



Experts Urge to Combat Desertification

Desertification, as defined in Chapter 12 of *Agenda 21* and in the International Convention on Desertification, is the degradation of the land in arid, semi-arid and sub-humid dry areas caused by climatic changes and human activities. There are several factors that contribute to desertification: Harsh dry climates, for example, can ruin soil. Harmful farming and grazing practices can also deplete the soil's nutrients. Inappropriate irrigation and overgrazing of animals contribute by decreasing food production.

Experts estimate that about six million hectares of land each year are lost to desertification and more than 100 million people are at risk of becoming what they call environmental refugees, or people who are forced to move in search of land that can sustain and feed them.

The *International Workshop on Climate and Land Degradation*, which took place in Arusha, the United Republic of Tanzania, 11-15 December 2006, issued a series of recommendations as to how climate information can be used to combat desertification, a phenomenon that affects one third of the planet's land surface. The workshop marked the close of the International Year of Deserts and Desertification and clearly illustrated that we are just at the beginning of tackling poverty and environmental degradation.

The International Year of Deserts and Desertification represented an opportunity to reflect on the recognized linkage between desertification and poverty and to act on the recommendations given by the United Nations Convention to Combat Desertification (UNCCD). Dr Ndiang'ui from the UNCCD Secretariat in Bonn, Germany, points out that the problem of desertification is not only environmental.

„Poverty is both, a cause and a consequence of desertification and it not only affects peoples but also the economies and has long-lasting impacts on the environment“. The International Year of Deserts and Desertification was initiated to help prevent the exacerbation of desertification around the globe. Its main objective was to get the message across that desertification is a major threat to humanity, compounded by both climate change and loss of biological diversity. According to estimations made by the UNCCD more than 250 million people are directly affected by desertification; in addition, some one billion people in more than 100 countries are at risk.

The main objectives of the December workshop in Arusha were (i) to develop a better understanding of the role of different



Desertification affects about six million hectares of land and more than 100 million people each year. Photo: A. Ambert-Gorwyn.

climatic factors, namely rain and wind, in land degradation and (ii) to accurately assess sustainable land management practices. And, recent observational trends indicate: time is getting short. Under the scenario of climate change, droughts, flash floods, dust storms, famine, migratory movements and forest fires - all linked to desertification - are on rise and with them the loss in human beings and socio-economic costs.

Over 60 experts from 30 countries around the world and representatives from the various United Nations' Agencies attended the workshop. At the Opening Ceremony, Dr Maua Daftari, Honorable Deputy Minister for Infrastructure Development, and Prof. Mark Mwandosya, Honorable Minister of Environment of the Government of the United Republic of Tanzania stressed the urgent need to tackle the issue of desertification in a concerted international effort even though the effects might now be felt only regionally, in the near future, however, food security world-wide will be under threat.

The workshop was organized by the World Meteorological Organization (WMO), the United Nations Convention to Combat Desertification (UNCCD) and the Tanzania Meteorological Agency. The OPEC Fund for International Development (OFIC), the United Nations Development Programme (UNDP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) co-sponsored the workshop.

Workshop participants noted that increasing incidence of climate extremes such as heat waves, droughts and heavy rainfall are having a global impact on land degradation processes; indeed, a rising trend in the amount of floods and sand and dust storms is being observed that affect soil erosion and salinization in vast parts of the semi-arid and arid world.

Climate variability, climate change and land degradation are intimately linked, generating effects such as an increased occurrence of conditions conducive to wildfires, but the linkages are yet purely understood. Workshop participants saw an urgent need to strengthen the knowledge and understanding of how the climate and eco-systems function in order to better understand, predict and value the risks of land degradation and at the same time, fully understand the complex interrelations between land use and environment.

So far, trends in land degradation have been assessed differently depending on the region which makes quantitative comparisons and the

development of innovative and adaptive land management practices difficult. There was a broad consensus among workshop participants that the identification and implication of land management practices need to consider sustainability and the generation of income. Farmers may in fact play a key role, if they are provided the tools that help to decrease their pressure on the natural resources when alternative revenue generating activities are created.

In their Workshop Statement, the participants further underlined the importance of the network of meteorological, hydrological and agro-meteorological stations around the world to enhance the provision and use of climatological data. Early warnings as part of national drought policies will be integral for the effective implementation of national action programmes.

Although yet available online for comments, the Workshop Statement will be formally presented to the UNCCD Committee on Science and Technology at the Eighth Session of the Conference of Parties (COP-8) meeting in October 2007 in Madrid, Spain. [ca]

Contact

World Climate Programme
Agricultural Meteorological Division
Dr M.V.K. Sivakumar
msivakumar@wmo.int

References and links

Agenda 21 (1992) www.un.org/esa/sustdev/documents/agenda21/index.htm.

Hansen J.W., Sivakumar M.V.K. and C.B. Bryson (2006) Advances in applying climate prediction to agriculture. Climate Research Special 16, Vol.33: 1-2.

International Year of Deserts and Desertifications (IYDD) www.iydd.org.

International Workshop on Climate and Land Degradation www.wmo.int/web/wcp/agm/wocald/.

International Workshop on Climate and Land Degradation: Workshop Statement (2006) www.wmo.int/web/wcp/agm/wocald/Workshop-Statement.pdf.

Ndiang'ui, N. (2007) Desertification, poverty and sustainable development. In: World Climate News No. 30, published by the World Meteorological Organization, January 2007.

United Nations Convention to Combat Desertification (UNCCD) www.unccd.int.

World Meteorological Organization (WMO) www.wmo.int.

WMO Press Release No. 769, 21 December 2006. Experts Recommend Ways to Tackle Global Drought and Desertification. www.wmo.int/web/wcp/agm/wocald/PR_769_E.pdf.

WMO Publication No. 1006 (2006). Drought monitoring and early warning: concepts, progress and future challenges. www.wmo.int/web/catalogue/freedwn/pdf/1006_E.pdf.

