

Section III: Gaps in Knowledge and Recommendations for Policy, Management and Research

Gaps in Knowledge

Although natural causes of land degradation and hence desertification are generally well known e.g. low rainfall and associated drought phenomenon, high temperatures and resultant global warming as well as physical factors like wind, accurate and reliable data on some of these factors are grossly inadequate. One reason for this inadequacy in data relates to the dynamism of dryland climatic regimes which, for example, are quite variable in both time and space (Williams and Balling, 1996). The effects of natural causes of land degradation are complicated further by human induced activities that often occur in a vicious cycle. It has been observed that because of the dynamism of climatic regimes, dryland boundaries vary considerably over time and yet delineation is based on average conditions (Hulme, et al 1992). Reliable data on the extent and severity of ground surface land degradation are still scarce and some of the available data are often controversial and open to criticism. This brings into perspective the issue of relevant capacity in terms of human, financial and physical resources to carry out assessments on the one hand and mechanism for monitoring on the other hand. Because of this, most governments in the dry sahel are ill equipped to mitigate effects of some of the natural causes of desertification e.g. drought and only attempt to respond to an already worsened situation.

Information on global warming from Africa in general, and the drylands in particular, is even scarcer despite general acknowledgement of the place of the region in the debate. Very few published studies exist that examine causative factors and their levels of contribution to emissions of green house gases. Some information exists based on predictive models which however, are based on scanty information. There is general understanding about the role of drylands vegetation as stores of carbon sink and hence in carbon sequestration but very little experimentation to generate supportive data is being done and published. These limitations will continue to deny Africa her place in

meaningful contribution to the debate on global warming and hence proper participation in the UNFCCC.

Wind is a well known agent of land degradation. Major problems of wind erosion and gaps in understanding them have now been identified for some dryland areas in sub-saharan Africa (Sivakumar et al, 1998). However, there is still little information on their seriousness or location of problem areas. As a consequence, there are no long term strategic plans to counter the erosion and reduce the resulting damage. Fire is another important land degrading agent whose contribution is not properly documented. This has been attributed to inadequate data on incidences and intensities of fire to allow comprehensive analysis on its contribution (FAO, 2001)

The role of human activities in land degradation is well recognised. Human activities are considered to be the main causes of accelerated degradation. Man continues to fight for ownership of every part of land and resources thereof and to claim responsibility of the way such lands are managed and used. The issue of land ownership and the rapid land use changes taking place in the drylands is of concern. Such changes arise, in part, from the ever-increasing population. There is inadequate information on how these land tenure and land use transformations should be managed to allow for sustainable resource use. The issue of land tenure and property rights, in particular, in the face of changing land use systems remains a teething problem. There are more examples on the effects of increasing population on land degradation in the drylands. Case studies on the positive contribution of increasing population and development are, however few.

Forestry is considered as part of the holistic approach to desertification control in complimentarity with actions developed in other sectors (SOCEM 1996). Yet in sub-saharan Africa, including the drylands, countries continue to suffer deforestation, especially for purposes of agriculture and settlements. There is a huge gap between deforestation rate and afforestation which stands at 32:1 (Odera, 1996). Many recommendations to reverse the trend are in place but the situation on the ground continues unabated. There is need to address this gap by clearly isolating factors

hindering afforestation/reafforestation programmes if initiatives in the rehabilitation and sustainable natural resource management are to be realised.

The three conventions (CCD, CBD and CCC) provide opportunities for national, regional and international actions and collaborations despite various constraints and limitations identified under each of them. However, full realization of the benefits from these conventions will depend on how contracting or conference of parties provide enabling environment on key actions identified under each convention. It is necessary also that actions should be from regional perspectives (e.g. African perspectives). The Intergovernmental Panel on Forests (which has now been replaced by the United Nations Forum on Forests) has a crucial role in monitoring “actions to support afforestation, reforestation and restoration of forest ecosystems particularly in countries with fragile ecosystems and affected by desertification and/or drought particularly in Africa” (SOCEM, 1996). The contribution of the Intergovernmental Panel on Forests in the past towards this cause has not been realized. Meanwhile, there is now the presence of a wide range of regional and international networks in the areas of forestry and allied natural resources whose role in sustainable management and use of dryland resources including rehabilitation has not been fully understood and/or made use of. Key amongst these networks are the Forestry Research Network for Sub Saharan Africa (FORNESSA), African Forestry Research Network (AFORNET), Sub Saharan Africa Forestry Genetic Resources Network (SAFORGEN), Network for Natural Gums and Resins in Africa (NGARA) and the European Tropical Forestry Research Network (ETFRN).

Recommendations on Policy, Management and Research Issues

Various regional and international fora as well as reviews and reports by various organizations and individual experts have addressed aspects of the degradation of drylands and their sustainable development. Most of recommendations are still valid today though some of them require modifying to take cognizance of new information

available and changes that have taken place. The recommendations given below are based partly on facts generated in this paper and recommendations from various fora and reports.

Recommendations on Policy Issues:

- **That** National Governments express strong political commitment in addressing dryland issues including forest resource conservation, management and sustainable development and formulate national policies that encompass peoples involvement, sound management of ecosystems, and economic and social relevance;
- **That** institutional reforms involving civil society and NGO's are formulated and implemented and that these should focus on empowering local communities, facilitating the set up of partnerships in the natural resources and providing them access to financial resources at national and local levels;
- **That** appropriate policy statements are formulated and practical actions developed that allow and encourage tree and land security, thus having the long term aim of developing participatory, shared and joint forest protection and management regimes.
- **That** national governments strengthen the legal and institutional framework that includes monitoring and preparedness to facilitate implementing mechanisms for mitigating disasters.

Recommendations on Management Issues

- **That** governments develop national strategies and capacities to monitor the state of natural resources (including trees and forests) in order to plan for effective conservation and rehabilitation of the resources following defined targets and timeframes;
- **Recognizing** the importance of forests and allied natural resources in environmental protection, poverty alleviation and support to rural livelihood in the drylands, integrated and sustainable management of the resources is strongly recommended;

- **That** governments and development actors identify and disseminate appropriate knowledge regarding natural resource management and conservation, and validate and promote local innovations and experiences;
- **Recognizing** that the relevant UN conventions have not achieved their targets in combating desertification, it is recommended that the strengthening of the conventions is done focusing on, among others;
 - Proper consultation and involvement of relevant stakeholders in the formulation, design and implementation of desired actions.
 - Development of clear rules and procedures that are understandable by the people who have to implement the action plans at all levels,
 - Political support both nationally and internationally, and
 - Improved coordination of CCD linking it with the other conventions and sectoral programmes to ensure synergies and enhance resolving of conflicts

Recommendations on Research and Training Issues

- **Recognizing** the importance of adequate and precise information on natural resources for sound decision making and, especially lack of such data on a wide range of aspects covered in this report, it is recommended that proper mechanisms be put in place for data acquisition;
 - recommends further that governments and donors carry out ex-post evaluation studies on completed projects on dryland Africa and make findings widely available in order to guide future actions,
- **Recognizing** the continuing and increasing needs for skills to combat desertification and the challenging needs at national and international levels, it is recommended that national governments and partners should support formal and in-service training and, curriculum development including gender issues;
- **Recognizing** the significance of dissemination of information and adoption of technologies to beneficiaries or target groups, it is recommended that

governments and partners should support and strengthen extension and training facilities at research and educational institutions.

- **Recognizing** that research in Africa is far from complete but that relevant data exists in other regions within the tropics, it is recommended that mechanisms be put in place to share such results and lessons to avoid duplication of efforts and ensure formulation and implementation of more effective programmes,
 - recommends further that advantage be taken of the existing networks to promote and acquire relevant information.

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