
northumbria
UNIVERSITY
 Disaster and Development Centre

Climate Change and Disaster Impact Reduction

UK – South Asia Young Scientists and Practitioners Seminar on Climate Change and Disaster Impact Reduction

Dr Andrew Collins
 Disaster and Development Centre
 Northumbria University
andrew.collins@unn.ac.uk
www.northumbria.ac.uk/ddc

Purpose

- ❑ To address local and regional perspectives on a global threat.
- ❑ To share and stimulate ideas about how people are reducing risks associated with climate change.
- ❑ To further engage networks contributing towards a more sustainable future.

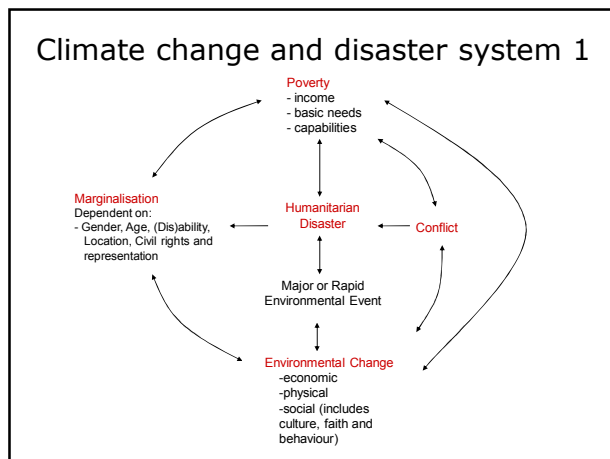
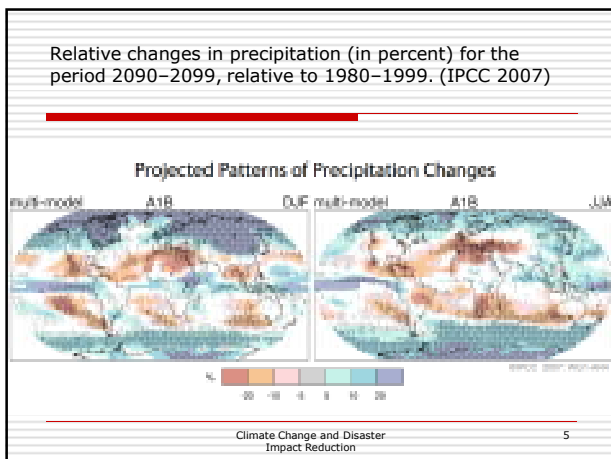
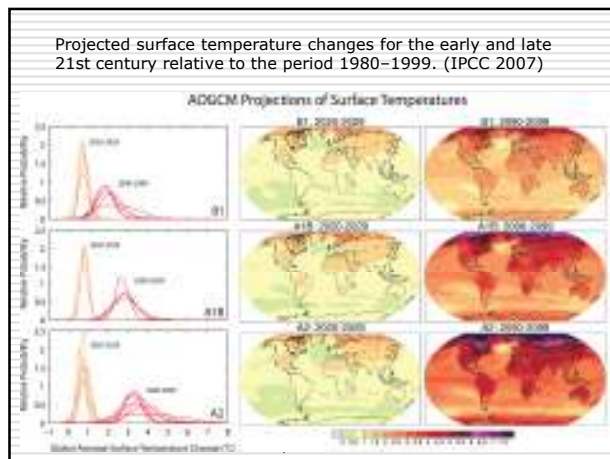
Climate Change and Disaster Impact Reduction 2

Recent climate predictions

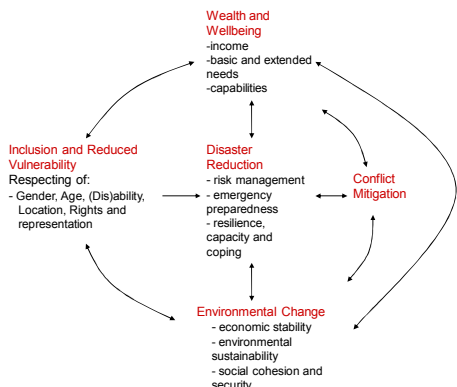
- ❑ 5 degree increase in temperature by 2080
- ❑ 50 million people at risk of hunger by 2020
- ❑ Flooding of millions of people in S, SE, and E Asia
- ❑ Increased toll on countries already with high burden of poverty and infectious disease

(IPCC Fourth Assessment Report 2007)

Climate Change and Disaster Impact Reduction 3



Climate change and disaster system 2



Example: Climate related risks to health based on an integrated health security approach

Health risk category	Process of change in health risk and resilience in relation to climate
Pathogens	Temperature and biogeochemical sensitivity.
Pathways	Distribution and viability of transmission routes of pathogens including via vectors (mosquitoes, flies, fleas, rats, snails, aquatic organisms etc) and environmental reservoirs (water, soil, phytoplankton, and living spaces.)
People	Temperature and water conditions. Nutrition security. Psychosocial wellbeing. Displacement. Exposure and susceptibility to infection. Socio-economic status and livelihood security.
Perceptions	Education. Fear. Experience. Conscience. Coping with uncertainty. Media representations.
Politics	Prioritisation of resources. Politics of humanitarian aid, trade and environmental issues including changing roles of international regimes, and conflict over natural resources.
Places	Environmental quality through drought and flood related changes to water, land, air, vegetation. Hazard modification in natural (i.e. land and water stability) and built environments (i.e. building, energy and water infrastructures).

Some Disaster Impact Reduction Challenges

- ❑ Reducing uncertainties (R+R assessment)
- ❑ Localising solutions (R+R management)
- ❑ Engaging people (R+R governance)
 - ❑ Empower people – communication and research
 - ❑ Sensitise institutions - ditto
 - ❑ Delineate responsibilities of the state
 - ❑ Legislate rights of individuals, and responsibilities of informal and private sectors