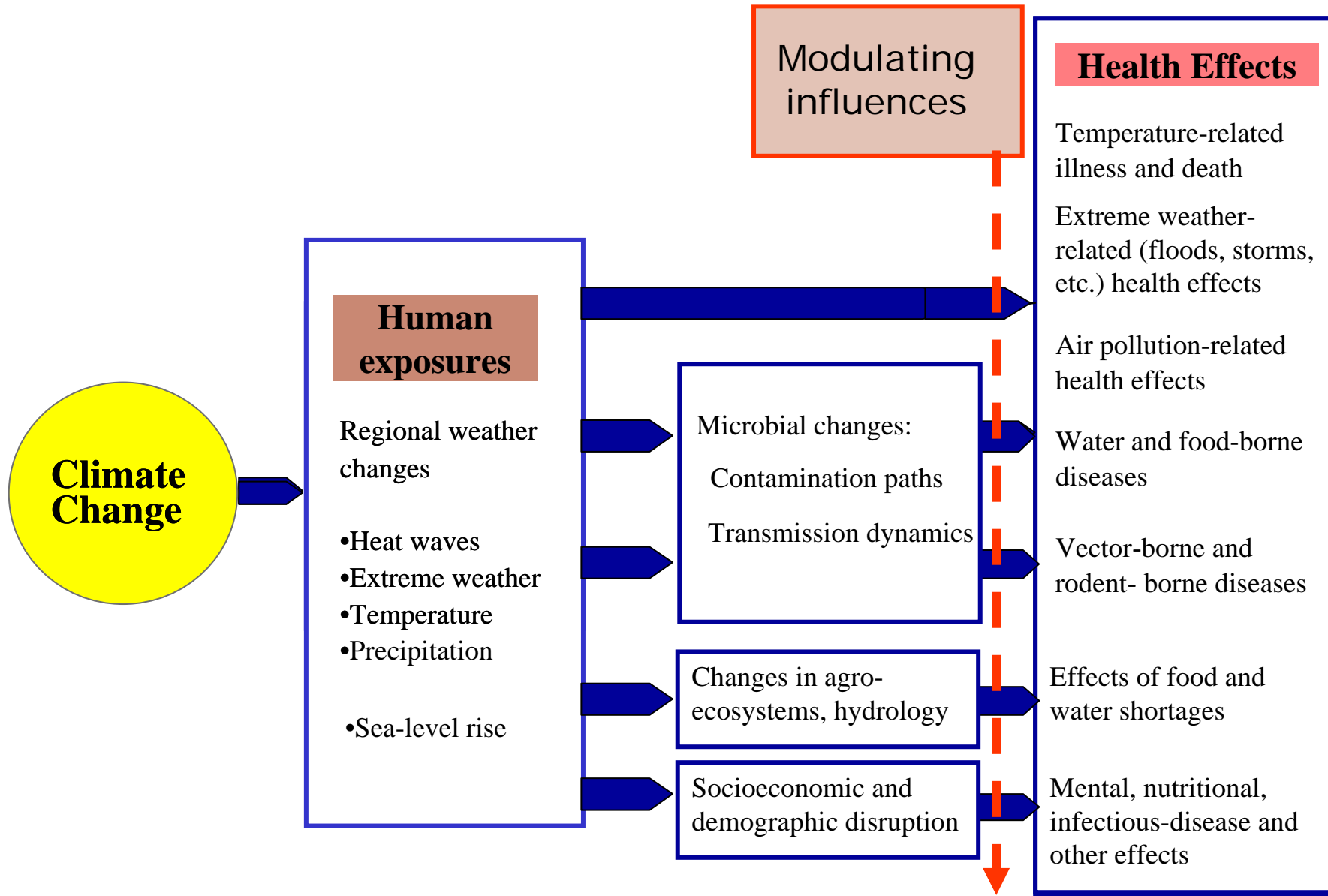
All other forms of damage, disruption and depletion due to climate change ultimately converge on threats to human wellbeing, health and survival.

- Stable patterns of infection agents
- Fish harvests
- Freshwater supplies

- Farm yields
- Yields of fibre and medicinals
- Relative climatic stability

All these essential foundations of population health are jeopardized by climate change.





WHY SHOULD WE BE CONCERNED?



... BECAUSE MAJOR GLOBAL KILLERS ARE AFFECTED BY CLIMATE.

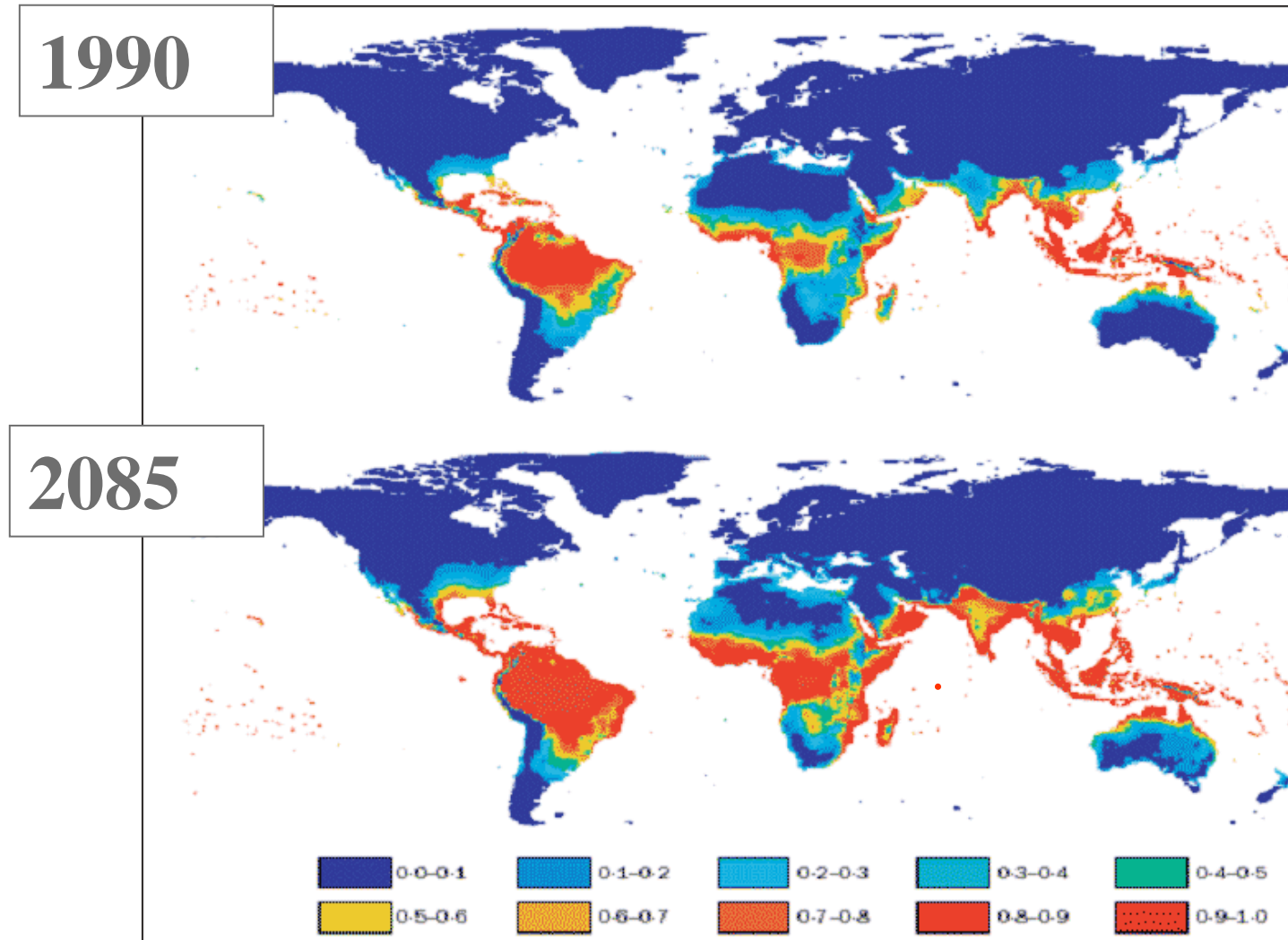
Currently, each year:

- Weather-related disasters kill over 60,000 and affect millions
- Malaria kills 900,000
- Diarrhoea kills 2.2 million
- Undernutrition kills 3.5 million

(WHO 2003, 2008)



Estimated population at risk of dengue fever under "standard" climate change scenario: 1990, 2085



Source. Hales S et al. Lancet (online) 6 August 2002. <http://image.thelancet.com/extras/01art11175web.pdf>



CLIMATE CHANGE: A RISK MULTIPLIER

Climate change is a risk multiplier which intensifies existing trends, tensions, and instability.

Climate change will overburden states and regions which are already vulnerable, fragile and conflict prone.

- Inadequate sanitation:
 - Urban development
 - Lack of infrastructure and funds for investments in improved sanitation
 - Extreme weather conditions: floods – disasters
 - Water-borne diseases, e.g. El Nino – South America and cholera
 - WHO: we will not meet the MDG for sanitation



ADAPTATION = STRENGTHENING HEALTH SYSTEMS

Much of 'adaptation' is basic, preventive health actions.

- Improved surveillance and response, e.g. heatwave warnings, compliance with International health Regulations.
- Strengthened action on diseases of poverty: including wider coverage with vector control and vaccination programmes.
- Better management of environmental health determinants: provision of safe water and sanitation, control of air pollution.
- Promotion of multisectoral and community-based approaches: community involvement in Disaster Risk Reduction and response, Integrated Vector Management.



Exposure	Vulnerability factors (modifying determinants)	Potential adaptation strategies
Storms and floods	Location, infrastructure, lack of warning, poverty (restricted choices)	Location, exposure forecasts, building standards
Heatwaves	Age, health status (esp CVD), housing quality, location (heat-island), knowledge	Physiological; behavioural (clothing, etc.-- public education), forecasts, air conditioning, housing and urban design, security of electricity supplies
Air pollution/ cold events	age, health status (esp. smoking), poor access to health-care	Stricter (urban) air standards, new technologies, forecasting, building standards, ventilation in relation to indoor temperature and humidity /condensation, security of electricity supplies
Vector-borne diseases	Location, poverty (poor housing), inadequate vector/pest control programs	Vector/pest control, public education, disease surveillance, treatment
Water- and food-borne diseases	Location, poverty (poor housing), ignorance of transmission sources,	Public health infrastructure/policies, public education, quality control (food and water), surveillance
Health effects of food and water shortages	Poverty, prior malnutrition, region (food insecurity, water stress), isolation (low access to markets, trade)	Adapted farming (new crops, ? GM crops/livestock), subsidies for changes/shifts, water conservation
Displacement, dislocation: mental health, infectious diseases	Poverty, marginality, minority status; subsistence agriculture, coastal dwelling; women and children, the elderly	Government support for displaced or disadvantaged communities, progressive immigration policies, public health facilities, health care

(adapted from McMichael, 2007)



What should health ministries in developing countries do?

- Commission/conduct national assessments of risks to health from Climate Change
- Participate in emergency management preparedness (communications, facilities, skills)
- Argue the centrality of population health as the real “bottom line” in the sustainability debate
- Make links with other ministries – education, primary industry (agriculture), fisheries, development planning, etc.
- Highlight the sense and cost-savings of adaptation strategies, to lessen adverse impacts



FOCUS AREAS

Health systems strengthening

Weak public health systems and limited access to primary health care contribute to high levels of vulnerability and low adaptive capacity.

Health impact assessments should become an integrated part of adaptation strategies, policies and measures to decrease the potential short- and long-term negative health consequences.

Health communication, public education

Public awareness, effective use of local resources, appropriate governance arrangements, community participation necessary to mobilise and prepare for climate change.

Research capacity development and education

Adaptation strategies, early-warning and preparedness systems require appropriate data collection, analyses and monitoring. More research on the burden of disease needed.



FOCUS AREA – Extreme weather events

Floods and disasters

Drought – heat

Biodiversity

