

Deserts, Water and Sustainable Livelihoods: the Role of the United Nations

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The Earth has a finite amount of land and a finite volume of freshwater but the demands on these two resources are growing exponentially with the growth of population. At the same time, the world has neglected the needs of ecosystems. There is a pressing need to restore ecosystems, protect forests, rehabilitate drylands and conserve biodiversity for present and future generations.

The challenge is to balance land and water use with population growth through sustainable agriculture and rural development so that the accelerating demands of food and other agricultural products can be met while protecting ecosystems and ensuring sustainable livelihoods.

Sustainable land management, integrated water resources management as well as social and population policies must be integrated in a holistic manner, with other resources management issues so that drylands can provide sustainable livelihoods rather than leading to poverty and migration out of them. What is needed is a socio-political approach as much as a scientific, biophysical one in order to achieve the sustainable development of drylands.

The more unstable societies, including many failed states, appear to be those where land use practices lack a holistic approach. The world's dry lands belt extends from Latin America and the Caribbean through the Sahel to the Horn of Africa, across the Red Sea into Central and South Asia. These also happen to be the regions of the world that are most at risk for conflict.

Therefore, a holistic approach is what the United Nations system seeks to follow – at the level of governments as well as the Secretariats of UN agencies. Two approaches in particular, sustainable land management and integrated water resources management, are strongly advocated by UN bodies that deal with drylands and desertification.

These bodies include the Commission on Sustainable Development, the Conference of Parties of the UN Convention on Combating Desertification, as well as the governing councils of numerous other agencies, including the UN Food and Agriculture Organization (FAO), the United Nations Environment Programme (UNEP), and the International Fund for Agricultural Development (IFAD). Together, they form the architecture for the fight against desertification.

There is an acute need for coordination among those bodies, specifically on the issue of combating desertification through sustainable land management. Accordingly, the Secretariat of the UN Convention to Combat Desertification has proposed the creation of an inter-agency coordination mechanism to be called UN-Land, which would be similar to the mechanisms UN-Water and UN-Energy, which coordinate UN system, work in those respective areas.

There is also need for greater synergies between the three Conventions that came out of the UN Conference on Environment and Development in Rio de Janeiro in 1992: the Convention on Biodiversity, the Convention to Combat Desertification and the Framework Convention on Climate Change.

All media attention is currently on climate change and on mitigating greenhouse gases. But both the loss of biodiversity as well as unsustainable land use that leads to desertification have demonstrable effects on climate change. And in turn climate change exacerbates biodiversity loss and desertification.

Essential water sources such as Lake Chad in Africa are drying up and the water levels of major rivers such as the Euphrates, the Tigris and the Nile have dropped drastically, even in comparison to the recent past. Severe and lengthier droughts are already being faced in Southern Africa, North America, Australia and southern Europe where forest fires have caused much destruction.

There is growing evidence that a sizeable share of the rural-to-urban migration within countries as well as international migration is connected with desertification, land degradation and drought. By way of an example, somewhere between 400,000 and 700,000 people migrate from Mexico's drylands to urban areas and, across the border, to the United States every year. Behind the migration debate in North America, then, there also lurks an issue of desertification.

It is essential that national governments and international organizations focus greater attention and resources on the livelihoods of people in drylands. In the developing world as much as 60 per cent of the population depends on land for their livelihood.

Now, sustainable land and water management, as well as land rehabilitation are not simply efforts at adaptation to climate change. They also represent one of the most relevant nationally appropriate mitigation approaches to climate change. For many developing countries, sustainable land management is a means to ensure sustainable growth and reduce poverty.

In addition to lowering carbon emissions, sustainable land management helps absorb excess carbon. The process of rehabilitating land usually calls for increasing the content of organic carbon in the soil, particularly degraded soils in areas that are not very arid.

As land fertility is enhanced through sustainable land management, farmers also help mitigate carbon levels in the atmosphere. What this means is that sustainable land

management is also a route to sequester carbon in the soil.

Why has sustainable land management not spread as a practice? Regretably, poverty is the main impediment to greater practice of sustainable land management in places where it has the greatest potential for success. Many governments in poor countries lack the funding and capacity to set up extension systems to re-train producers.

Even in rich countries, farmers may be reluctant to switch over to another land use system because of costs. It is essential, then to design policies at the national level with incentives to encourage producers to manage land sustainably.

It is well known that land-based activities, specifically agriculture, land degradation and deforestation, are major sources of green house gases. Nearly one third of the carbon dioxide released into the atmosphere comes from land use, land use changes and deforestation. Yet, just over a month from the Copenhagen Conference of Parties of the Climate Convention, only deforestation has made it onto the climate change agenda.

Negotiators say that the methodologies for calculating and measuring carbon sequestration through land rehabilitation and the changes in agricultural practices are not sufficiently accurate to be brought into the negotiations. The fact of the matter is, though, that there is tremendous political resistance in both the global North and South to bringing in the full range of land use issues into the climate negotiations.

Agricultural lobbies in many countries are very reluctant to change their land uses. Many developing country governments also do not want to bring in the full range of forest issues because they see their forest resources as sovereign.

In poor agricultural countries, governments shy away from international commitments that would place a crushing burden on small farmers who scratch their living from degraded land. However, there is no doubt that more sustainable land use practices would contribute greatly to global efforts to curb climate change.

The governing bodies of UN agencies, particularly the Commission on Sustainable Development, have recommended a series of policy options for countries to achieve sustainable development in drylands so that livelihoods and ecosystem services are protected. Other governing bodies such as the Commission on Population and Development have recommended specific policy options to influence population growth for sustainable development.

These measures include:

- the promotion and sharing of scientific and practical knowledge about the sustainable management of drylands and integrated water resources management;
- the inclusion of climate change and desertification explicitly into national strategies and policies;

- drawing up national action plans to combat desertification which are compatible with national development goals;
- accounting explicitly for externalities in water resources management, particularly in river basins, that call for joint action by neighboring riparian states or countries;
- water management techniques including demand management, water conservation, introducing drought-resistant crops, non-conventional water use, including water recycling, reclamation and desalination;
- increasing land security and access, to provide incentives through ownership for smallholders to conserve and rehabilitate their land;
- deepening scientific knowledge of the environmental services provided by drylands and establishing schemes for the payment for ecosystem services;
- low-tech solutions such as planting trees, rotational pasturing, demarcation of pastoral corridors;
- community based natural resources management;
- promoting alternative livelihoods for inhabitants of drylands, including greenhouse farming and supporting ecotourism;
- new and sustained funding for transfer of technology needed for sustainable land management in arid zones; and
- social policy measures related to population such as empowerment of girls and women, expanding girl's education, and making reproductive health services and contraceptives easily available.

In the final analysis, achieving sustainable development in drylands will require achieving the balance between land, water and people. The planet is said to be already 20 per cent above its carrying capacity in terms of the depletion of its natural capital, including ecosystems. Striking the right balance between land, water and people may well be the decisive factor that determines whether humanity survives into the twenty-second century.