

Climate Change Impacts in Africa – Today and Tomorrow

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Part A: Global and Sectoral Aspects. Contribution of Working Group II to AR5

Livelihoods and Poverty

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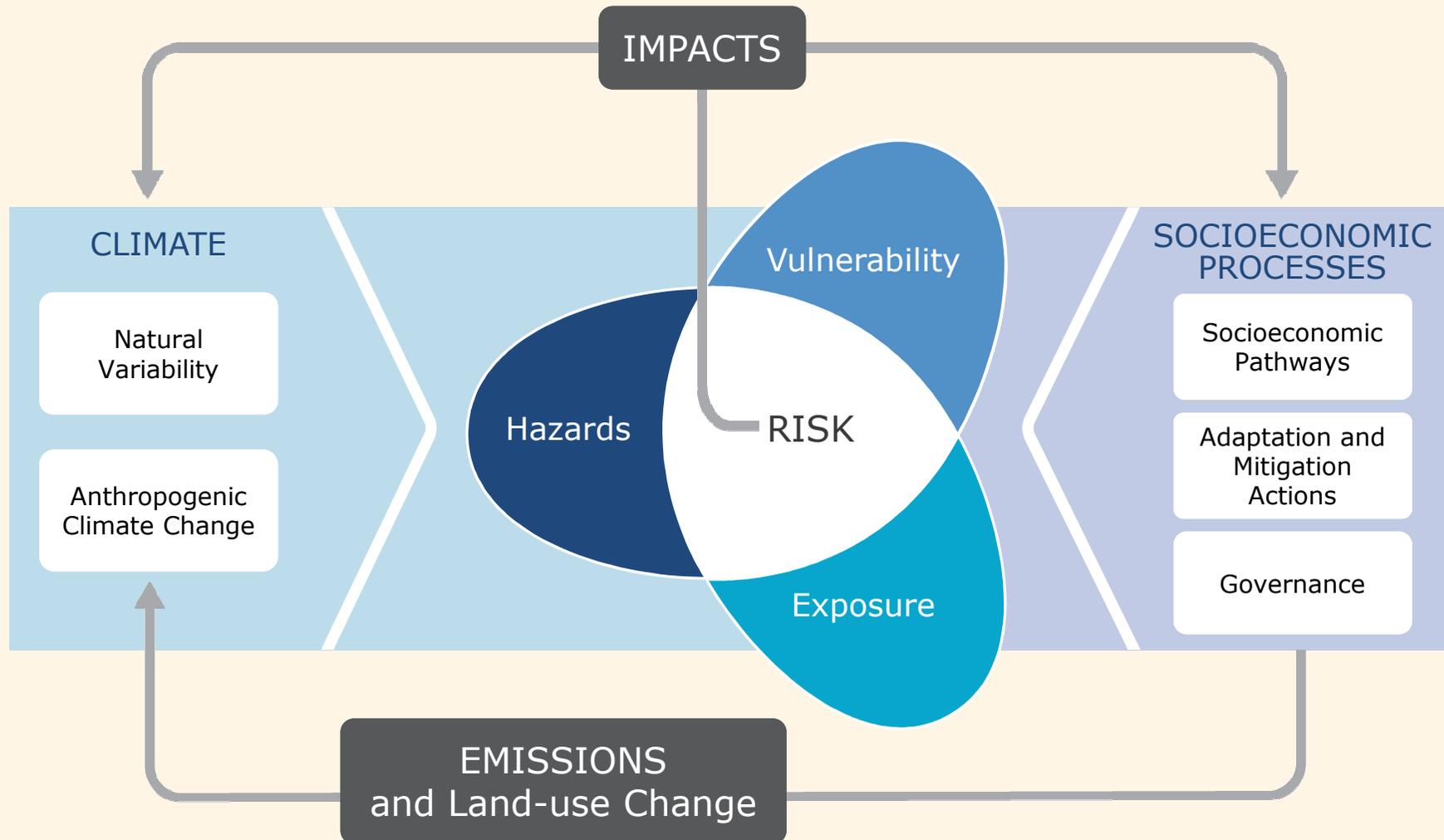
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Climate change poses risks to human and natural systems



Climate change poses risks to human and natural systems

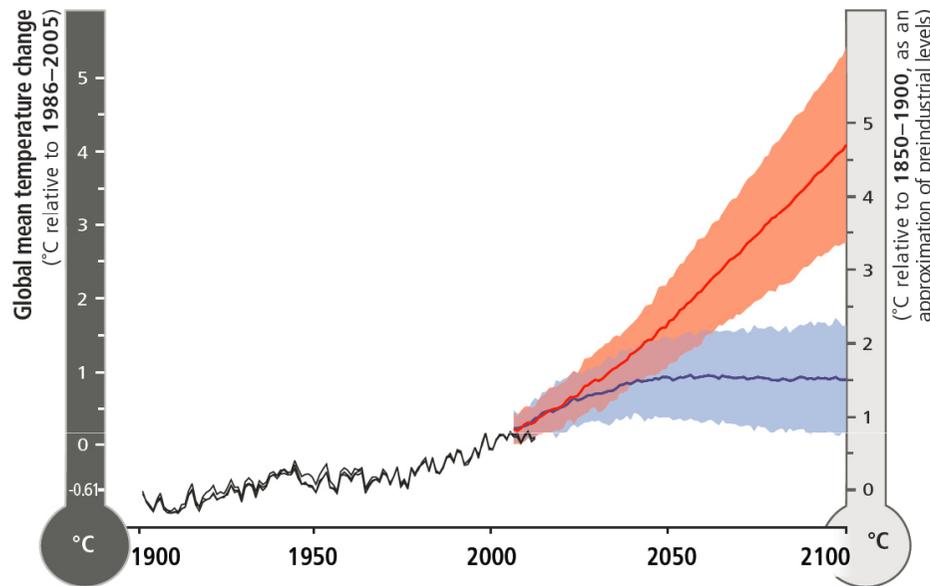
- Risks to climate change come from climate-related hazards (droughts, floods) and the vulnerability of exposed societies, communities and ecosystems (livelihoods, infrastructure, ecosystem services and governance)
- The vulnerability and exposure of African societies and ecological systems vary constantly because of the changes in the economic, social, demographic, cultural, institutional and governance
- Vulnerability to drought in sub-Saharan Africa is closely linked to poverty and poor rural economies

RISKS OF
CLIMATE CHANGE

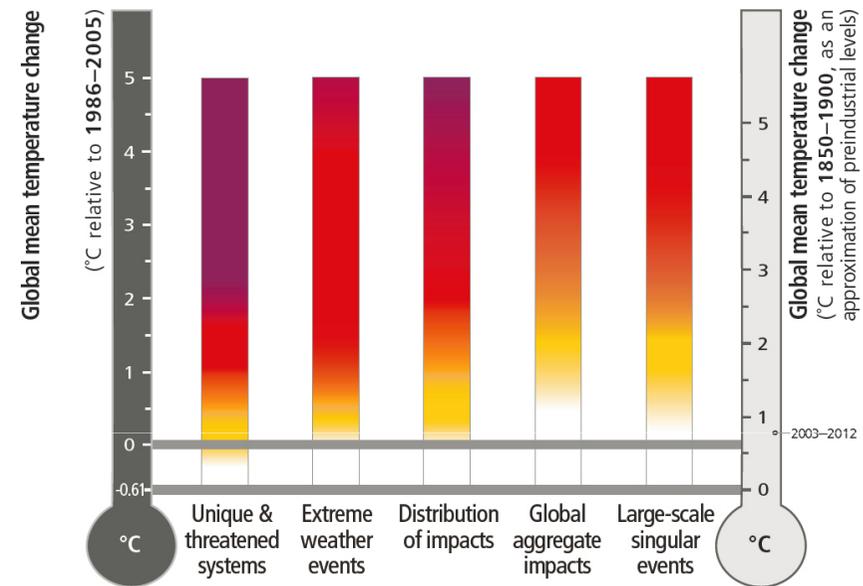
INCREASE

WITH CONTINUED
HIGH EMISSIONS

Additional climate related risks under increasing levels of climate change



— Observed
 RCP8.5 (a high-emission scenario)
 Overlap
 RCP2.6 (a low-emission mitigation scenario)



Level of additional risk due to climate change
 Undetectable Moderate High Very high

- 1-2°C => unique and natural systems threatened => food productivity, human health and water resources
- 4°C => increased likelihood of severe, pervasive and irreversible impacts – difficult to adapt to
- Increased risks of food insecurity, breakdown of food systems, loss of rural livelihoods & income
- Risks due to extreme events => breakdown of infrastructure networks

Climate change and development in Africa

- **Climate change threats could undermine the progress African countries have made** in tackling disease, malnutrition, infant mortality and gains in agricultural productivity.
- During this century, temperatures in the African continent are likely to **rise more quickly than in other land areas**, particularly in more arid regions
- Climate change is a threat to human security because it is:
 - undermining livelihoods
 - compromising culture and identity (Nganyi rainmakers in Western Kenya)
 - increasing migration that people would rather avoid
 - challenging the ability of states to provide the condition necessary for human security

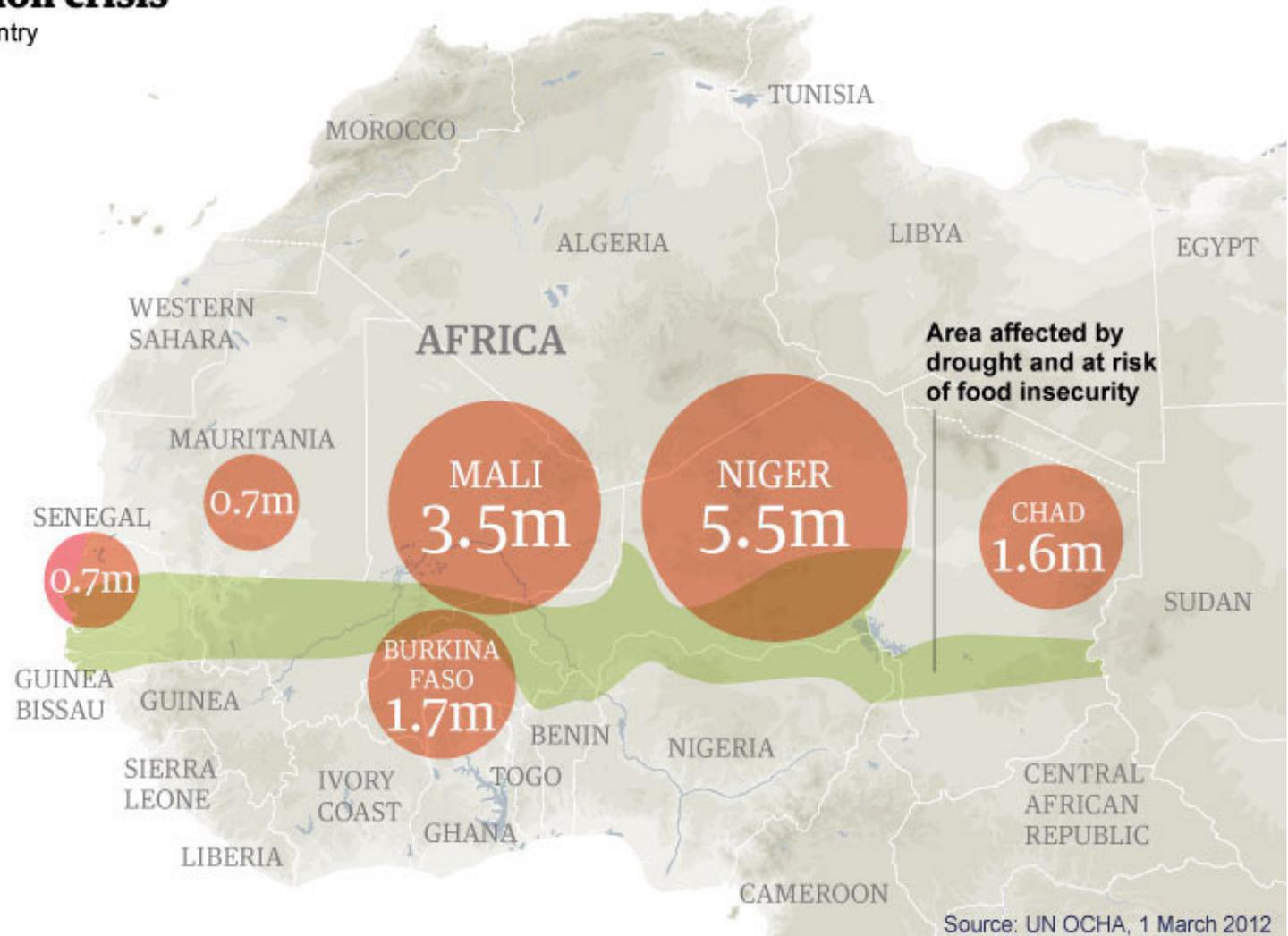
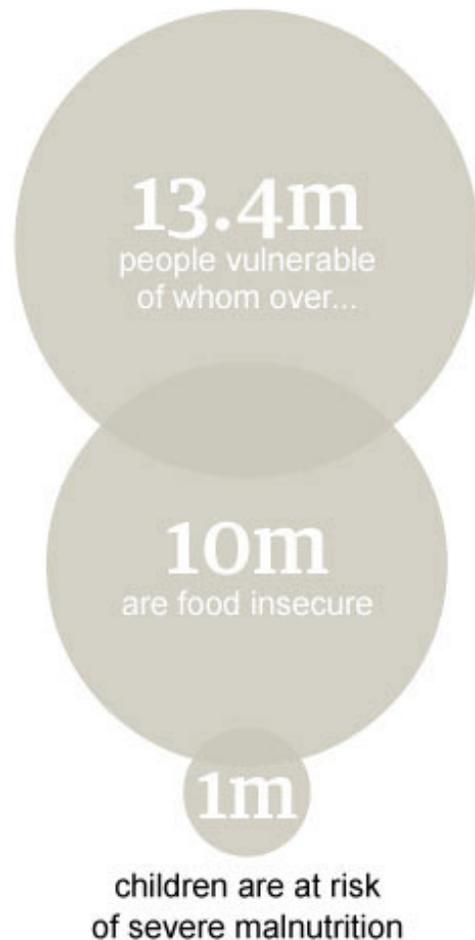
Climate change and development in Africa

- Part of Africa's vulnerability lies in the fact that **the recent development gains have been in the climate-sensitive sectors**
- Economically, many Africans depend on food, fibre and income on primary sectors such as agriculture and fisheries, which are affected by rising temperatures, rising sea levels and erratic rainfall
- Africa's growing populations will increase the demand for water and food, but prolonged droughts will put additional pressure on already scarce water resources and reduce crop yields

Africa's food crises and climate extremes

Sahel: food and nutrition crisis

Number of vulnerable people per country

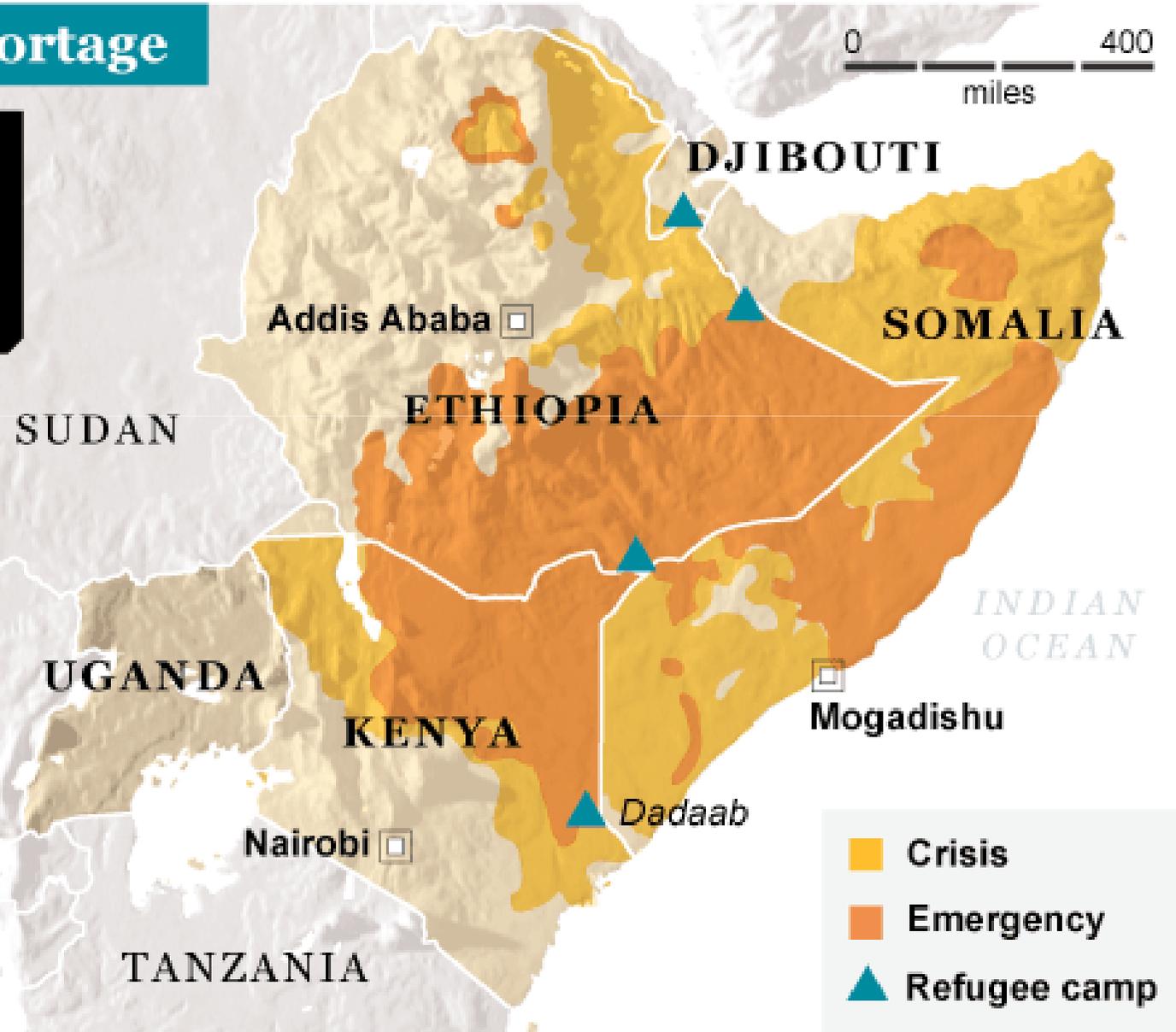


Africa's food crises and climate extremes

Africa's food shortage

The Horn of Africa faces famine as the area experiences its worst drought in 60 years


12m
Estimated number of people affected



Climate change and human health

- **Health is particularly at risk in Africa's changing climate**
- The majority of Africans do not have access to safe water, good sanitation and adequate health care
- Climate change will exacerbate vulnerability to vector (malaria) and water-borne (cholera) diseases
- More floods in areas with poor sanitation and inadequate waste management will spread disease
- Rising temperatures will spread diseases to the highlands

Conflict and climate change



People living in places affected by violent conflict are particularly vulnerable to climate change

- Large-scale violent conflict harms assets that facilitate adaptation (infrastructure, institutions, natural resources, social capital, and livelihood opportunities)
- Lack of such assets influences vulnerability to climate change impacts

Livelihoods and poverty in Africa

- **Climate change is already causing harm upon rural and urban Africans living in poverty**
- **The face of poverty in Africa usually means multi-dimensional deprivation: hunger; illiteracy; unclean drinking water; lack of access to health services, sanitation and electricity; and social isolation**
- This affects poor people's lives directly through impacts on livelihoods, such as losses in crop yields, food insecurity and destruction of property and homes

Direct impacts on livelihoods and poverty



- In urban areas, low-income groups face climate risks because of poor quality housing and flood exposure
- The most extreme form of erosion of natural assets is the disappearance of people's land
- Poor people settlements are more often in vulnerable zones (flooding in Africa's informal settlements – Accra, Lagos and Nairobi)

Direct impacts on livelihoods and poverty

- Even well-intentioned adaptation projects may have detrimental impacts on poverty
 - Biofuel production sometimes displaces small landholders and contributes to food price increases
 - Biofuel schemes may also harm poor people through declining biodiversity or reduced grazing land
- However, employment in the biofuel industry may create opportunities for some people to improve their livelihoods

The poverty-climate-change nexus

- Climate change is never the only factor that affects poverty dynamics
- It is a threat multiplier at the intersections of policies, power structures, gender, age, class, ethnicity etc.
- Climate change does not act alone
- We have to reduce emissions, foster adaptation and mitigate impacts but we can also address the CC-poverty nexus by addressing more fundamentally the organization of our societies

Adaptation in Africa

- Adaptation is the only effective option to manage the inevitable impacts of climate change that mitigation cannot reduce
- Adaptation brings benefits both today and in the future.
- Africa has much to gain from adaptation actions such as disaster risk reduction and social protection that reduce impacts of warming that are already being felt and from building resilience around critical sectors such as water, energy and agriculture.

Adaptation in Africa

- The IPCC emphasizes that integrating adaptation into planning and decision making can create many synergies with development
- Effective adaptation strategies should strengthen livelihoods, enhance wellbeing and human security and reduce poverty
- ‘No regrets’ or ‘low regrets’ measures such as:
 - increasing access to information and resources
 - improving health services
 - diversifying cropping systems
 - strengthening access to land, credit and other resources for poor and marginalized groups
 - making water and land management and governance more effective is good for development irrespective of climate change

Adaptation in Africa

- Adaptation is basically about managing climate risks
- Africa needs to take both the short and long term approach to managing climate risks
- Africa should do much more to anticipate and reduce risk, rather than reacting after impacts have occurred
- Support for effective disaster relief and recovery needs to continue, along with proactive efforts to reduce risk, such as integrating comprehensive risk assessments and risk reduction measures into national economic and development policy

Adaptation in Africa

- For adaptation to be successful, more ‘transformational’ changes (changing agricultural practices, integrating climate change into education, providing useful climate services, diversifying livelihoods or introducing social and technical innovations) may be necessary
- Recent success stories from smallholders in Africa showcase the potential for transforming degraded agricultural landscapes into more productive and sustainable systems
- However, there is no single adaptation strategy that will meet the needs of all communities and contexts in Africa
- The characteristics of a community or society’s capacity to adapt to climate change will differ from place to place and is context specific

Challenges to adaptation in Africa

- Lack of climate data and information creates difficulties in assessing the overall risks and vulnerabilities caused by climatic and non-climatic factors
- Development planning tends to take place at national scales and so may not take account of localized climate change impacts
- Interventions need to cross sectors and yet working across sectors does not come naturally and can be quite challenging

Global action on climate change mitigation

- In the long term, there may be limits to adaptation and the only way to reduce this risks is through global action to reduce greenhouse gas emissions
- Therefore, ambitious climate mitigation at the global level must start now in order to limit the magnitude of long term climate change
- Delaying action on mitigation will not only lead to rising adaptation costs but will also make it more difficult to transition to a global low-emissions development pathway

Global action on climate change mitigation

- To be cost-effective on a global scale, most mitigation needs to take place in countries projected to have the highest emissions in the future
- Developing countries have a significant proportion of opportunities for low cost mitigation
- Therefore, African countries can play a leading role by taking advantage of low carbon options
- However, Africa will need substantial financial support for mitigation which must be a shared effort

Thank you!

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INTERGOVERNMENTAL PANEL ON climate change