



2nd International UN-SPIDER Bonn Workshop 'Disaster Management and Space Technology - Bridging the Gap'

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Disasters

Natural disasters: such as hurricanes, tsunamis and drought. These kinds of occurrences have their own dynamics and are not caused directly by humans. However, it is considered that human activities can intensify or reduce the effects of these disasters. The Early Warning Systems and Preparedness Programmes can minimize human and economic losses;

Human disasters: such as war, famine or epidemics that are caused by humans and have not to do directly with the environment, even though they can impact deeply the environment. It is considered that some civil wars in Africa caused deeply damage in the natural resources;

Human/natural disasters: they reflect the combination of human behavior/activities with a specific natural or environment conditions. In general these mixed disasters have a dynamic based on feedback mechanisms between causes and consequences. Desertification and the recent climate change trends fit in this category. Regarding desertification, it represents a man-induced phenomenon that generates degraded land (physically speaking). Sustainable land management is a tool to avoid land degradation, to reduce the impacts of drought and other social and economic consequences



Basics on drought and climate change

- Intensified droughts have occurred over wider geographical areas, especially the tropics and sub-tropics, since 1970. The severity of drought rapidly increased from 1980.
- Droughts have also been influenced by increased sea surface temperatures, changed and strengthened wind patterns particularly in the mid-latitudes and decreased snow pack and snow cover.
- There have been widespread changes in extreme temperatures with an increased number of hot days, hot nights and heat waves.
- Increased global surface temperatures.
- Increased drying (or evapotranspiration) as a result of the increased temperatures and decreased precipitation.
- A decrease in the total area of seasonally frozen ground in the Northern Hemisphere

IPCC Scenario

Regardless of the specific scenario, IPCC projects that many of the observed trends are likely to continue and the impacts on drylands could be really devastating.

- Desertification and climate change are processes that are feeding each other and getting worse all around the world.
- Savanna fires presently account for about 30 percent of the total carbon and 20 percent of the total nitrogen emissions from global biomass burning.

IPCC Scenario

- Drylands wood fires are thought to contribute around 10 percent of total gross global emissions of these two elements.
- Dryland deforestation and accelerated soil loss from wind and water erosion are also reducing the ability of dryland ecosystems to store carbon, further contributing to the cumulative build-up of atmospheric carbon dioxide as well as reducing soil-moisture storage capacity.
- Some tropical areas will be strongly affected due to the temperature improvement, causing the aridification of some tropical humid areas. Only in Brazil almost 1 million square kilometres would be added to the current semi-arid areas, affecting more than 10 million people.
- In India, China and in south Europe the aridification of humid zones could be seen in the next 30 years.



Policy implications regarding DLDD/Global change and disaster management

To respond to the mentioned threatens the UNCCD country Parties approved a 10-Year Strategic Plan – “The Strategy” is aimed “to forge a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability”

Policy Framework

Global level

- SLM as a key tool to avoid land degradation and to ensure food security and combating poverty in drylands
- Drought and extreme events: managing risks, early warning and drought preparedness
- A Global Policy on drought awareness in a climate change scenario



Policy Framework (cont.)

- SLM and Drought management networks, global and regional: design and implementation of a comprehensive communication strategy on drought
- Facilitation of targeted scientific research and implementation of practical cases under a climate change scenario
- Promotion of education, capacity building and training, including manuals and publications
- Financing



Policy Framework (cont.)

Regional level

- Partnership with key institutions (Wheatear and Drought Centers)
- Common approaches through lessons learned, practical applications, exchange and use of good practices regarding SLM and drought



Policy Framework (cont.)

National level

- The UNCCD-NAP - as the instrument for SLM, drought forecast and drought preparedness.
- NAPs guidelines – as sustainable policy on SLM and drought
- Investment on SLM actions in drylands aiming the improvement of agricultural production and drought adaptation at the local levels (primarily food producers)
- Capacity building and strengthening of community organizations on drought and on methodologies for drought management reporting
- Participatory approach: Partnerships with CSOs in local-based actions for capacity building, outreach and publication materials for land users



Thank you!