

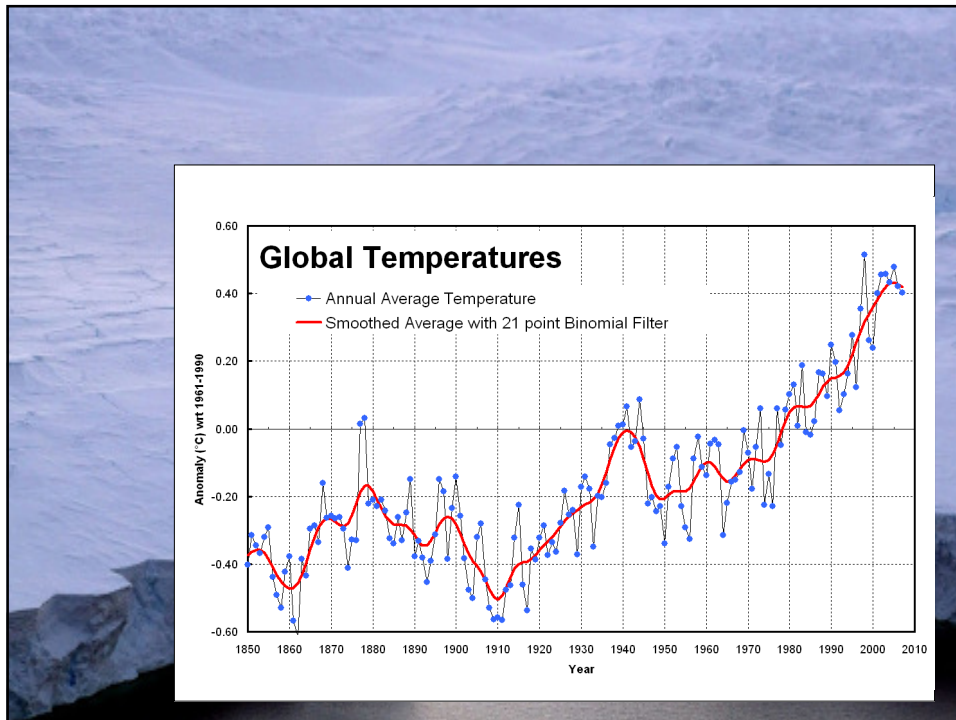
# The Human Cost of Climate Change

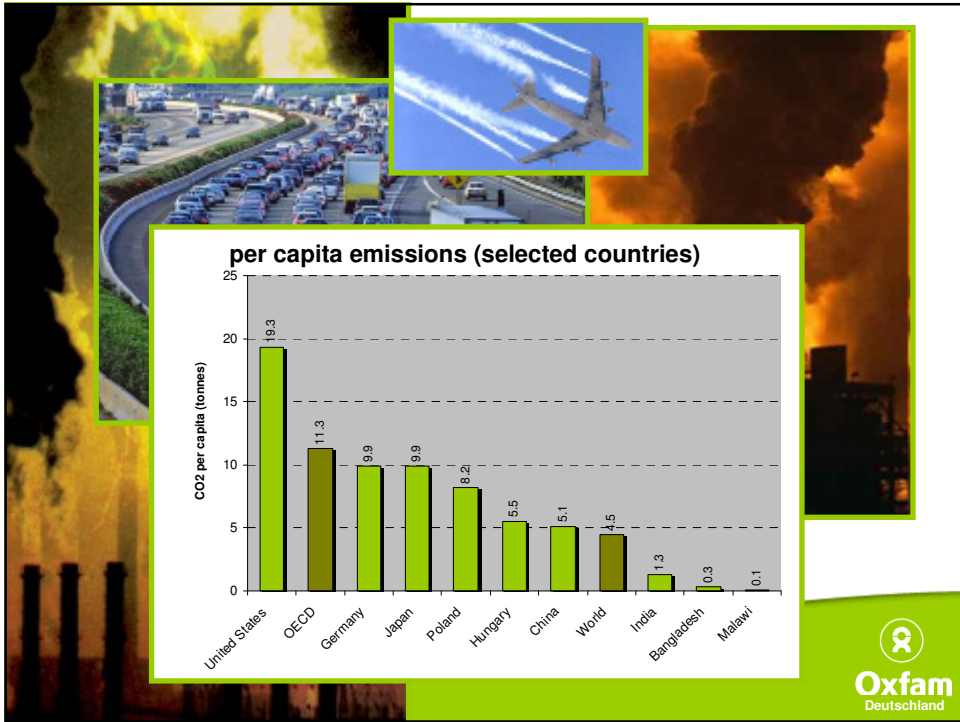
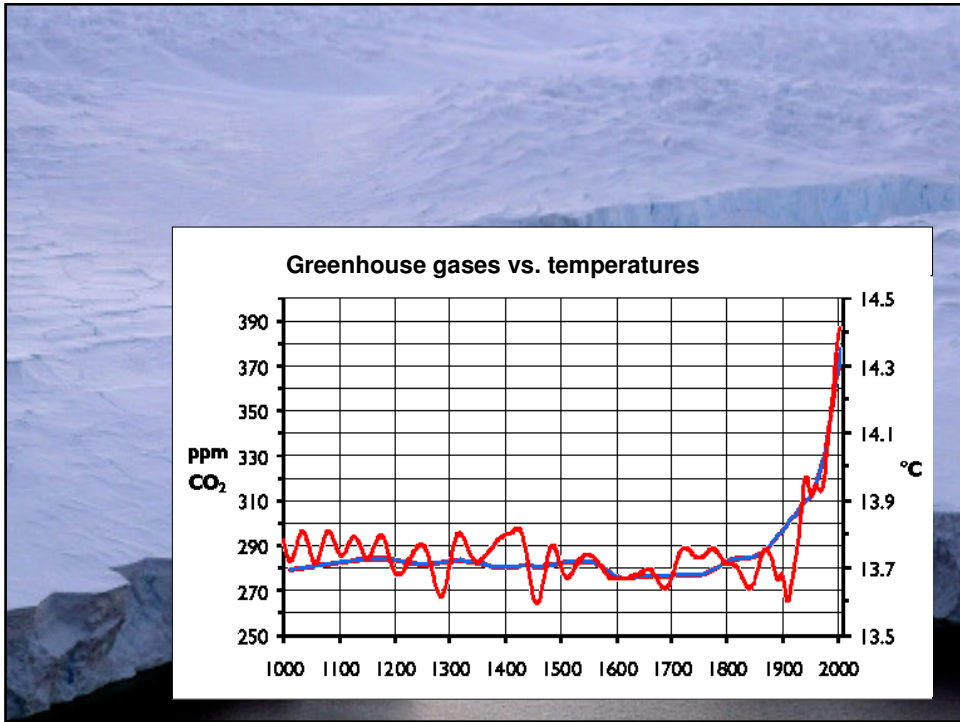
**Jan Kowalzig**

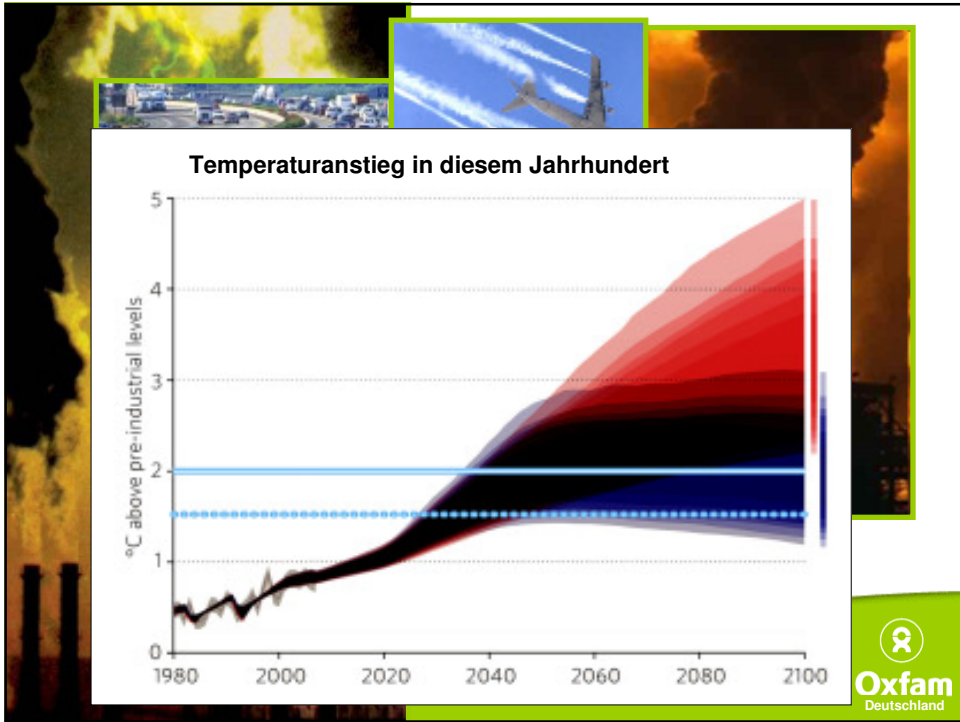
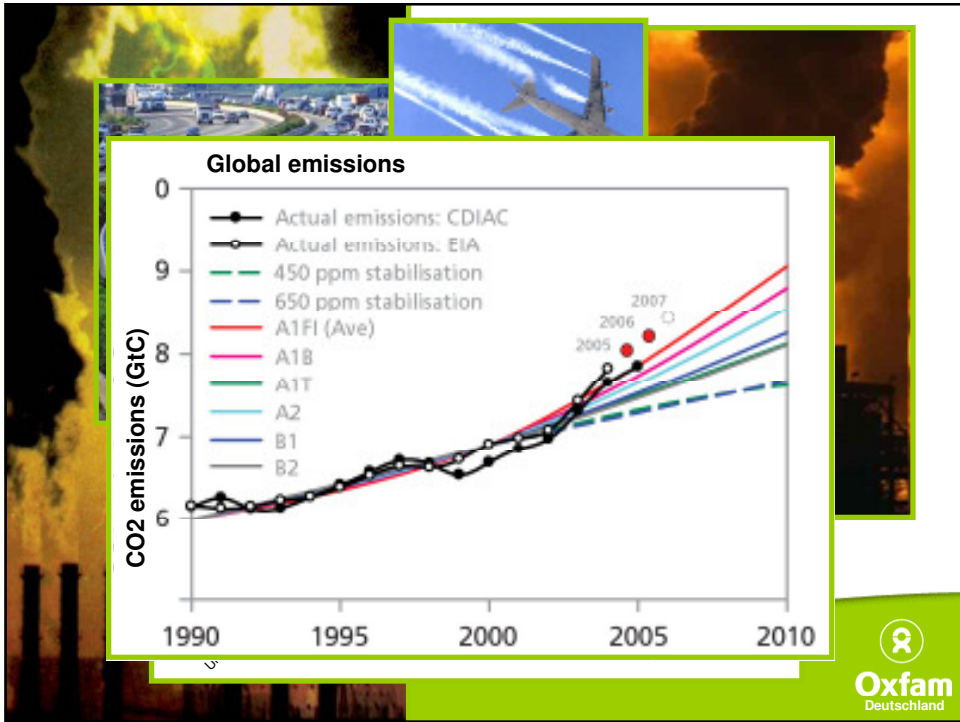
Senior Policy Advisor Climate Change

[jkowalzig@oxfam.de](mailto:jkowalzig@oxfam.de)

Warsaw, 10 February 2011





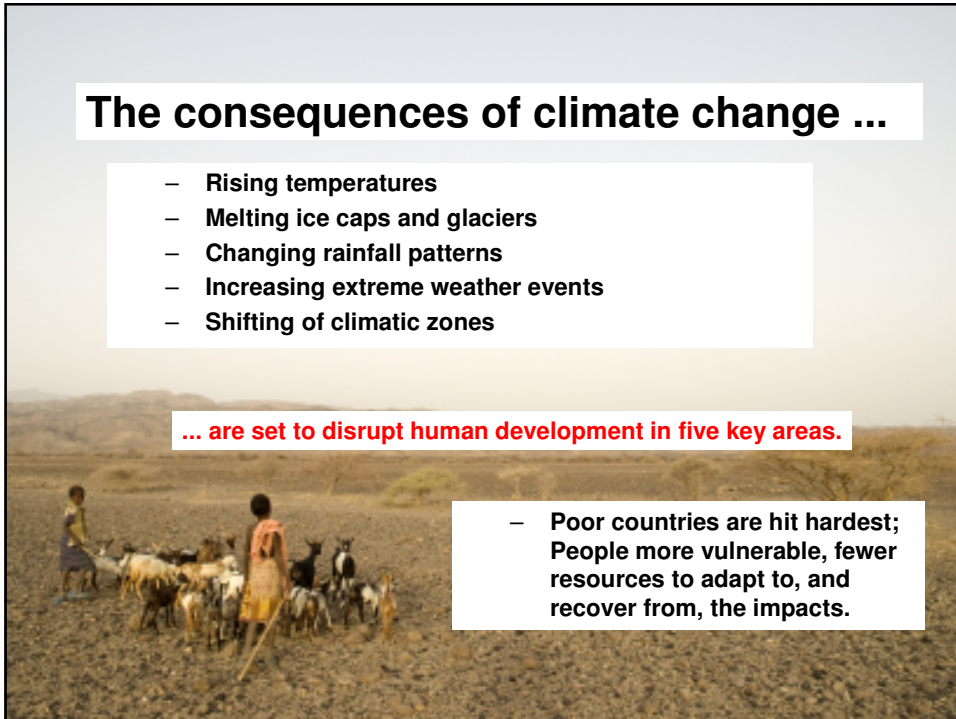


## The consequences of climate change ...

- Rising temperatures
- Melting ice caps and glaciers
- Changing rainfall patterns
- Increasing extreme weather events
- Shifting of climatic zones

... are set to disrupt human development in five key areas.

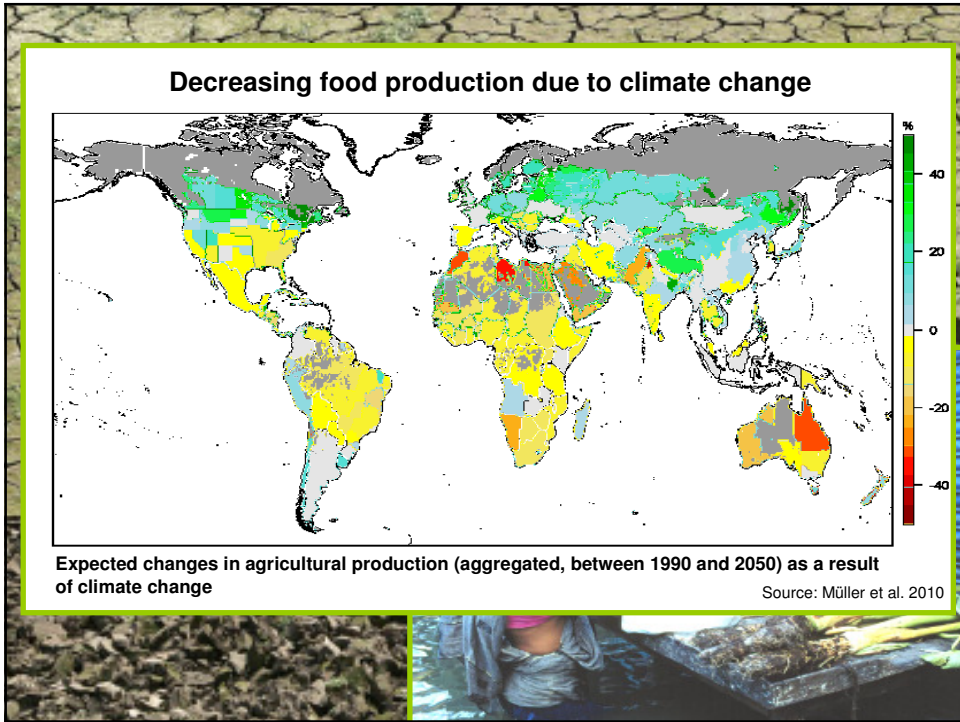
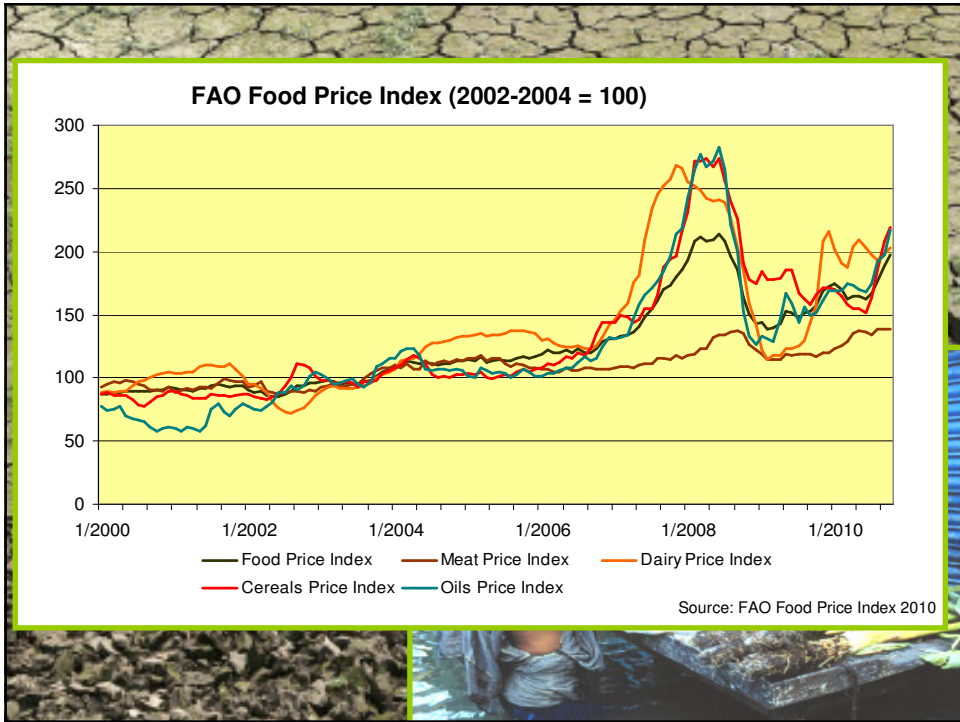
- Poor countries are hit hardest; People more vulnerable, fewer resources to adapt to, and recover from, the impacts.

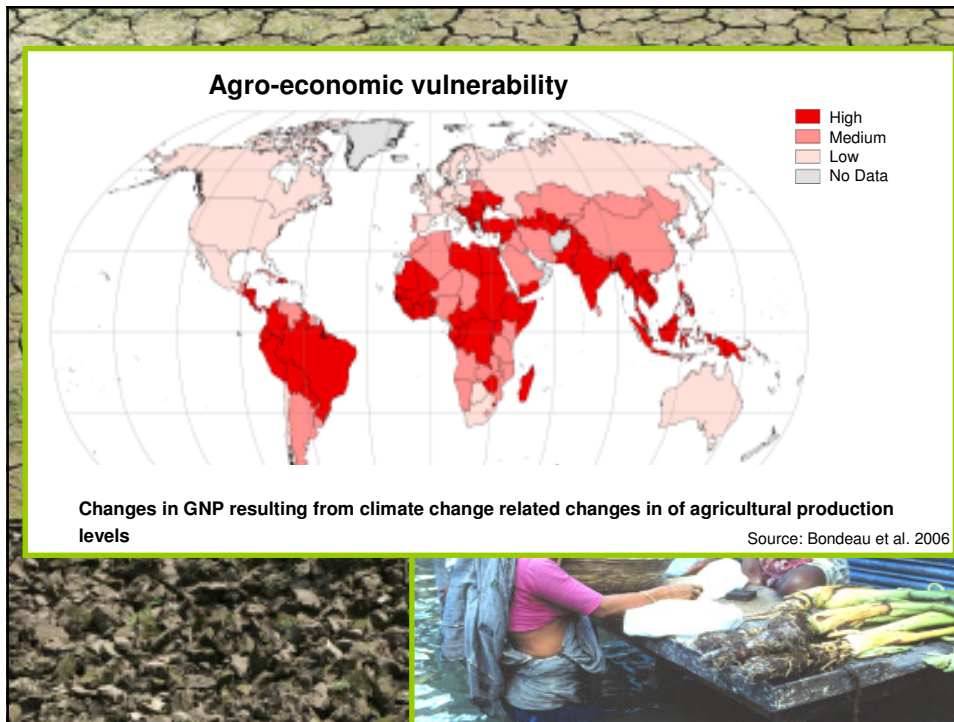


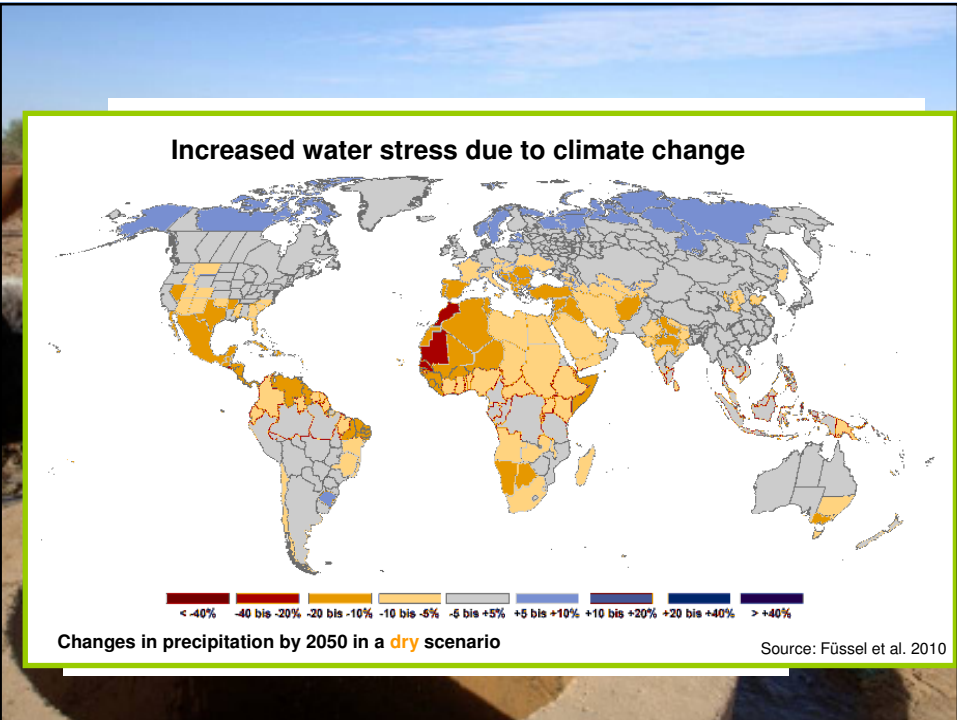
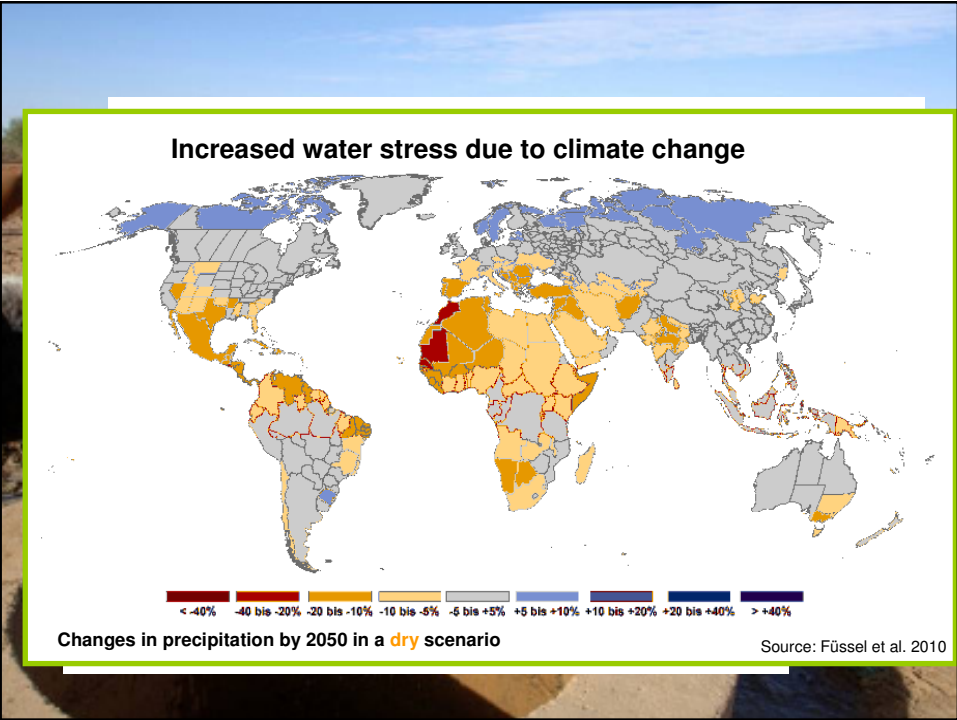
## Impacts 1

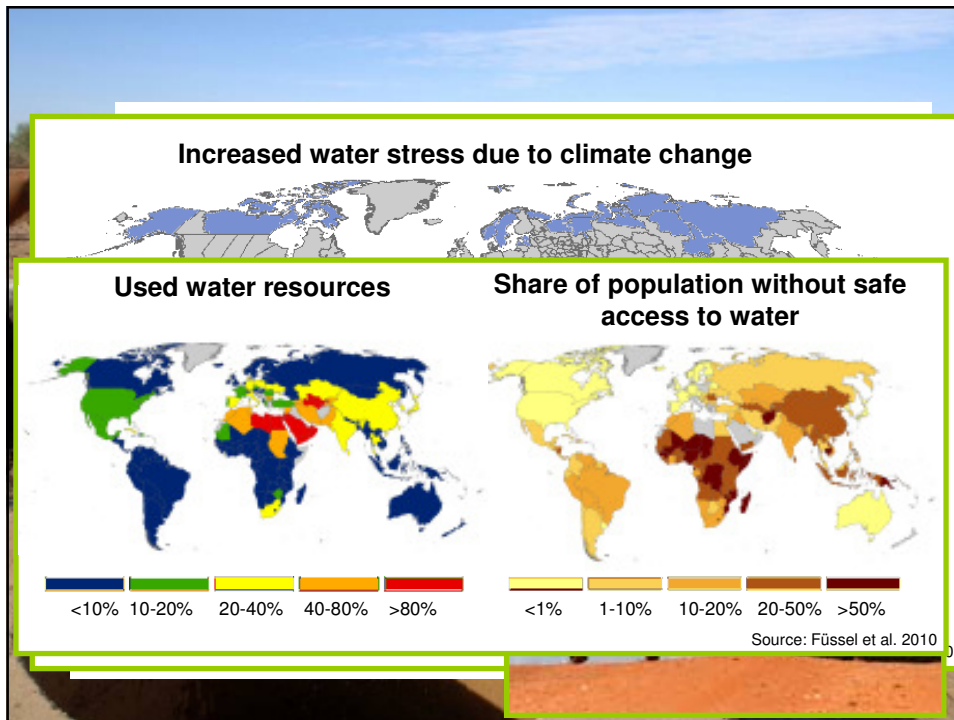
- 1 Disrupting food production:** decreasing yields and crop failures, rural poor lose their livelihoods, price increases in commodity markets, by 2080 more than 600m people additionally affected by hunger and malnutrition.











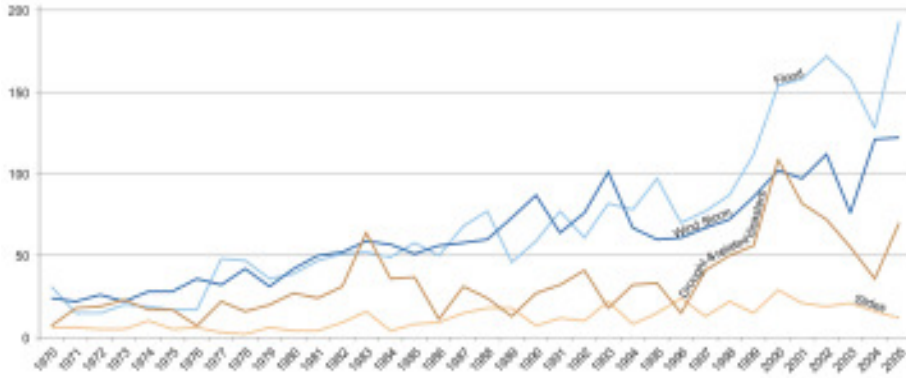
## Impacts 3

**3** Sea level rise and weather disasters: by 2050 150-350 million „climate refugees“; tropical storms, droughts or floods destroy livelihoods of people (and threaten their lives!).



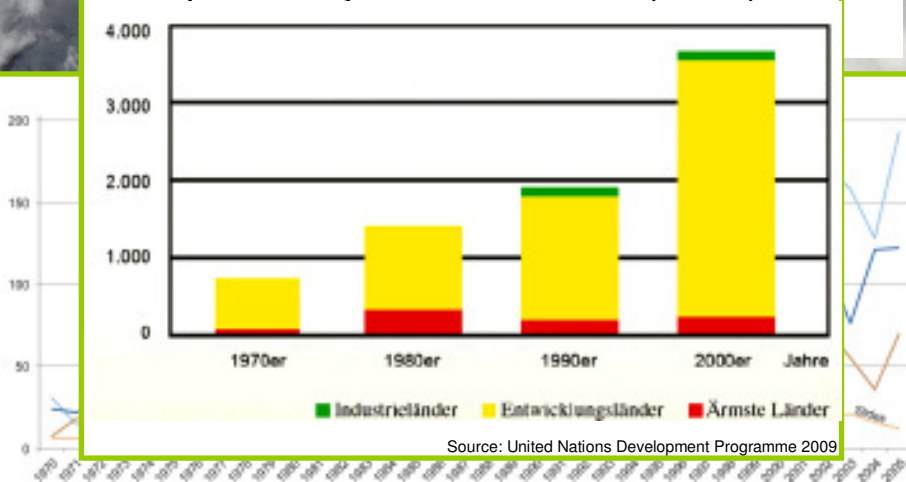
# Impacts 3

Climate related disasters 1970-2005



Source: International Strategy for Disaster Reduction 2009

People affected by climate related disasters (millions)



Source: United Nations Development Programme 2009

Source: International Strategy for Disaster Reduction 2009



## Impacts 4

### **4 Damages to ecosystems and biodiversity:**

20-40% of world species may become extinct, coral bleaching, disappearing rainforests; 45-90% of the „GDP or the poor “ directly linked to intact ecosystems.

### Impacts on ecosystems

- >3.5°C**
  - most ecosystems substantially altered
  - Large scale species extinction
- 3.5°C**
  - 21-52% species lost
  - coral bleaching complete
- 2,5°C**
  - 9-31% species lost
  - large scale coral bleaching
  - large scale losses of Amazonian forests
- 1.5°C**
  - Increased coral bleaching
  - Polar ecosystems substantially damaged

Source: IPCC 2007

20-40% of world species may become extinct, coral bleaching, disappearing rainforests; 45-90% of the „GDP or the poor “ directly linked to intact ecosystems.



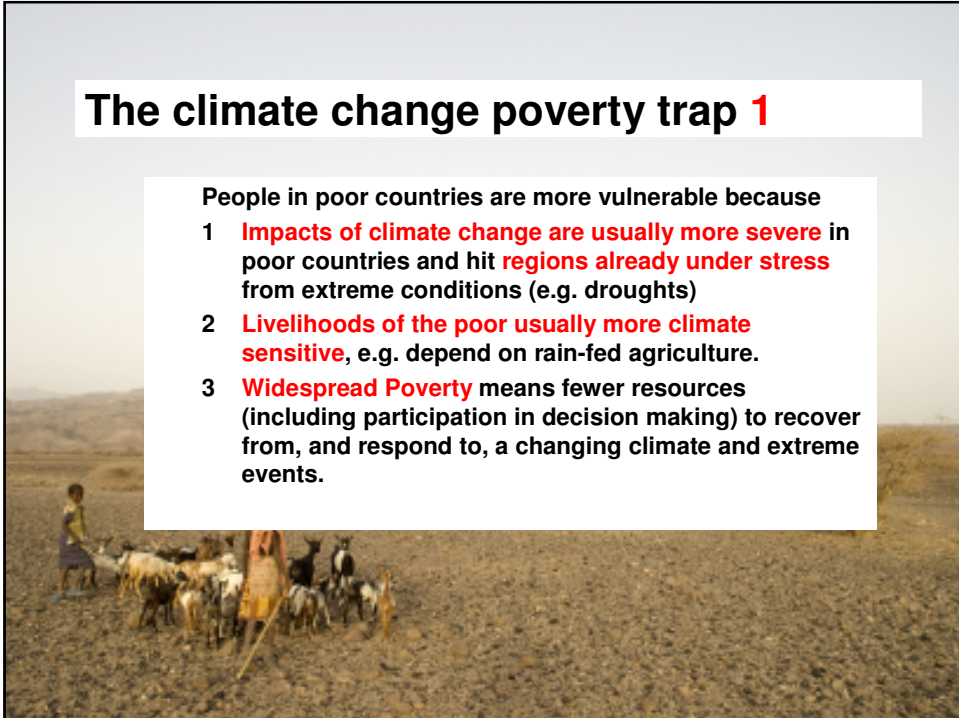
## Impacts 5

**5** Spread of disease: Spread of parasites, Malaria, Dengue fever; 500 million additionally exposed to Malaria by 2080.

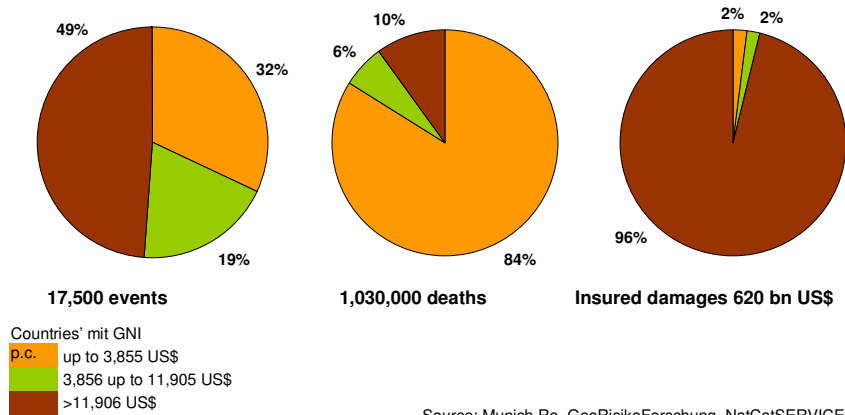
## The climate change poverty trap 1

People in poor countries are more vulnerable because

- 1 **Impacts of climate change are usually more severe** in poor countries and hit **regions already under stress** from extreme conditions (e.g. droughts)
- 2 **Livelihoods of the poor usually more climate sensitive**, e.g. depend on rain-fed agriculture.
- 3 **Widespread Poverty** means fewer resources (including participation in decision making) to recover from, and respond to, a changing climate and extreme events.



### Access to insurance, extreme disasters globally 1980-2009



## The climate change poverty trap 2

Vicious circle of poverty turns into a downward spiral:

- 1 **Climate change poses few "new" challenges but increase existing ones.**
- 2 **Poverty forces low risk behaviour, resulting in low income opportunities** (e.g. growing drought resistant crops that have lower yields).
- 3 **Loss of production means** (e.g. cattle) as a direct result of disasters but also indirectly, e.g. when production means are sold to compensate for damages e.g. crop failure.
- 4 **Lower spending on food, health, education** (children contributing to income) to compensate for crop failures; worsening people's income basis.
- 5 **Decreasing income as a result of hunger and malnutrition and spread of diseases** (e.g. Malaria).
- 6 **More time consuming firewood and water collection**, resulting from climatic changes and ecosystem degradation => less time for income generation.

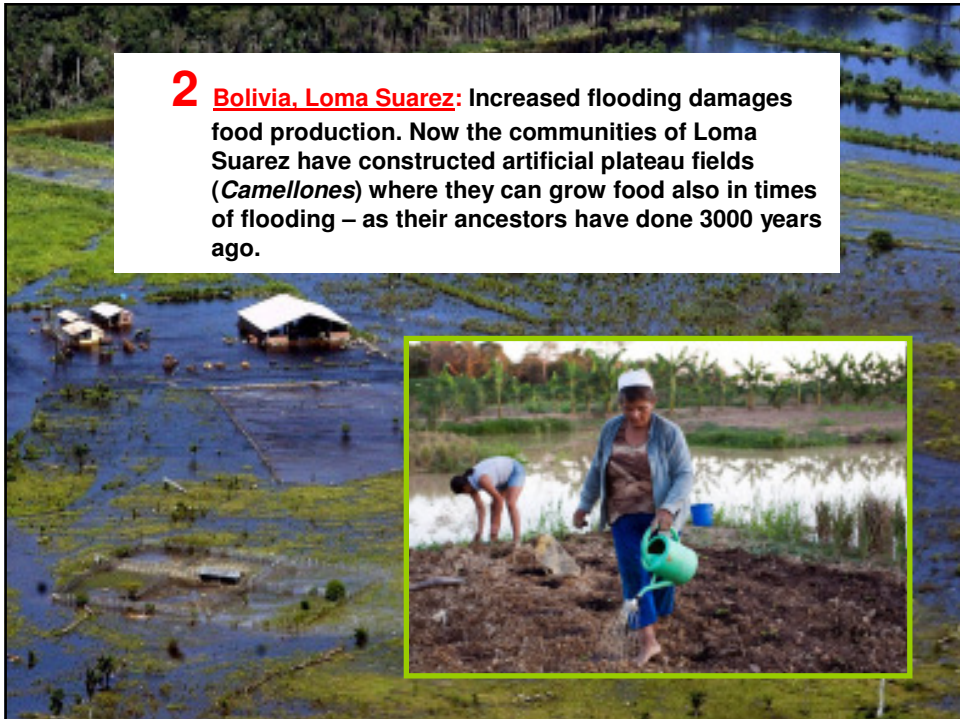
## Adapting to climate change

- 1 We cannot prevent climate change, but we can limit it. Hence, **adapting to the unavoidable is the key to get out of the downward spiralling poverty trap.**
- 2 **Adaptation is already happening – but needs substantial financial and technical support,** because of the scale and speed of the changes that go beyond the “default” adaptive capacity of many societies.

Examples ...



- 1 **Sri Lanka, Nuwara Eliya:** Droughts and heavy rains both eroding the soil – to compensate for lower yields, smallholder farmers have organised themselves in a co-operative. They can thus negotiate better prices with the retailers.



**2** **Bolivia, Loma Suarez:** Increased flooding damages food production. Now the communities of Loma Suarez have constructed artificial plateau fields (*Camellones*) where they can grow food also in times of flooding – as their ancestors have done 3000 years ago.



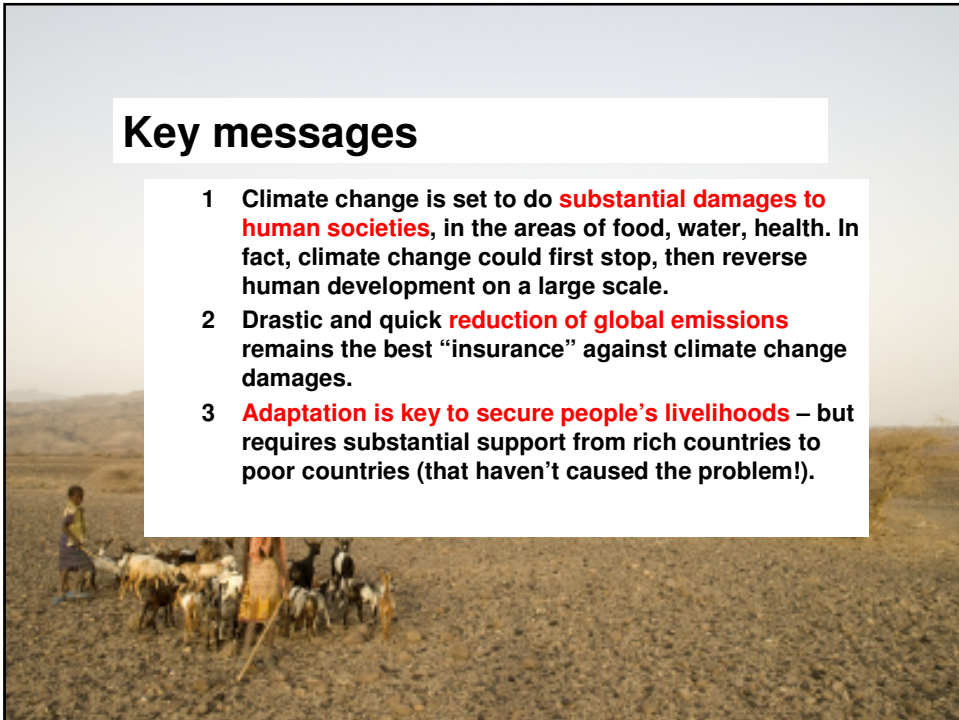
**3** **Thailand, Yasothorn:** low tech irrigation systems and introduction of drought resistant rice species saves the harvests of the people of Yasothorn. By switching to organic farming, the farmers spend less on pesticides, compensating lower yields. Also, farmers are now growing a variety of crops for subsistence, so they need to buy less food for their families.

**4** **Ethiopia, Affule:** Repairing and extensions of the traditional birkads, for collecting and storing of rain water – for human use, but also cattle.



## Key messages

- 1 Climate change is set to do **substantial damages to human societies**, in the areas of food, water, health. In fact, climate change could first stop, then reverse human development on a large scale.
- 2 Drastic and quick **reduction of global emissions** remains the best “insurance” against climate change damages.
- 3 **Adaptation is key to secure people’s livelihoods** – but requires substantial support from rich countries to poor countries (that haven’t caused the problem!).



**Thank you for your attention**

**Jan Kowalzig**

Senior Policy Advisor Climate Change

[jkowalzig@oxfam.de](mailto:jkowalzig@oxfam.de)

