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**Dry Matter? – International bio-
diversity and climate policies
overlook the potential of drylands**

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Dry Matter? – International biodiversity and climate policies overlook the potential of drylands

Bonn, 14 June 2010. The earth's drylands remain a fringe issue of international environmental and development politics. The World Day to Combat Desertification and Drought, which is celebrated annually since the United Nations Convention to Combat Desertification (UNCCD) has been adopted, will hardly change this. Quite the contrary, the UNCCD appears more than ever in the shadow of its two big sisters, the United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). 2010 was declared to be International Year of Biodiversity and besides the preparations of the CBD's tenth Conference of the Parties, which is due to take place in October in Nagoya, Japan, international environmental politics are currently primarily occupied with the revitalization of the international climate negotiations, which have been deadlocked since the failed climate change conference of Copenhagen.

Yet, in hardly any other ecosystem than in the drylands, covering roughly 40 % of the earth's landmass, are the interactions between the challenges of climate change and the conservation of biodiversity so closely interlinked with the key development policy issues of food security and the fight against poverty,. The development chances of the more than 2 billion people living in drylands significantly depend on efficient water management, adapted land use, the conservation of traditional crop and animal varieties and the general ecosystem services.

Sustainable resource management in the drylands of the developing countries of Africa, Asia and Latin America can therefore at the same time make important contributions to the conservation of biodiversity, the adaptation to climate change and thereby also to poverty reduction. Especially the safeguarding of ecosystem services, whose significance goes far beyond the protection of species, requires sustainable land use practices. These are not only highly relevant for local food security, but also for agricultural, medical and biotechnological research.

The example of agro-biodiversity, i.e. biological diversity in agriculture, demonstrates this. For the rural population and poor smallholders in particular, the conservation of plant and animal genetic diversity is essential to preserve their own adaptability. In view of the adverse climatic conditions existing in the drylands anyway, this applies irrespective of their awareness for the challenges regarding the probable future impacts of climate change. Fully functional ecosystems, which also depend on agro-biodiversity, are simply indispensable for local food security.

This applies in particular to the availability of drought resistant seeds. In addition, varieties with a short cultivation cycle are increasingly important, since the variability of scarce rainfalls will probably increase as a result of climate change. Traditional local knowledge is paramount in the selection of suitable varieties and the further development of available seeds. For instance, Indian smallholders in the Deccan Highlands were able to cope well with drought periods through the cultivation of drought resistant foxtail millet and thus ensured the survival of humans and livestock in spite of scarce precipitation.

The situation is similar with pasture management, where for example the composition of managed livestock is decisive for the extent of soil degradation. Pastoralism has proven itself to be the form of animal husbandry best adapted to dry environmental conditions worldwide. In



East Africa, for example, sophisticated land use systems have been developed over generations in order to use the scarce resources of soil, vegetation and water sustainably. This knowledge is central to the conservation of dryland ecosystems with their unique plant and animal species and the corresponding genetic resources. The directly related intellectual property issues are of great importance, both economically as well as politically. A case in point, Kenyan Massai sheep are also suitable for industrial use. An equitable benefit sharing is necessary here in order to honour the contribution of traditional resource users for the long-term conservation of agro-biodiversity.

Economically, the conservation of drought resistant varieties seemed rather uninteresting so far. The necessity to adapt to more frequent and longer drought events in the future as a result of climate change looks likely to fundamentally change this. As the basis of sustainable land use in drylands and their significance for global food security, agro-biodiversity will also receive greater attention.

Sir Nicholas Stern's widely noted 2006 review on *The Economics of Climate Change* has demonstrated how important it is for decision-makers to grasp the economic dimension of global environmental challenges and to be able to assign these with "price tags". Last year's report on *The Economics of Ecosystems and Biodiversity* (TEEB) followed this example and has again attracted great interest in environmental and development politics. Regarding the value of soils, especially in drylands, and the costs of inaction in the efforts to combat desertification, there has so far been a lack of comparable expertise.

Ongoing debates about the significance of the figures calculated by environmental economists notwithstanding, an economic assessment of soils and sustainable land use appears long overdue. Not only could it help to increase political attention for the general problems of development in the earth's arid regions, but also facilitate the translation of general political objectives in specific policies that also provide the links to the policy areas of biodiversity and climate change. The decision of the last UNCCD Conference of the Parties of September 2009 to initiate a corresponding scientific process responds to this.

It will still take some time before tangible figures can be put on the economic value of drylands and their varied ecosystems. Yet, the intersection between the forms of agriculture that contribute to sustainable land use, the conservation of biodiversity and the adaptation to climate change in drylands is obvious. Hence, there is much to be said for paying more attention to the supposedly dry matter of fighting against desertification even today. The interactions of land use, biodiversity and climate change in drylands finally need to be taken seriously.

The views expressed are those of the authors, and do not necessarily reflect the views of the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) or the German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE).

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