

## ANNEX 3: STAP TECHNICAL REVIEW

February 19, 1998

Further to my review of September 1997 of the above project, I am pleased to note that the revised proposal is very well conceived and adequately addresses the issues raised in my review. The rationale and objectives of the proposal are clearly defined and the role of stakeholder participation is clearly spelled out and covers all my earlier concerns. In addition, I find the implementation arrangements most appropriate.

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### COMMUNITY-BASED REHABILITATION OF THE DEGRADED LANDS OF THE TRANSBOUNDARY AREA OF MAURITANIA AND SENEGAL REVIEW OF A GEF PROJECT PROPOSAL

#### Summary

This proposed environmental management project is a significant undertaking by two countries -- Mauritania and Senegal -- that share nearly common environmental and economic priorities and concerns. The scientific and technical design of the project is basically sound and qualifies as a bankable GEF project. Adequate attention has been paid to the protocols that are often associated in inter-country initiatives of this nature. There are, however, a number of points that need clarification or refinement in the body of the text to ensure the proper integration of the project into the overall policies and strategies of the two countries. Subject to the addressing of the points raised below, this project is well-conceived and well-structured, and is therefore highly recommended for funding.

#### I. Global Priority

I believe this project fits in nicely with GEF's mandate and that it has global significance for the issue of land degradation as a cross-cutting theme, for a number of reasons: the first is the transborder nature of the valley area of the Senegal River, and international body of water. The project seeks to restore abused land and fragile ecosystems along this river. The second reason is the importance of the area for migratory birds. The third is the existence of endangered species in the area. The fourth reason is that reforestation projects such as this one, and initiatives to retard wood burning and bush fires, have potential global climatic effects.

In addition, while the project operationally focuses on a particular geographical area, its context is regional in nature: one of its central objectives is to integrate sub-regional activities, improve sub-regional co-operation in the reversal of land degradation, and encourage consultations at the sub-regional institutional level. The project is linked with regional-level structures in other ways: for example, the monitoring and evaluation function will be carried out in conjunction with the existing monitoring networks set up by UNSO-Dakar as part of the activities of the Environmental Monitoring Centre.

One of GEF's goals is to encourage and facilitate regional and interregional collaboration. This project exemplified that type of regional collaboration because of the transborder context in which the project takes place. Additionally, the similarity of many of the past and current initiative undertaken by both Mauritania and Senegal, and their shared focus of their governments on common priorities such as food security, poverty eradication, and the empowerment of local participants, enhances the likelihood that this project will bring further regional collaboration.

The operational focal areas of GEF include biodiversity, climatic changes, and international waters, with land degradation as a cross-cutting theme. In that context, this project dovetails with GEF's overall goals, priorities, and strategies.

## **II. Cost-Effectiveness**

The cost-effectiveness of this project appears high not only because of its use of simple technologies and voluntary participation by local communities, but also because of the proven linkages among land degradation, biodiversity, carbon sequestration and the protection of the regional waters. These close linkages mean that if this project were to be abandoned, the likely cost would be further degradation to the land through soil deterioration, additional loss of carbon reserves, almost predictable periodic drought, demographic pressure and improper usage of resources.

The region where the project is sited is an important one. It is a wetland zone within several fragile ecosystems. As indicated in the proposal, the biodiversity of this area is comparatively one of the most extensive in this Sahelian sub-region of West Africa, and it includes faunistic elements such as manatees, several fish species, and a wide range of wildlife and arid and semi-arid floristics.

## **III. Adequacy of Project Design**

The project appears to be well designed, with relatively clear links between targeted objectives and the means for achieving them. The project's objectives can be broken down into six main components. Taking them one at a time: the carbon sequestration (community agroforestry and reforestation) component has been well thought out. Adequate attention has been paid to the methods the implementers will use to achieve the critical mass of tree and grass cover by 2002 – for example, developing village nurseries of both local and rapidly growing exotic species. However, it would have been useful if some preliminary details had been given about the quantity and size of the planned nurseries and who would maintain them. Again, it would have been even more reassuring if a specific schedule had been outlined for the planned training sessions. I must, however, draw the attention of the project

implementers to the fact that there is a vast difference between "tree planting." This caution is being recorded because of extensive personal experiences with so-called tree-planting projects in the sub-region.

I concur with the project designers' plan that, as a result of the decentralisation of reforestation to the local communities, the planned measures likely to be replicable.

Second, the resource management steps outlined to reverse land salinisation, improve pastoral land productivity and enhance fodder resources, seem likely to achieve their target goals if the project implementers are successful in encouraging the local communities to comply with all a number of measures -- for example, deferred grazing and the creation of fire breaks by rural residents. This will require concerted public education, especially through the medium of visual aids and local drama. Integrated resource management is about managing people. The agro and technological steps have been spelled out clearly, but perhaps not enough has been said about the people management aspect. This is not an easy proposition. I am, however, confident that if the implementers are pragmatic and thoroughly study the sociology of the communities, they should improve their economic situation.

The third component -- the restoration of damaged ecosystems and the conservation of threatened and endangered local species through the rehabilitation of valley woodlands and gazetted forests -- has been less well designed. The goals are spelled out clearly enough, but more programmatic details need to be given to make a convincing case that these objectives can, in fact, be achieved through "awareness rousing, protective measures, local flood control" and the rationalisation of land use systems. In short, the protocols are top general and need to be more clearly delineated.

Reducing greenhouse gas emissions. The successful achievement of this component will depend largely, as pointed out, on the degree to which the other components of the project are achieved: a reduction of bush and grass fires and more efficient use of wood resources will most directly contribute to the reduction of greenhouse gas emissions. The "design" adequacy of this component is therefore necessarily a big "if".

The section on capacity building for local communities and NGOs and for management services is well-designed. Much will depend, however, on the quality of the training sessions. Much also will depend on the ability of the training staff to building on the indigenous knowledge of local ecosystem relationships and to "reorient" this knowledge base to take account of the new changes to the ecosystem brought about by river management, population pressure, and environmental changes. The diagnosis of needs will also have to be accurate to improve the relevance of the training sessions.

The feasibility of the project is enhanced by the fact that it attempts to build on the lessons and experience gained from a number of past projects in the area, including the stabilisation of active sand dunes in Mauritania.

In short, the basic design of this project, which focuses on combating land and resource degradation in the Senegal River Valley caused by a combination of natural and anthropogenic forces, is sound. The feasibility of the project is likely to be ensured by the fact that adequate attention has been paid to all relevant protocols, to review and evaluation, and to the

integration of the project into the overall policies and strategies of the two countries will ensure the feasibility of the project.

#### **IV. Feasibility of Implementation, Operation and Maintenance**

The success or failure of this project will depend in large measure on the ability of its implementers to fulfill the design requirements already outlined and discussed in the proposal. One such requirement -- an important one for project implementation -- is stakeholder involvement. The prospect of local participation appears good because Senegal and Mauritania both have a demonstrable track record for undertaking modest projects that support policies which involve and empower local communities in the management of their natural resources. This is especially evident with projects which seek to integrate desertification management into the large process of the local community's socio-economic development. In both countries, decentralisation measures are also underway to give local communities greater control over the management of their natural resources.

#### **V. Replicability and Sustainability**

Based on the fact that the project is well-designed and that there are good indications that it will well-managed, the conditions for its feasibility can be said to have been spelled out properly, I would therefore speculate that the project has a high degree of replicability in other areas with similar conditions.

While there may indeed be a close causal link between land rehabilitation, on the one hand, and improvements in the livelihood security of the people, on the other, this linkage will not result in greater enthusiasm or participation by the people in resource management unless the beneficiaries themselves come to realise that such a sociological link (between the reversal of land degradation and the reduction of poverty) does exist. The proposal, however, does not make it clear how the project intends to bring this realisation to fruition, especially given the fact that both the process and the benefits of land rehabilitation are realised relatively slowly, that is, over a number of years.

It may help local communities if they are shown how past projects (in silviculture, management of gazetted forests, and so on) have raised awareness, among certain beneficiary populations, especially the benefits of environmental and natural resource management. Therefore much will depend on how well those other projects are publicised, and how close the proposed beneficiaries are to the particular project sites.

The concept of sustainability also requires a certain level of governmental commitment to make a project succeed. In general, the reversal of desertification and other land degradation mechanisms have been of high priority to both Mauritania and Senegal. The governments of both countries have said as much. There are already a number of anti-desertification projects underway in both countries. This bodes well for the likelihood of their commitment to this particular project. Nevertheless, some attention should be given to the possibility that the proposed project may end up competing for funds with various other plans, strategies, initiatives, and programmes currently underway in these countries.

## Conclusion

I therefore highly recommend this project for funding. However, I expect that the few points raised will be taken into consideration when the project design is being finalised.

In view of my interest and extensive field experience of the environment of the West African Sahelian zone -- specifically the two countries under consideration -- I will certainly be available to serve the project team. In addition to my own research studies in the area, I served as the Vice Chairman of the Advisory Committee on the Sahel, which resulted in the two landmark studies *Agroforestry in the West African Sahel* and *Environmental Changes in the West African Sahel*, both of which are published in 1983 by the National Academy Press, Washington DC. That Advisory Committee was constituted by the Board on Science & Technology for International Development (BOSTID) of the National Research Council of the U.S. National Academy of Sciences.

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