

Linkages and synergies between the Climate Convention and the other two Rio Conventions

There is a lot to be gained from establishing links between the UNFCCC and the other two major environmental conventions namely the CBD and the UNCCD. It is in recognition to this need that a Joint Liaison Group (JLG) was created in 2001 to foster collaboration between the secretariats of the three conventions (www.unfccc.int). There are probably numerous reasons why the synergies between these conventions should be explored. Here are three of them.

1. The inherent links between the three problems

It is necessary to understand the driving forces behind the three major environmental problems the international community is currently addressing, i.e. climate change, loss of biological diversity (or biodiversity) and desertification. Climate change (if we use the UNFCCC definition) is the result of the concentration of carbon dioxide and other heat-trapping gases known as greenhouse gases (GHGs) in the atmosphere, which has increased to reach alarming levels over the last century (IPCC, 2001). It is also understood that a significant fraction of the GHGs that have been emitted to the atmosphere has originated from the destruction of natural forests and other biomes, and their subsequent conversion to agricultural or grazing land, the very process that has led to the extensive destruction of habitats and the loss of biological diversity (Wood et al., 2000). In many cases, especially in the tropics, when natural systems are brought into agricultural production, a degradational process begins whereby the land progressively loses its productivity. If such a process is allowed to start and to continue unchecked in arid, semi-arid and dry sub-humid environments, it can ultimately lead to an irreversible state of land degradation called desert. This is what the process of desertification is all about. Loss of natural vegetation (hence biodiversity), degradation of agricultural and grazing lands, and climatic variations are therefore some of the recognised causes of desertification. In many tropical areas, climate change will exacerbate climatic variations leading to more frequent droughts and wild fires that in turn will accelerate the loss of biological diversity and desertification. It is therefore clear that there are inherent linkages between the three problems although a causal relationship may not always be easy to establish between them. Nonetheless, the desertification – biodiversity loss – climate change nexus is without any doubt the biggest threat to sustainable development, especially in Africa.

2. The commonalities in the response strategies

A large number of programmes, policy measures and projects have been developed to meet the objectives of the Rio Conventions, including the sustainable use of natural resources. In the framework of the UNCCD, soil and water conservation measures (including forestry and agroforestry based solutions) have been implemented in various parts of Africa and elsewhere in the world. Although the initial goal is to improve land productivity and halt the process of desertification, it is becoming increasingly clear that

these measures have useful spill-over effects in the form of biodiversity restoration/conservation and climate change mitigation/adaptation. For example, restoring degraded land by growing trees or with other means offers environmental benefits such as carbon sequestration that may have an effect on the global climate. At the local level also, trees provide useful watershed and microclimate services. The effect of the feedback between land cover and the atmosphere on precipitation is well established (Bruijnzeel, 2004). The feedback mechanism suggests that vegetation cover exerts some influence on rainfall patterns at the local scale, thus mitigating the effects of the global climate. Furthermore, successful implementation of the technologies and measures that are meant to combat desertification or enhance biodiversity is likely to create resilient production systems susceptible to buffer land-users against environmental stresses such as climate variations. Therefore, the development of diversified agricultural and natural resources management systems that encourage the mixing of various crops species/varieties and the use of soil and water conservation techniques including agroforestry is not just an effective way to enhance biodiversity and control desertification, it also contributes to bringing responses to climate change.

3. The limited resources of many countries

Some of the countries that are implementing activities related to the three conventions have a narrow economic and institutional resource base to operate from. This is particularly true of African countries, which incidentally, have often been at the receiving end of environmental disasters. For many of these countries, addressing climate change, desertification and biodiversity loss as separate matters may be not only technically impractical but also economically unsustainable. There is a genuine concern that putting too much effort in environmental issues can divert attention from, and drain resources that could go to, more urgent development priorities (Odingo, 2001). Therefore, there is a need to find strategies in order to streamline these limited resources in a way that produces impacts, focussing on technology and policy options that can address all these environmental problems together. This can be achieved if the various people and institutions that are active on the environmental arena enter into a sound collaboration and join efforts to develop common strategies.

References

L. A. Bruijnzeel, L.A., 2004. Hydrological functions of tropical forests: not seeing the soil for the trees? *Agriculture, Ecosystems & Environment* 104: 185-228

IPCC, 2001. *Climate Change 2001. Third Assessment Report of the Intergovernmental Panel on Climate Change* (www.grida.no/climate/ipcc_tar).

Odingo, R.S., 2001. *The Clean Development Mechanism in Africa – A Framework for the Design of Sustainable Development Projects*. Climate Network Africa, Nairobi, Kenya, 210pp.

Wood, A., Steadman-Edwards, P. and Mang, J. (eds), 2000. *The Root Causes of Biodiversity Loss*. Earthscan, London and Stirling, VA, 399pp.