The IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation

Risk management and adaptation

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Outline

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Definitions

- **Adaptation**
- T**he process of adjustment** to actual or expected climatic stimuli or their effects, in order to **moderate harm** or **exploit beneficial opportunities**.

- **Disaster risk management (DRM)**
- **Social processes** for **designing, implementing, and evaluating strategies, policies, and measures** to **improve the understanding of disaster risk, foster disaster risk reduction and transfer, and promote continuous improvement in disaster preparedness, response, and recovery practices**, **with the explicit purpose of increasing human security, well-being, quality of life and sustainable development**

Be prepared !!!!!!!!!


DISASTERS CAN STRIKE ANYWHERE
No matter who you are or where you live, you need to be ready to deal with unexpected disasters or emergencies, quickly and effectively.
DON'T BE CAUGHT UNPREPARED
CLICK HERE NOW!

Climate Extremes
Increasing frequency & intensity (1)

- **Disasters are appearing in everyday news**
- in Africa **the deadliest** weather disasters are droughts followed by famines.

- From October 2010 to September 2011, a severe drought in the Horn of Africa caused **widespread famine** and **large-scale migratory movements**, particularly in Somalia and Kenya.
- Around 80 percent of the livestock of Somalia's nomadic population died, some 13 million people required humanitarian aid, and an estimated 50,000 people lost their lives.

Climate Extremes
Increasing frequency & intensity (2)

- With 551 fatalities, the 2011 U.S. tornado season was the **deadliest** in more than 85 years.
- The Atlantic Ocean hurricane season was the third-**strongest** since record-keeping began, with 19 named storms.
- In May and June 2011, **the worst** floods in decades occurred along the Mississippi and Missouri rivers, causing more than $5 billion in overall losses

Climate Extremes
Increasing frequency & intensity (3)

- **The costliest** weather-related disasters are tropical cyclones, floods, winter storms, and thunderstorms.
- Hurricane Katrina, which occurred in 2005 and caused $125 billion in overall losses, was **the most expensive** weather catastrophe **ever.**

Risk Management & Adaptation
flash floods in Nairobi, Kenya

Risk Factors

- rapid growth of informal settlements
- weak building construction
- settlements buil near rivers and blocked drainag areas

Risk Management/Adaptation

- reduce poverty
- strengthen buildings
- improve drainage and sewage
- early warning systems

Projected: *likely* increase in heavy precipitation in East Africa

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Risk Management & Adaptation

drought in the context of food security in W. Africa

Risk Factors

- more variable rain
- population growth
- ecosystem degradation
- poor health and education systems

Risk Management/ Adaptation

- improved water management
- sustainable farming practice
- drought-resistant crops
- drought forecasting

Projected: *low confidence* in drought projections for West Africa

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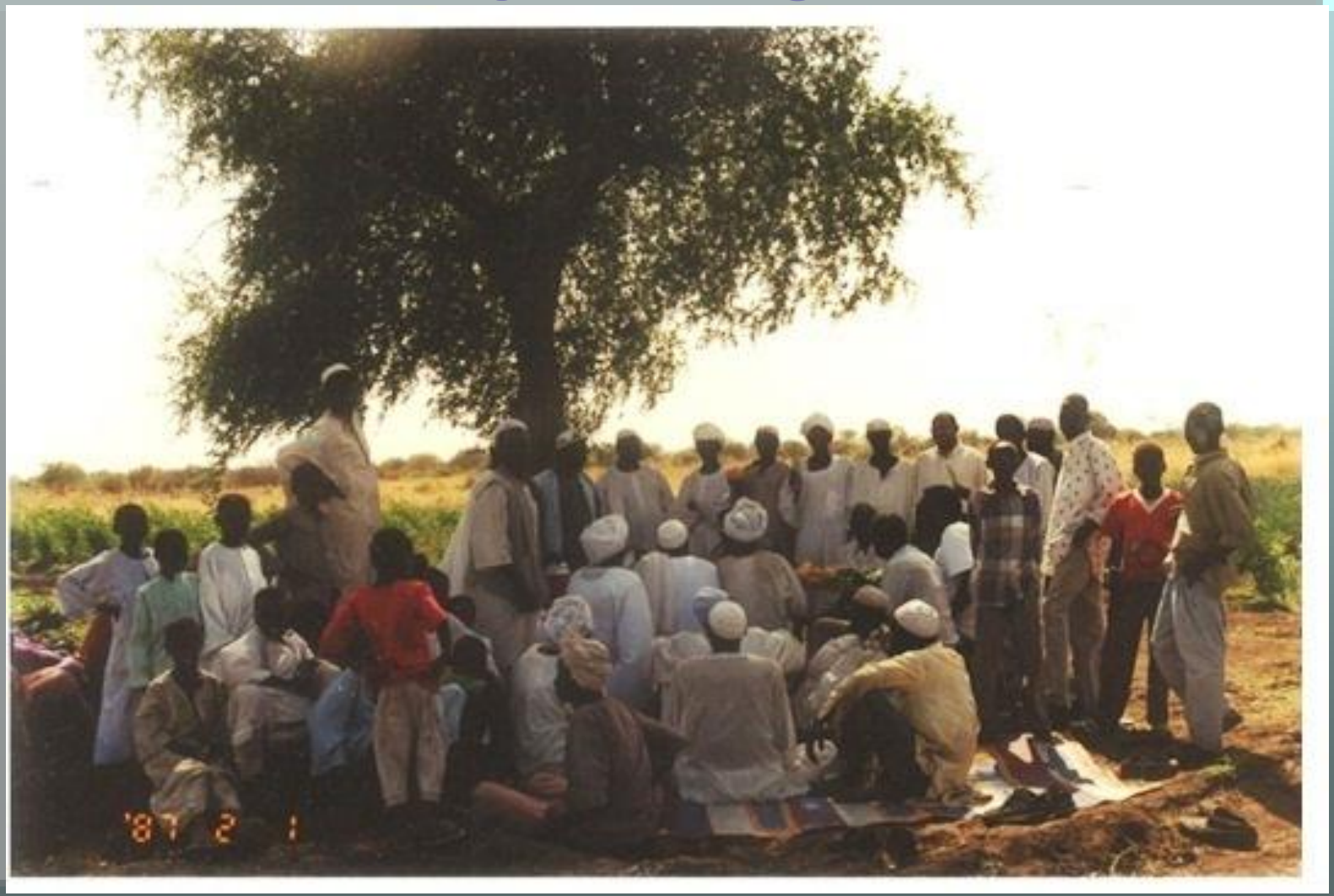
Risk Management & Adaptation

Key messages



Trends in vulnerability and exposure are major drivers of changes in disaster risk (*high confidence*)

- Understanding the multi-faceted nature of both **vulnerability** and **exposure** is a **prerequisite** for **designing and implementing effective adaptation & DRM strategies**.
- Vulnerability reduction is a core common element of **adaptation and disaster risk management**.

Recurrent drought in the Africa Sahel

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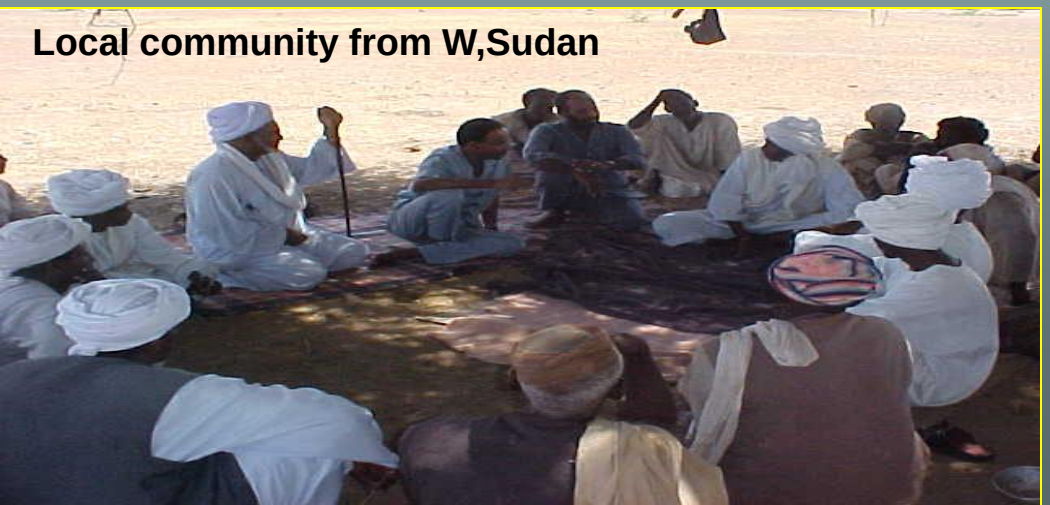
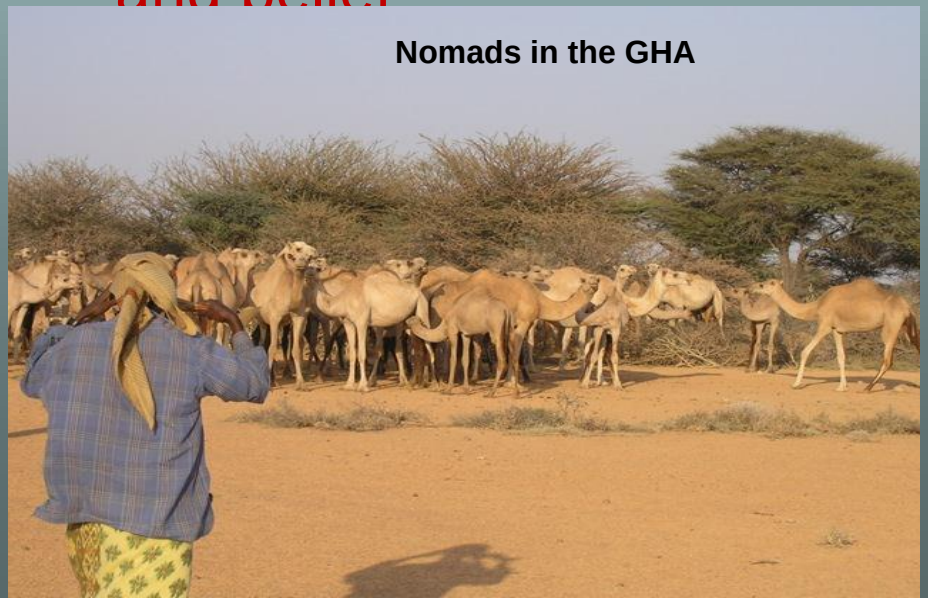
Integration of local knowledge with external scientific and technical knowledge can improve local participation in DRR& CC adaptation (*high agreement, robust evidence*)

- Community-Based adaptation can benefit management of DR and climate extremes, but is constrained by **the availability of human and financial capital and of DR and climate information customized for local stakeholders**


Local community from W,Sudan

Appropriate and timely risk communication is critical for effective adaptation & DRM (*high confidence)*

- Explicit characterization of uncertainty and complexity **strengthens risk communication**.
- Effective risk communication requires **exchanging, sharing, and integrating knowledge** about climate-related risks among all stakeholder groups.
- Among individual stakeholders and groups, perceptions of risk are driven by psychological and cultural factors, values, and belief



Inequalities influence local coping and adaptive capacity, and pose challenges to DRM & adaptation (*high agreement, robust evidence*)

- These inequalities reflect socioeconomic, demographic, and health-related differences and differences in access to livelihoods and entitlements.

A woman from East Sudan

A woman carrying Barely-Souss-Morocco

Nomads in Central Sudan

Risk sharing and transfer mechanisms can increase resilience to climate extremes at local, national, and international scales

- Insurance and other forms of risk transfer are linked to DRR& CC adaptation by providing means to finance relief, recovery of livelihoods, and reconstruction, reducing vulnerability & providing knowledge and incentives for reducing risk.
- Uptake of formal risk sharing and transfer mechanisms is **unequally distributed across regions and hazards**

Kordofan State-W.Sudan

Attention to the temporal & spatial dynamics of vulnerability & exposure is important given that the design & implementation of adaptation &DRM strategies can reduce risk in the short term, but may increase vulnerability & exposure over the longer term. (*high agreement, medium evidence*)

- For instance, dyke systems can reduce hazard exposure by offering immediate protection, but also encourage settlement patterns that may increase risk in the long-term

A road is turned into virtual river amid rising flood waters. (Photo courtesy of Haziq Ariffin) 26/1/2011

Vehicles float on a rising sea of flood water along Siteen Road. (Photo courtesy of Sarah Qamar) 26/1/2011

Low-regrets measures for current DRM are entry points for addressing projected trends in exposure, vulnerability, as they have the potential to offer benefits now and lay the foundation for addressing projected changes (*high agreement, medium evidence*).

- Many of these low-regrets strategies produce co-benefits, help address other development goals, such as **improvements in livelihoods, human well-being, and biodiversity & help minimize the scope for maladaptation.**

Closer integration of DRM & Adaptation, along with the incorporation of both into local, national, & international development policies & practices, will provide benefits at all scales

(*high agreement, medium evidence*)

Small Dam in Souss S. Morocco

Thanks

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