

Climate change adaptation and land degradation measures in drylands – with focus on Africa

Threats, opportunities and challenges

UNFCCC Media training

Accra, Ghana

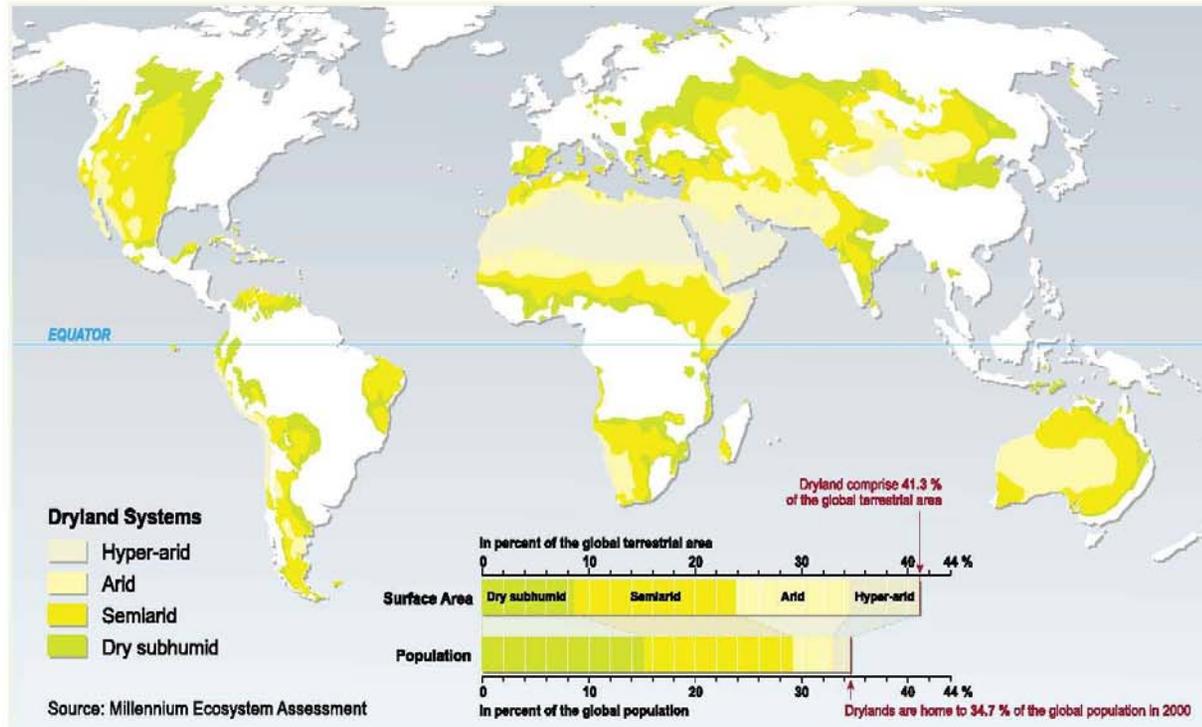
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Desertification and climate change in Africa

“In its most recent assessment, the Intergovernmental Panel on Climate Change (IPCC) reported that all of Africa is likely to warm during this century, with the drier subtropical regions warming more than the moist tropics. Annual rainfall is likely to decrease throughout most of the region, with the exception of eastern Africa, where annual rainfall is projected to increase. These changes in the physical environment are expected to have an adverse effect on agricultural production, including staple crops such as millet and maize. The areas suitable for agriculture, the length of growing seasons, and yield potentials (particularly along the margins of semi-arid and arid areas) are expected to decrease.... Due to the overall drying of the continent, between 75 and 250 million people are projected to be exposed to additional water stress by the year 2020.”

The Drylands =

41,3% of the global terrestrial area – 34,7 % of the global Population



Land Degradation: Facts & Figures

(from I

One third

of the world's cropland has been abandoned in the

s because s made it unproductive

creasing and estimated at

30 to 35 times the historical rate

Land Degraded or lost for crop production

20 million

Loss of potential productivity due to soil erosion is estimated as equivalent to some 20 million tons of grain per year

Total land affects some

ha

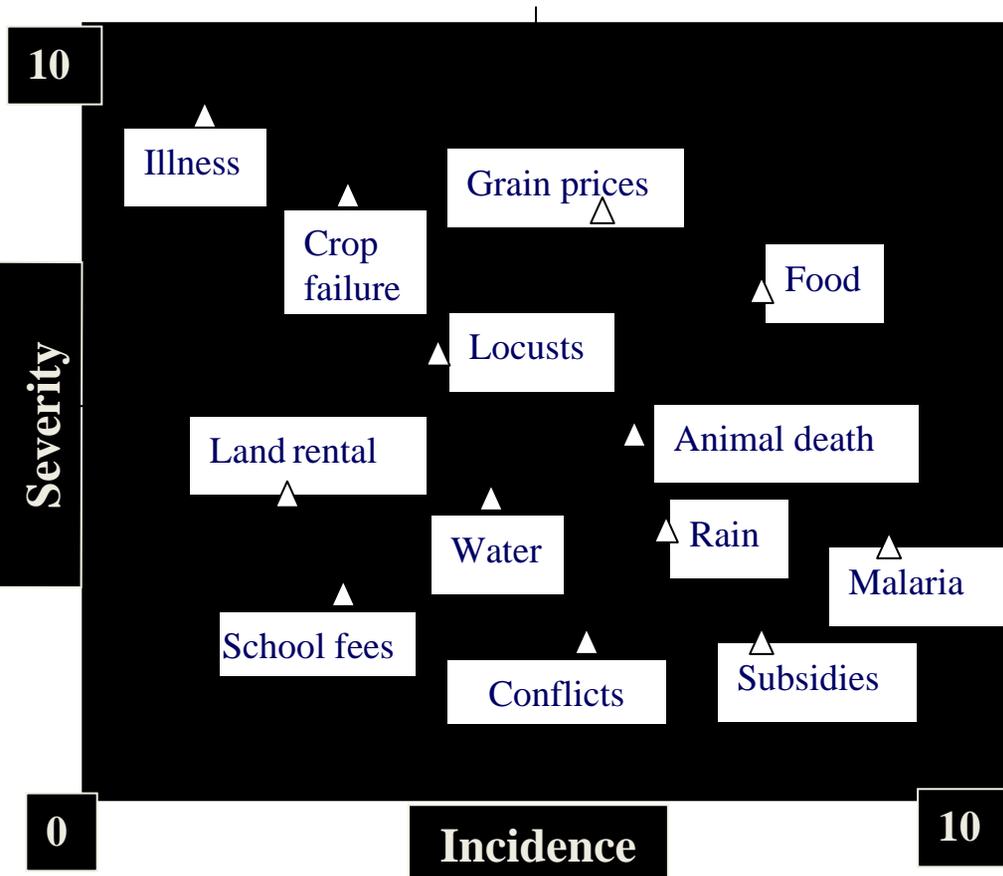
of land worldwide

Imperatives I

- Dryland concerns will have to play a major role in climate change adaptation measures
 - Many of those most vulnerable to climate change live in dryland areas
 - Central areas of southern Africa, for example, have been identified by the IPCC as among the areas most vulnerable to climate change
 - This is due to
 - the nature of climatic changes,
 - existing risks such as water stress, conflicts, the spread of infectious diseases, and poverty and food insecurity
 - but also because although there is a rich set of indigenous strategies, they are not sufficient to reduce the negative impacts of climate change; nor are such strategies adequately supported by policy processes

These multiple stressors will have to be addressed henceforth in order to surmount the challenges and capitalize on the opportunities

Multiple Stressors, Risks, and Worries



Multiple stressors
Structural causes of risk
Adaptive responses to
“underlying” vulnerability
(individual + institutional)

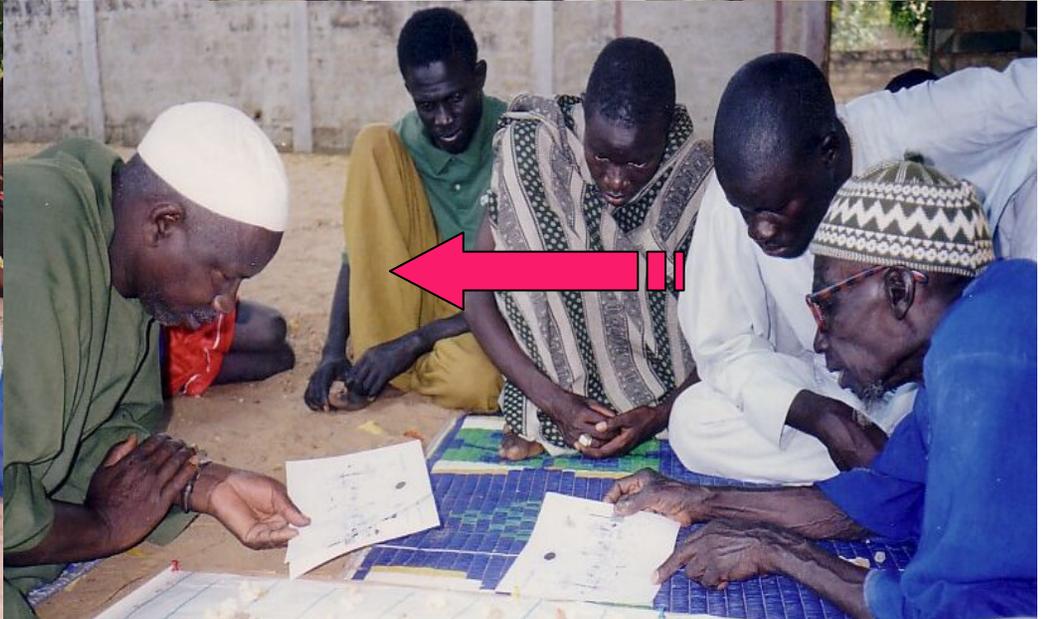
Imperative II

- Any measures to reduce degradation in drylands will have to take into account climate change
 - Climate change may undermine measures to reduce degradation if these measures do not take increased drying, irregular rainfall and flooding into account
 - Measures to reduce degradation may exacerbate vulnerability if they do not support people's indigenous strategies to cope with climatic variability and change, as well as address the causes of vulnerability (such as poverty, political marginalisation, loss of access to resources, loss of employment opportunities, conflicts, and the spread of infectious diseases)
 - In countries with scarce financial and human resources, it makes sense to link adaptation to climate change and desertification measures rather than designing, implementing and managing policy separately

Opportunities

- Reducing vulnerability and strengthening current strategies to face climate stress is a good starting point for adaptation
- Potential synergies between the objectives of:
 - adaptation to climate change in terms of improving livelihood security in the face of uncertain and changing climate (Climate Change Convention) and
 - mitigating the effects of drought and improving living conditions (Convention to Combat Desertification)
- The UNCCD 10-year strategy strengthens the NAPs, which are designed from the bottom up, thereby providing an entry point for addressing climate change adaptation in a way that is more focused on livelihoods than has so far been the case

NAPs are based on a bottom-up approach and collective learning



Entry point: sustainable adaptation measures

- Sustainable adaptation measures are those that both reduce poverty, contribute to sustainable development and contribute to climate change adaptation
- Specifically:
 - 1) reduce risk to current ways of securing well-being;
 - 2) strengthen adaptive capacity of the poor; and
 - 3) address the causes of vulnerability among the poor.

Particularly relevant for combating desertification by improving living conditions among dryland populations and strengthening alternative livelihoods

Multi-Use Ecosystem Carbon Sequestration



Dryland vegetation especially important for sustainable adaptation

- Some of the measures required aimed at dryland agriculture, livestock keeping and forest resources
- Particularly important because the most vulnerable populations in African drylands often rely on access to indigenous plant resources in their drought coping strategies
 - Grazing of livestock
 - Indigenous foods (fruits, tubers etc)
 - Medicines
 - Handicraft
 - Honey collection
 - Charcoal and brick production for sale
 - Hunting
 - Timber



Challenges I

- Thus, synergy is based on the premise that measures must improve access by local populations to vegetation resources
 - In the past, desertification measures have restricted local livelihood strategies because these were seen as degrading of the environment
 - For example destocking and gazetting of areas for conservation, excluding human uses
 - These measures have severely increased vulnerability to climate change (smaller herds and hence less capital with which to survive droughts, exclusion from drought grazing areas, loss of access to critical forest products)
- Measures must hence support local adaptive capacity through
 - strengthening rather than restricting existing practices and
 - ensure sustainable access to indigenous resources during times of climate stress

Challenges II

- Institutional and financial: coordinating desertification actions with those funded through the UNFCCC
 - Financial mechanisms related to the climate convention provide new and more promising sources of funding than those related to the desertification convention.
 - The types of activities that can be paid for through the climate convention are, however, subject to close scrutiny and this may limit the opportunities to implement measures that focus specifically on strengthening livelihoods.

Challenges III:

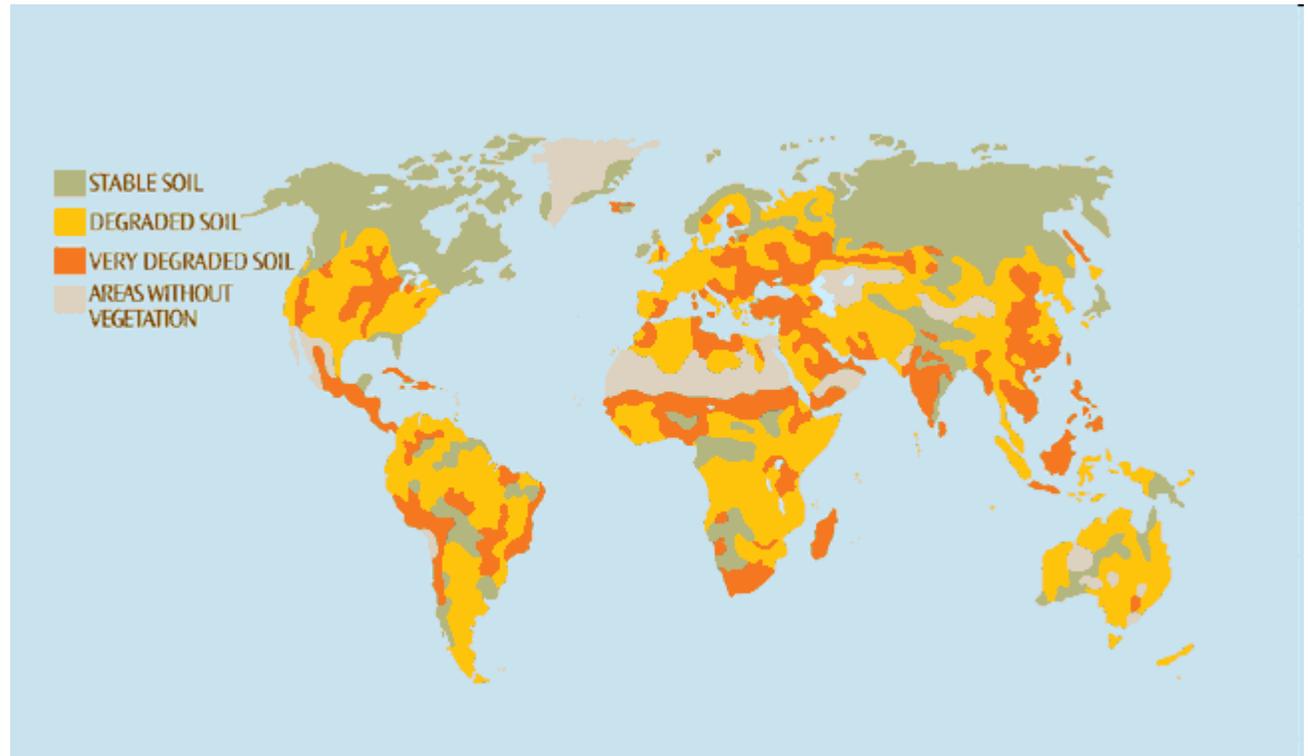
- Effective measures may have to challenge existing power structures
 - For example, targeting the vulnerable requires:
 - Representation of vulnerable groups (the poor, landless, women) in development related committees and decision making
 - Ensuring rights of the poor to land, grazing and water
 - Create economic opportunities for landless and destitute
 - Resolving conflicts that may be politically or economically motivated by powerful individuals
- Effective measures can not only be technical or institutional, they need to address inequities in resource access and control

Think Globally, While Acting Locally

- In order to solve all these problems as well as take advantage of the opportunities arising from the interaction between climate change and desertification, in the post 2012 climate regime, there is a need to highlight the global nature of the problem of land degradation (mainly the following aspects):
 1. Land degradation is occurring worldwide
 2. The local socio-economic impact of land degradation have global ramifications (e.g. migration)
 3. Dust storms affect global climate and weather conditions

Global problem: soil degradation

- > 25% soil loss
- > 50% soil loss



- No continent is free of soil degradation
- 1.2 billion ha moderately to severely degraded (especially Asia and Africa)
- Central America highest percentage and worst degrees of soil degradation
- Central part of USA very degraded soils due to mechanized monoculture

Conclusions

- In order for a proper framework to be established, that would facilitate Africa to solve the problems, overcome the challenges outlined above, and take advantage of the opportunities arising from the interaction between desertification and climate change, it is imperative for Africa to play an active role in the ad-hoc working groups that have been set up to negotiate the post 2012 climate change regime.

In Conclusion ...

Let us not forget the following warning,
a five thousand years old wisdom:

“Upon this handful of soil our survival depends. Husband it and it will grow our food, our fuel, and our shelter and surround us with beauty.

Abuse it and the soil will collapse and die, taking humanity with it”.

From Vedas Sanskrit Scripture – 1500 BC