

Second Annual Conference on Climate Change and Development in Africa

Theme:

Advancing Knowledge, Policy and Practice in Climate Change and Development

**Emerging knowledge, science and partnerships for
enhancing Africa's negotiation position**

**Special Report on Managing the Risks of Extreme Events and
Disasters to Advance Climate Change Adaptation (SREX)**

by

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Outline

The Report highlights

**Africa's exposure to climate
change and extremes**

Key Africa-relevant messages

The Report---

Responds to the need to address the gap in information related to climate extremes.

Explores relations and interactions between disasters resulting from extreme climates and development

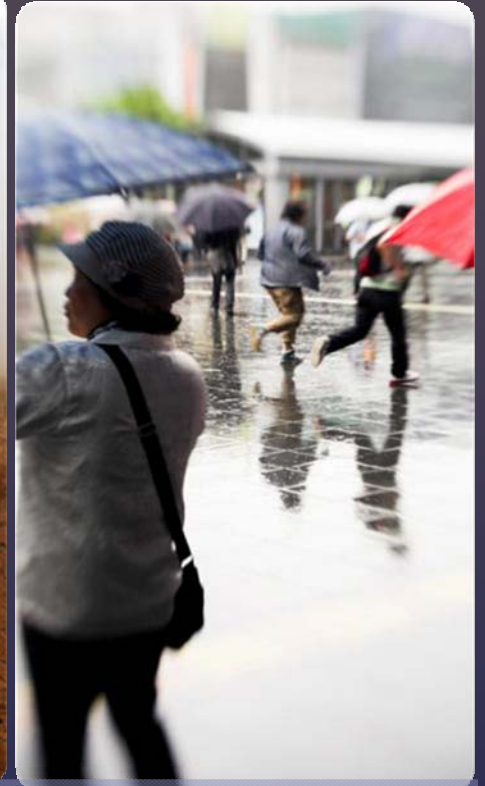
Demonstrates how the exposure to extremes and vulnerability to climate change can hinder development efforts

The Report ---

- Provides scientific evidence, demonstrating that extreme events which used to occur infrequently & perceived today as '**abnormal**' will be tomorrow's '**normal**' weather.
- Examines how human responses to Extreme Events and the consequent disasters could contribute to adaptation objectives.
- Calls for building cooperation and partnership with development partners and agencies working on disaster risk management and climate change adaptation.

Key Findings

A changing climate is leading to changes in extreme weather and climate events



Increasing frequency & intensity of climate extremes

Impacts from weather and climate events depend on:



nature and severity of event



vulnerability



exposure

Africa is vulnerable to different types of climate extremes

Droughts

Floods

Heat Stresses

Tropical Cyclones



Risk Management & Adaptation

flash floods in Nairobi, Kenya

Risk Factors

- rapid growth of informal settlements
- weak building construction
- settlements built near rivers and blocked drainage areas



Nairobi, Kenya

Risk Management/Adaptation

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

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

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

High levels of vulnerability, combined with more severe and frequent weather and climate extremes, may result in some African coastal cities, being increasingly difficult places in which to live and work

Risk Factors

- shore erosion
- saltwater intrusion
- coastal populations
- tourism economies



Risk Management/ Adaptation

- Early warning systems
- maintenance of drainage
- Regional risk pooling
- relocation

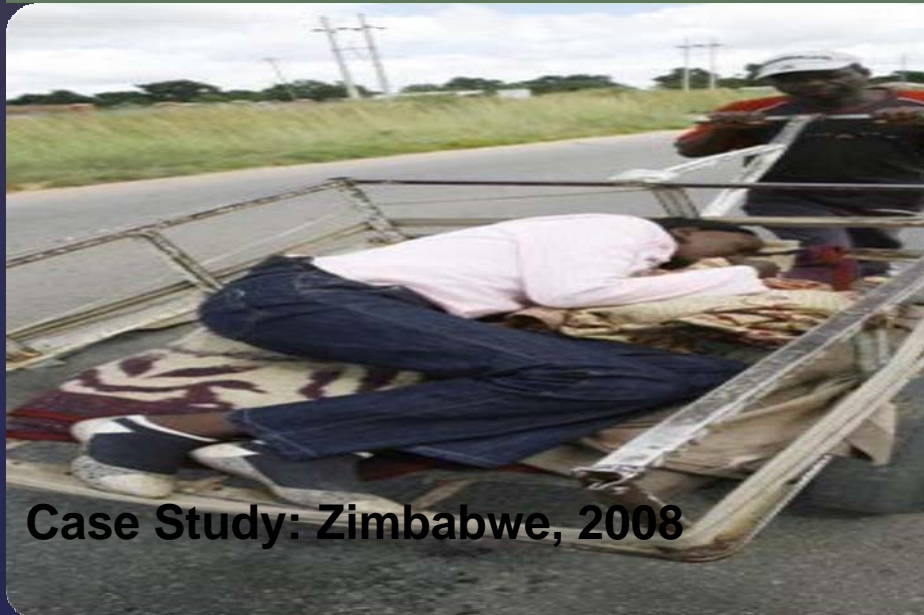
Risk Management & Adaptation

Key Africa-relevant messages



Even without taking CC into account, disaster risk will continue to increase in many African countries **as more vulnerable people and assets are exposed to weather extremes**

*For exposed and highly vulnerable communities, even non-extreme climate events can have **extreme impacts***



Case Study: Zimbabwe, 2008



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.

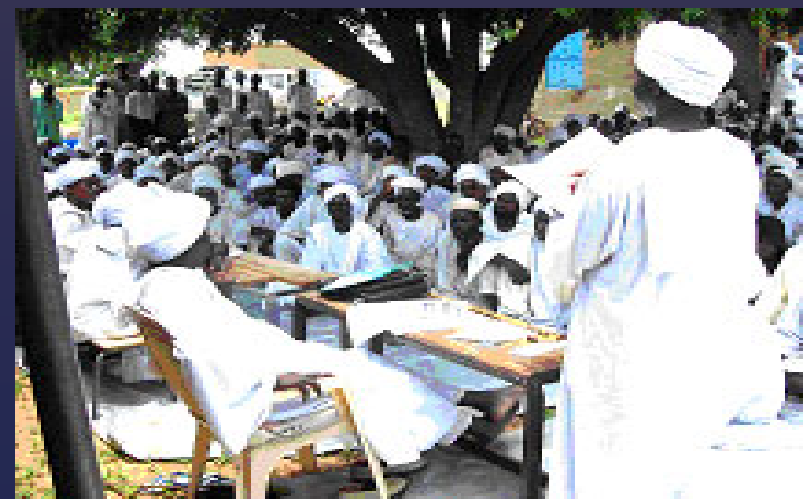


Integration of **local knowledge** with external scientific and technical knowledge can improve local participation in DRR & CC adaptation

(high agreement, robust evidence)

Community-Based adaptation can benefit management of DR & climate extremes, but is **constrained** by **the availability of human & financial capital & of DR & 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 strengthens Risk Communication (RC). Effective RC requires exchanging, sharing, and integrating knowledge among all stakeholder groups.

Among individual stakeholders & groups, perceptions of risk are driven by psychological & cultural factors, values, and believes.



Inequalities influence local coping and adaptive capacity, & pose challenges to DRM & adaptation

(high agreement, robust evidence)

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

These mechanisms provide means to finance relief, recovery of livelihoods, and reconstruction,

Uptake of formal risk sharing and transfer mechanisms is unequally distributed across regions and hazards



Attention should be given to the temporal & spatial dynamics of vulnerability & exposure

(high agreement, medium evidence)

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**.



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 (LRMs) for current DRM are entry points for addressing projected trends in exposure & vulnerability,

(high agreement, medium evidence).

Many of these LRMs produce co-benefits, help address other development goals, such as improvements in human well-being & livelihoods

•It also helps 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



What is next?

The findings and key messages could help donors and MDBs frame their responses to the risk of future disasters & create a momentum for investments in DRR & climate resilient development in Africa

It could also be used to set the direction for AfDB & other organizations to invest more on the **regional cooperation** in areas related to e.g. the development of improved early-warning systems based on science and technology

Need to ensure that updated knowledge and scientific information made available to all stakeholders at different levels to help the most vulnerable protect themselves and their livelihoods against the new risks

Thanks

for more information

<http://www.ipcc.ch/>