

MSc Climate Change, Development and Policy

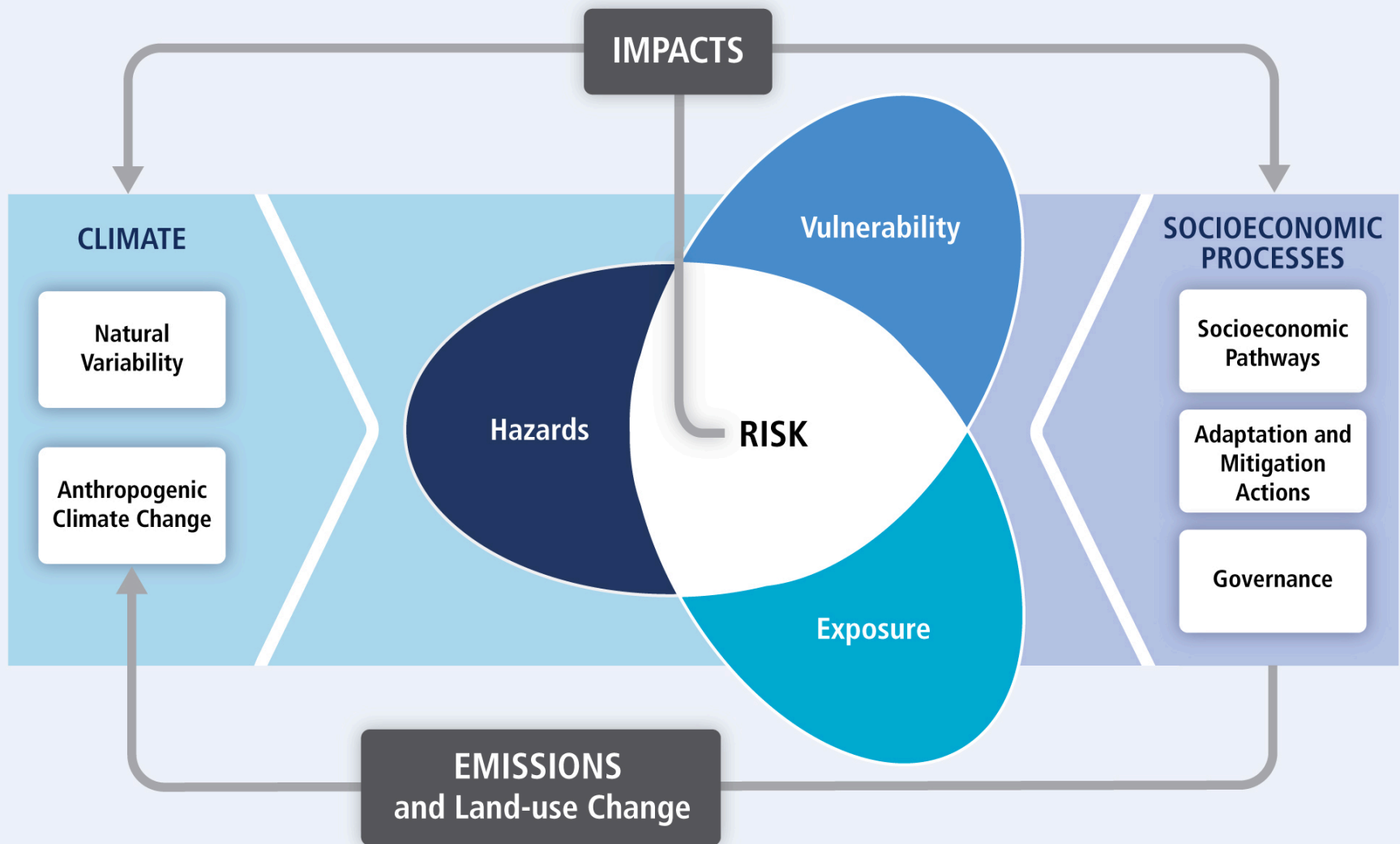
838F8 Climate change impacts and adaptation

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In sum:

- **What are the Climate Impacts?**
 - **Climate risk assessment, across key sectors**
- **What can we do about it**
 - **Status of our adaptation response**
 - **Barriers and opportunities**





Aim to move towards climate 'resilience'

Is this module...

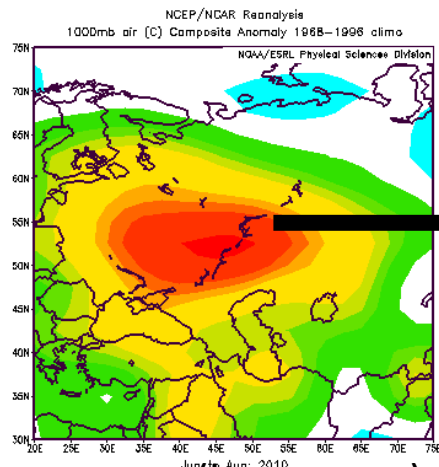
'Climate change Impacts and Adaptation' ?
(following IPCC WG2)

Or...'Climate risk management'?

Or....'Climate resilient development' ?
(see option 701M9)



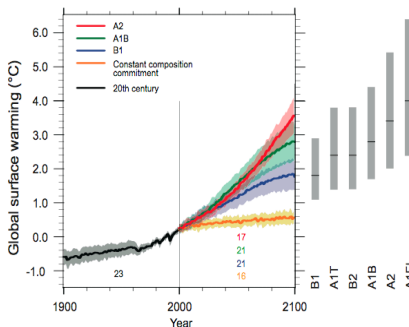
Example: Russian heat wave, agriculture and global food prices (2010)



Climate event (heat wave)



Political decisions and commodity market effects

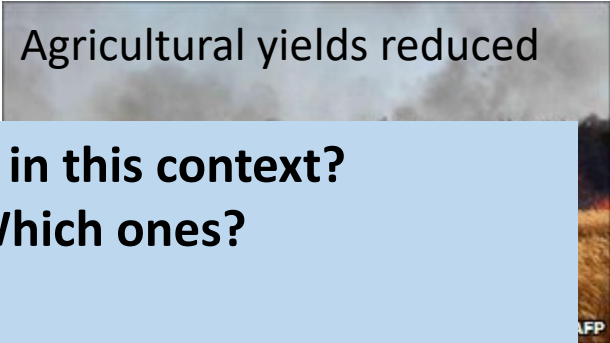
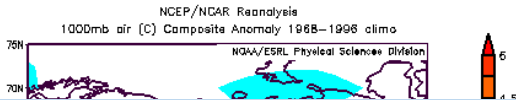


Will it be worse in the future and what can we do about it?

Impacts on livelihoods around the world



Example of the challenge: Russian heat wave, agriculture and global food prices (2010)

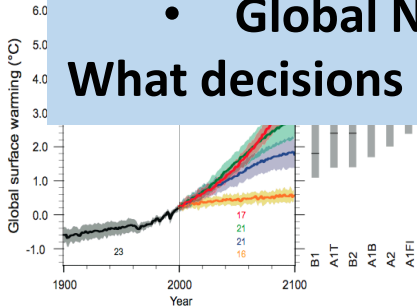


Who makes adaptation decisions in this context?

- National governments? Which ones?
- Farmers?
- Agri-business?
- Commodity traders?
- Investment funds?
- Food industry supply chain?
- Global NGOs?

What decisions should they make?

Political decisions
and commodity
market effects



Impacts on
livelihoods
around the
world



Will it be worse in the future and what can we do about it?

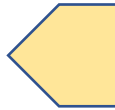
Module themes and content

Framing

- Evolution of perspectives on adaptation ‘impact’ vs ‘livelihoods’
- Policy frameworks
 - UNFCCC, SDGs, Sendai etc
 - Climate adaptation finance

Sectoral risk assessments (‘Understanding risk’)

- Water
 - Agriculture/Food
 - Human health
 - Urban and coastal environments
 - Human migration
- How do we determine climate impacts on key sectors?
- Towards ‘Robust’ evidence in complex systems



Adaptation/risk management in practice (‘planning for risk’)


- From national planning to sector specific
- Technical aspects
 - Climate information, DMUCU etc
- Contested concepts e.g. CSA

Illustrate with real world examples

- Drawing on wide portfolio of Sussex projects



Teaching methods

- Lectures ‘Set the scene’
 - Seminars: ‘Deep dive’
 - Critical assessment
 - Active role playing
 - Serious games
 - Case study analysis
 - Debates
 - (all based on group work)
 - Assessment
 - 5000 word Short term paper
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- The ‘adaptation profession’
 - Climate information: is it good enough?
 - National risk assessment and adaptation planning
 - Adaptation case studies: programmes and projects
 - Approaches to decision making under uncertainty
 - Understanding vulnerability

Learning outcomes

- At the end of the course students will gain understanding of..
 - The various **perspectives** on adaptation
 - The global **policy** context
 - The landscape of adaptation **activities** and how adaptation looks **in practice**
 - The **methods** of climate change impact and risk assessment
 - The climate change **risks** in key sectors
 - The **challenges and barriers** to adaptation

Draft programme

week	Lecture title	Seminar title
1	Perspectives on adaptation	The professional landscape: Jobs in the climate change adaptation sector
2	Policy Context and climate finance	National planning in the UK
3	Impacts on the water sector	National planning around the world
4	Decision making under climate uncertainty (DMUCU) in the water sector	Understanding climate resilience - from academia to practice
5	Agriculture and food	DMUCU: A hypothetical role play (MT)
6	Climate resilience today: Lessons from hazard risk management	Climate smart agriculture: triple wins, for whom?
7	Climate, environmental change and migration	Serious games for understanding risk management. Part 1
8	Climate, environment and conflict	Serious games for understanding risk management. Part 2
9	Climate change and health	Planning for heat waves (MT)
10	Urban impacts and coastal risk	Detecting climate change signals in health data
11	Challenges in climate resilient development: experience from West Africa	Disaster Risk Financing