

# **Recommendations for Forest Research, Policy Formulation and Institutional and Legislative Reforms**

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## **Introduction**

The eco-regional background papers as well as the e-discussion exercise have identified a large number of causes of environmental degradation, gaps in knowledge and constraints limiting successful rehabilitation of degraded lands in sub-Saharan Africa. This report reviews the main causes, gaps and limiting constraints and presents the recommendations generally suggested for:

- (a) Research to bridge the gaps in knowledge;
- (b) Policies to create the enabling environment to halt land degradation and successfully rehabilitate the degraded lands;
- (c) Institutional and legislative reforms to facilitate the implementation of the enabling policy measures.

## **Major Drivers of land degradation in sub-Saharan Africa**

Direct causes of deforestation and land degradation in sub-Saharan Africa are many, the major of which are:

- Forestland conversion for alternative uses (primarily, agriculture, road infrastructure development, and mining);
- Human settlement (including refugees camps);
- Overgrazing;
- Fuelwood and charcoal production;
- Uncontrolled wild fires;
- Commercial logging;
- Unsustainable land use practices;

- Inadequate investment in research and development of forest land resources;
- Poor information flows and networking between and among forest administration, research and development institutions;
- Poor legislation of ownership, tenure and user rights;
- Conflicts and civil unrests with displacement of populations in forest areas.

To these, one must add natural factors, such as drought, wind, floods and declining rainfall.

These direct causes of the land degradation process are said to be driven by a number of underlying causes, including the following:

(a) Population pressure and rural poverty

It is generally believe that hunger, poverty and environmental degradation in Africa are intimately correlated. Thus implying that any action to reduce poverty and hunger will assist in minimizing environmental degradation as well. Palo (1994) and Yirdaw (1996) among others argued that there is a significant correlation between population pressure and deforestation, especially in the presence of prevailing poverty, an unclear land tenure system, extensive agriculture, market failures and political instability.

Nevertheless, reports based on detailed local-level data exist which show that the relationships between population dynamics and environmental degradation are much too complex to fit reductionist generalizations about causes and effects, as generally believed. Professor Chamshama reported, in his background paper on "Rehabilitation of Degraded Sub-humid Lands in Sub-Saharan Africa", case studies in Tanzania, where a highly populated highland rural area (Lushoto) experienced more forest cover, while in a lightly populated rural area (Rufiji) there has been rapid deforestation.

(b) Market and policy failures

Markets and policies are important determinant of how forests and forestlands are used and managed.

- Market failures refer to the inability of market prices to reflect accurately the value of tradable and non-tradable environmental goods and services. These failures of the market are related to conditions of externalities, open access exploitation of resources, incomplete information and imperfect competition.
- Policy failures on the other hand relate more to the following conditions: (a) inability of governments to institute strict centralized management with adequate financial and management capacity; (b) inability of governments to adequately define property rights, thus rendering forests an "open access" resource, with high risk of over-exploitation, resource degradation, and limited investment incentives on forest activities; (c) inability of governments to charge a sufficiently high forest rent which reflects the real financial costs of managing forests, creating incentives for inefficient use and over-exploitation of forest resources; (d) implementation of old forest policies which fail to adequately address emerging opportunities and constraints imposed by national aspirations, international agreements and conventions; (e) Non-forest incentives (pricing policies, tax incentives and other subsidies) encouraging private investments in other land-based sectors such as agriculture, energy, mining and transportation; (f) Structural Adjustment Programmes (SAP) aimed at correcting severe macroeconomic problems in national economies, have contributed also to unsustainable forest utilization and land degradation. The SAP package includes, among other things, the removal of price controls, trade liberalization, reduction of government spending, devaluation of

domestic currency. For the countries implementing SAP, a major effect has been reduced financial capacity of forest departments to manage forest resources effectively. Also, peasant farmers who, hitherto, depended on subsidized farm inputs have been compelled to encroach forests in order to expand farmlands to meet the rising demand for food as population grows. Rising demands for food bring about higher food prices, which in turn may result in increased land clearance to increase production; and (g) colonial land alienation policies in terms of which much of the fertile lands are concentrated in the hand of a selected few, with the majority of peasant farmers being concentrated in highly fragile marginal lands (the case of Zimbabwe).

(c) The state of the economy

Poor economic performance, combined with high external debts, pushes highly indebted poor African countries to exploit forest resources quickly and intensively for short-term gains. The debt burden thus provides an inducement to liquidate forest capital with little immediate attention to the associated medium and long-term environmental consequences.

Debt service requirements also provide the justification for expanding exports crops production into forest areas, while food crops production is expanded into highly vulnerable marginal lands, including hillsides and watershed areas.

The pressure to generate foreign exchange earnings, therefore, has led to an emphasis on quick return and unsustainable lands use practices. This has resulted in the adoption, in most developing SSA countries, of policies that led to forest conversion to cash-crops agriculture, mining and short-term exploitation of forest capital.

These driving forces have created major constraints and gaps in knowledge, which limit efforts toward the rehabilitation of degraded lands in sub-Saharan Africa. Recommendations for research, policy, and institutional and legislative reforms are needed to address the situation.

### **Recommendation for Research and training**

On the basis of the above causes and driving forces, the following are recommended for research in order to bridge the gaps in knowledge in the fight against environmental degradation and for more effective efforts to rehabilitate degraded lands in sub-Saharan Africa:

1. **Recognizing** the need to bring scientific knowledge to bear on the development of forest policies and management; **recognizing further** the existing large gaps in knowledge and the inadequate means and resources available to national research institutions and universities, we **recommend** that governmental policy-decision makers not only promote research (through a firm commitment toward adequate research capacity building) but also value scientific information and seek their application in forest policy formulation and planning processes. We **furthermore recommend** that forest research scientists produce, in a timely manner, relevant and reliable data/knowledge in order to earn continued commitment and support from governments and donors.
2. **Recognizing** the needs for new skills to face up emerging challenges associated with sustainable management of natural resources, and the implementation of international agreements and conventions from Rio, we **recommend** that national governments and development partners support formal and in-service training as well as school curriculum revision and development.

3. **Recognizing** the importance of technology transfer to and adoption by target groups, including the rural poor, we **recommend** that governments and development partners support and strengthen extension services, educational initiatives and training at the local communities level.
4. **Recognizing** the spread of pluralism, decentralization and participatory processes in the management and planning of natural resources throughout sub-Saharan Africa; **recognizing further** that local people and their administrations are in most cases not well equipped to face up their new responsibilities, we **recommend** that research programmes include the needs of the rural poor who may not be able to clearly express their research needs. Research into non-wood-forest products (e.g., medicinal plants, boswellia species) and fuelwood supply and demand for example should be promoted.
5. **Recognizing** that forest research at national research institutions is proceeding with less than a critical mass of scientists and missing expertises in key disciplines, we **recommend** that regional and sub-regional forest research networks be strengthened to effectively foster collaboration between research scientists and institutions, promote exchange of information in order to avoid unnecessary duplication of efforts.
6. **Recognizing** the huge research needs in sub-Saharan Africa coupled with the region's limited human and financial research capacities, we **recommend** that interdisciplinary forest research needs at the local, national and eco-regional levels be identified and prioritised.
7. **Recognizing** the incomplete knowledge about forest resources availability and value, and the feasibility of sustainable forest

management options, we **recommend** that research be extended into forest inventories and monitoring techniques, as well as the development of efficient methods for the valuation of all forest goods and services, and for the identification of costs and benefits of sustainable forest management.

8. **Recognizing** the contribution of natural factors (e.g., drought, wind, high temperature) to land degradation; and recognizing further that accurate and reliable data on some of these factors are grossly inadequate, we **recommend** that research into the dynamics of dryland climatic regimes, which are complicated by their variability through time and space, should be promoted to effectively mitigate the effects of these natural factors rather than reacting to them as they occur.
9. **Recognizing** the important role of drylands, sub-humid and humid lands vegetation in carbon sequestration; and the need for Africa to meaningfully contribute to the international debate on global warming, we **recommend** that experimentations to generate supportive data should be undertaken and their results published.
10. **Recognizing** that the issue of land tenure and property rights remains a teething problem related to land degradation in Africa; recognizing further how land tenure and the rapid land use changes taking place in the continent should be managed to promote sustainable resource use, we **recommend** that research into case studies on the land tenure/ownership – land use dynamics should be promoted.

## **Recommendations for Policy**

11. **Recognizing** the increasing degradation of forestlands, and the urgent need to create enabling environments for sustainable

forest management throughout sub-Saharan Africa, we **recommend** that the linkages between forest science and forest policy and planning processes should be improved.

12. **Recognizing** that land degradation in sub-Saharan Africa is highly correlated with land use changes and practices, we **recommend** that national overall land use plans, which optimise the allocation of lands and the rehabilitation of degraded lands with the different landscapes and forest ecosystem types, should be carefully drawn up consultatively, with the participation of all stakeholders, including local populations. It is **further recommended** that land use preferences should be captured in the plans and the full social costs and benefits of land use alternatives should be properly evaluated.
13. **Recognizing** that people's motivation to change negative perceptions and behaviour is needed for sound land use practices and active participation in land resources management, we **recommend** that the vision embedded in national land use plans should be clearly and consistently communicated to all stakeholders, together with the required actions, opportunities and responsibilities agreed upon to conserve, utilize, manage, restore/ rehabilitate the forest ecosystems sustainably.
14. **Recognizing** the necessity to improve on the quality of forest management decisions and pricing policies, we **recommend** that information/knowledge on extent of social, economic and biophysical consequences of forestland degradation should be scientifically generated and disseminated to all stakeholders, including those in other land-based sectors, such as agriculture, fisheries, and mining.
15. **Recognizing** the urgency to reverse environmental degradation, especially forests and forest resources, we **recommend** the

creation within national forest services, units to be charged with the restoration of degraded primary forests, the management of secondary forests and the rehabilitation of degraded forestlands. These units should be adequately supported and monitored so that they become centers of excellence cooperating in network mode.

16. **Recognizing** that forests and forest resources are valued by and accessible to a variety of stakeholders, we **recommend** that multiple-use management should be the single most important management option in rehabilitating degraded forest landscapes. A single purpose restoration scheme in many situations may not be a valid option in the long-term.
17. **Recognizing** the urgent need to complement public funds with external sources of funding to support adequately sustainable forest management, including the effective rehabilitation of degraded forest lands, we **recommend** that funding opportunities associated with the implementation of relevant international conventions should be carefully sourced out and seriously considered.

#### Recommendation for Institutional and Legislative reforms

18. **Recognizing** the tendency of governments to reduce their financial support to research, which forces public institutions to seek alternative ways of funding, and promotes the entry into the research area of profit-oriented enterprises and non-profit organizations (e.g., NGOs), we **recommend** that governments find more flexible and innovative ways of integrating the new institutional arrangements which are now emerging, including the development of mixed public and private partnerships and joint ventures in research as well as the increasing involvement of non-public research organizations. The new roles and niches of these organizations and their

interactions and coordination should be carefully planned for the benefit of national forest sectors.

19. **Recognizing** the necessity to promote the entry of new partners, including private-for-profit enterprises, in the forestry research sector, we **recommend** that governments work on creating a favourable environment, including economic and political stability, advantageous legal conditions which could promote joint ventures and protect research results through patents and copyrights; the possibility of for national research centers to be contracted to carry out research for private companies and vice versa.
  
20. **Recognizing** the opportunities and challenges associated with the adoption of the multi-partner approach to forest research, we **recommend** that the new institutional arrangements include a clear identification of national research priorities as well as the definition of responsibilities for the different partners. The research agenda of national research institutions could now focus more on basic and applied research and the needs of the rural poor; and over areas less attractive to profit-oriented organizations.
  
21. **Recognizing** that much of the conflicts and unsustainable practices in forest land uses are due to the unclear legislation over land ownership and rights, we **recommend** that forest legislations should be reformed, including clear and understandable land tenure and property rights, together with a meaningful framework for their application and reinforcement in order to prevent further unsustainable land conversion and degradation.

