

Conclusions

A fish eagle crossing the White Nile flood plain, against a backdrop of seasonal rangeland fires set by pastoralists. Sustainable management and development of natural resources is one of the greatest challenges facing post-conflict Sudan.



Conclusions

15.1 Introduction

The UNEP post-conflict environmental assessment of Sudan has made clear that Sudan is affected by a number of severe environmental issues, which are closely tied to the country's social and political problems with conflict, food insecurity and displacement.

Ignoring these environmental issues will ensure that some political and social problems remain unsolvable and even likely to worsen, as environmental degradation mounts at the same time as population increases. Resolving them will require a cross-cutting effort in the political arena.

Investment in the environmental sector has suffered greatly from the conflicts that have wracked Sudan for most of the last fifty years, and environmental concerns still cannot be adequately addressed in Darfur today. Corrective action, however, can start in much of the rest of the country. Moreover, thanks to the benefits of oil exports, Sudan can for the first time afford to significantly invest its own resources into such action.

Recommendations on each of the various cross-cutting issues and sectors have already been set out in Chapters 3 through 14. These have been viewed and vetted by the Governments of Sudan and other national and international stakeholders. As such, they represent an agreed way forward for each sector.

This chapter summarizes the findings and recommendations of the UNEP post-conflict environmental assessment, and proposes the general way forward for the Governments of Sudan, civil society and the international community, to help ensure that these recommendations are acted upon.

15.2 Key findings

Over 100 environment and governance issues are discussed in Chapters 3 through 14, many of which are closely connected or different aspects of the same problem. These items have been distilled into three positive and seven negative key findings:

Positive findings

- 1. The oil-driven economic boom can fund the necessary investment in improved environmental governance.** The total cost of the recommendations listed in this report is USD 120 million over three to five years. With oil exports expected to be in excess of USD 5 billion in 2006, the government clearly has the capacity to pay some if not all of these costs. On this basis, all future international aid projects for environmental governance should have a strong element of matching government funding.
- 2. The combination of the natural resources of the south and the resource needs of the north represents a real opportunity for large-scale sustainable trade in raw and added-value natural resources.** Many of the resources of Southern Sudan could be used to drive economic development, but are currently being wasted. For example, Khartoum state imports construction timber even as mahogany trees are burnt to clear land for shifting agriculture in the southern states. While tight controls are obviously needed to avoid over-exploitation, extracting added value from the natural resources of the south is key to both economic development and conservation.
- 3. Political support for the environment is strong in the newly formed Government of Southern Sudan, and rising in the Government of National Unity.** Support is both political (in terms of awareness-raising) and practical (in terms of allocating GONU and GOSS core budgets to tackling environmental governance and natural resource management issues).

Negative findings

- 4. Environmental degradation in northern, central, eastern and western Sudan is widespread, severe and continuing at a linear rate.** The most common forms of degradation – desertification and deforestation – are long-term problems that may worsen in the future. The northern coastline and marine habitats have been locally damaged near urban areas, but remain in good condition overall.

5. Environmental degradation in south Sudan is overall moderate but locally severe and generally increasing at a rapid pace. Ongoing deforestation, which could worsen considerably in the coming years due to the massive refugee and IDP return process underway, represents a significant lost opportunity in sustainable development and economic growth.

6. Southern Sudan's environment is highly vulnerable to development-induced damage in the post-conflict period. Given the near complete absence of environmental governance, natural resources such as timber and the remaining wildlife are vulnerable to over-exploitation.

7. Environmental degradation, as well as regional climate instability and change, are major underlying causes of food insecurity and conflict in Darfur – and potential catalysts for future conflict throughout central and eastern Sudan and other countries in the Sahel belt. Setting aside all of the social and political aspects of the war in Darfur, the region is beset with a problematic combination of population growth, over-exploitation of resources and an apparent major long-term reduction in rainfall. As a result, much of northern and central Darfur is degraded to the extent that it cannot sustainably support its rural population.

Although not a novel finding to those working in this field in Darfur, it is not commonly understood outside the region. Yet it has major implications for the prospects for peace, recovery and rural development in Darfur and the Sahel. Indeed, the situation in Darfur is uniquely difficult, but many of the same underlying factors exist in other parts of Sudan and in other countries of the Sahel belt. Darfur accordingly holds grim lessons for other countries at risk, and highlights the imperative for change towards a more sustainable approach to rural development.

8. Long-term peace in Sudan is at risk unless sustainable solutions are found for

several environmental issues identified as potential conflict 'flashpoints' in Unity and Upper Nile states, the Three Areas and other north-south border zones. In general order of priority, these unresolved issues are:

- the environmental impacts of the development of the oil industry;
- the southward migration of northern pastoralists due to land scarcity and degradation;
- tree-felling for the charcoal industry in the north-south boundary zone;
- new and planned dams and major water projects, including any revival of the Jonglei canal project; and
- ivory and bushmeat poaching.

An appreciation and long-term solutions for these environmental issues should be integrated into peacebuilding efforts to reinforce the prospects for sustainable peace.

9. Environmental governance and policy failures underlie many of the problems observed. Many of the issues identified cannot be resolved by more aid or investment, but require changes in government policy instead. This is particularly the case for agricultural development. In addition, the basics for good environmental governance are lacking or need substantial strengthening throughout the country. Areas necessitating attention include legislation development, civil service capacity-building and data collection.

10. United Nations work in the field of environment and aid in Sudan could be much improved by increased efforts in coordination. At present, environmental issues are not integrated into the larger UN humanitarian programmes, and numerous structural and management problems reduce the effectiveness of environment-specific programmes, such as those funded by the Global Environment Facility. Improved coordination could resolve many of these problems without significantly raising overall aid expenditure.

15.3 Key recommendations and investment requirements

Eighty-five detailed recommendations are provided in Chapters 3 through 14. These have been distilled into four general recommendations:

1. **Invest in environmental management to support lasting peace in Darfur, and to avoid local conflict over natural resources elsewhere in Sudan.** Because environmental degradation and resource scarcity are among the root causes of the current conflict in Darfur, practical measures to alleviate such problems should be considered vital tools for conflict prevention and peacebuilding. Climate change adaptation measures and ecologically sustainable rural development are needed in Darfur and elsewhere to cope with changing environmental conditions and to avoid clashes over declining natural resources.
2. **Build capacity at all levels of government and improve legislation to ensure that reconstruction and economic development do not intensify environmental pressures and threaten the livelihoods of present and future generations.** The new governance context

provides a rare opportunity to truly embed the principles of sustainable development and best practices in environmental management into the governance architecture in Sudan.

3. **National and regional government should assume increasing responsibility for investment in the environment and sustainable development.** The injection of oil revenue has greatly improved the financial resources of both the Government of National Unity and the Government of Southern Sudan, enabling them to translate reform into action.
4. **All UN relief and development projects in Sudan should integrate environmental considerations in order to improve the effectiveness of the UN country programme.** Better coordination and environmental mainstreaming are necessary to ensure that international assistance ‘does no harm’ to Sudan’s environment.

Analysis of chapter recommendations

The recommendations from each chapter have been collated by issue and economic sector in Table 31, and by theme in Table 32.

Table 31. Recommendations by economic sector and geographic region

Issue and economic sector	No.	Cost of recommendation by region/target (USD million)			
		National (including Darfur)	Southern Sudan	International Community	Total
Natural disasters and desertification	3	4.0	–	–	4.0
Conflict	4	–	–	2.9	2.9
Displacement	4	–	–	5.3	5.3
Urban environment and environmental health	6	5.0	2.0	1.0	8.0
Industry	5	2.9	1.0	–	3.9
Agriculture	8	14.6	9.2	–	24.0
Forestry	13	10.6	7.8	0.3	18.7
Water resources	9	11.6	2.0	–	13.6
Wildlife and protected area management	5	3.5	6.0	–	9.5
Marine and coastal resources	8	9.1*	–	–	9.1
Environmental governance and awareness	10	8.7	9.3	–	18.0
International aid and the environment	6	–	–	3.0	3.0
Total	85	70	37.3	12.5	119.8

*Includes USD 0.7 million by Red Sea state

Table 32. Recommendations by theme and region/target

Recommendation theme	Costs of recommendation by region (USD million)			
	National (including Darfur)	Southern Sudan	International Community	Total
Governance	9.1	6.5	0.3	15.9
Technical assistance	13.0	6.0	6.5	25.5
Capacity-building	7.0	12.0	–	19.0
Government investment	25.1	–	–	25.1
Awareness-raising	0.2	0.1	0.5	0.8
Assessment	9.6	0.7	1.2	11.5
Practical action	6.0	12.0	4.0	22.0
Totals	70	37.3	12.5	119.8

Cost of the recommendations

Depending on the approach, the cost of a list of recommendations for the substantial resolution of the major environmental issues in Sudan could run from millions to billions of US dollars. In the context of the competing needs of post-conflict recovery and the ongoing Darfur crisis, it is at present clearly unrealistic to expect such additional expenditure. However, it is critical that expenditure be raised from its current negligible level to one at which a real difference can be made (and measured). Accordingly, the costed recommendations are kept below USD 5 million per government, per sector, and per annum – and address only the most urgent or logical first few items.

The resolution of many of the issues raised will also require considerable time. UNEP estimates that building national capacity and addressing some of the more complex policy, legal and political issues noted in this report will take a minimum of three to five years. Reversing the noted trends of environmental degradation could take much longer.

UNEP does not expect work on all of the listed recommendations to commence in 2007; some indeed may never be taken up. Moreover, the costs listed are only basic estimates that will need to be refined in the project development stage. However, they provide a good indication of the scale of investment required to make a significant difference to the current environmental situation and trends in the country.

It should be noted that in addition to the expenditure discussed above, a major investment in environmental

health infrastructure (water supply and treatment, sewage treatment etc.) is unavoidable if GONU and GOSS wish to achieve major improvements in the health sector. In this area, ‘soft’ approaches like awareness-raising and capacity-building will be of limited benefit in the absence of ‘hard’ improvements in water supply and sanitation infrastructure.

The total cost of this report’s recommendations is estimated at approximately USD 120 million over three to five years: USD 70 million for GONU, USD 37.3 million for GOSS and USD 12.5 million for the international community. These are not large figures compared to the Sudanese GDP in 2005 (USD 85.5 billion), and are hence considered to be relatively affordable for both GONU and GOSS. The recommendations aimed specifically at the international community come to approximately 0.5 percent of annual aid expenditure for Sudan in 2006 – again relatively affordable.

Financing the recommendations

The UNEP proposal is that the Government of National Unity and the Government of Southern Sudan own this list of sector recommendations and contribute the majority of the funds. International aid should make up the difference on a partnership basis, with a view to providing technical assistance and capacity-building rather than just funding. As mentioned in the previous chapter, sole funding by the international aid community is specifically not recommended for three reasons:

1. Prior experience in Sudan and elsewhere has shown that one hundred percent aid-funded recovery and development projects often have

poor sustainability and collapse when donor funds are withdrawn. Part-financing by the government typically results in much better design and national ownership;

2. International aid funding for Sudan has its limits, and urgent humanitarian needs will continue to draw the bulk of the available funds. It will simply not be possible to raise all the required finances from international donors; and
3. Many of the recommendations focus on policy and governance, so the direct costs are limited and internal to government civil services.

Some sectors such as industry, urban development and forestry have a high potential for part-financing by the private sector, but any revenue-generating option, such as license fees and royalty agreements, should be designed and introduced with care to avoid governance problems.

15.4 The way forward

Establishing roles and responsibilities in GONU, GOSS and the UN

UNEP's recommendations envisage a key role for several government ministries within GONU and GOSS, as well as for over ten different UN agencies. Their wholehearted support is required for the implementation of many recommendations.

UNEP and its government counterparts in the GONU and GOSS environment ministries cannot play the roles of the other parties, as they do not have the mandate or the capacity to do so. They can, however, catalyse action from their counterparts to pick up the recommendations and assist them throughout the process. The first stage in the implementation of the recommendations has in fact already occurred, as the respective ministries and UN agencies were asked for their views and support in the report drafting process. The recommendations in this final report reflect that input.

UNEP proposes to maintain a central role through the establishment of a Sudan country programme for the period of at least 2007-2009 (funds permitting). For each recommendation listed, UNEP will have one of three positions:

- a central role as the lead UN agency or one of a small joint agency team;
- a catalysing and supporting role to other UN agencies; or
- a tracking role for recommendations that do not require substantive UN input.

On the government side, the environment and wildlife ministries and authorities will also need to determine their specific role for each recommendation, and engage the appropriate line ministries if required.

UNEP country programme

The UNEP Sudan country programme is still under development as of early 2007, but an outline can be presented.

Funds permitting, UNEP will establish more permanent project offices in Khartoum and Juba, to implement a core programme for the period 2007-2009. In 2009, the possibility of an extension will be reviewed against a set of exit criteria based on the situation in the country and progress on addressing the environmental issues listed in this report. Key themes for the UNEP programme are anticipated to be the same as the recommendation themes:

- governance (with a focus on legislation development);
- technical assistance and capacity-building;
- awareness-raising and advocacy;
- assessment; and
- practical action.

The exception is the recommendation category of government investment, as this is considered to be a role for the GONU and GOSS only.

Advocacy, and awareness- and fund-raising

The funding and political support required to implement the recommendations will need to be found through an organized process of advocacy and awareness-raising. This effort will by default be led in the first instance by UNEP and its government counterparts in GONU and GOSS.

UNEP has developed a range of assessment products to assist this process and will lead fund-raising within the international community. The government counterparts will direct fund-raising within their respective governments, using normal annual budgetary mechanisms and all other avenues for extra-budgetary funding. The existing National Plan for Environmental Management (NPEM) process could be utilized to this end by the GONU Ministry of Environment and Physical Development.

It is anticipated that awareness- and fund-raising will take a minimum of one year to complete substantially. Some projects will start much sooner than this, but major items, such as line ministry policy shifts and infrastructure investments, will probably require one to three years.

Development of national, regional and sectoral plans and action programmes

Once the agreed partners are on board and funds have been allocated, the recommendations list can be converted into a number of national, regional, sectoral and project plans for implementation. Wherever possible, these plans should be integrated into general development and poverty reduction strategies rather than be stand-alone initiatives.

In the water sector, for example, individual states have the responsibility to develop five-year State Water Master Plans; this represents an ideal opportunity to mainstream environment and sustainability issues into concrete policy and investment programmes at the intermediate level. At the international level, UNEP will be working to integrate environmental issues into the UN Development Assistance Framework (UNDAF) process, planned for late 2007, and the joint government-UN Poverty Reduction Strategy Papers (PRSPs).

Annual and three-year progress review

This UNEP assessment project has been a major and relatively costly undertaking. Its first phase has now been successfully completed. The real test, however, will be the rate of implementation of its recommendations, which will only be possible to accurately evaluate some time after the public launch of the report and other assessment products.

It is therefore recommended that UNEP and partners conduct an evaluation of the status of the recommendations at the end of 2009. Interim assessments should be conducted on an annual basis, starting in December 2007.

15.5 Concluding remarks

Sudan is now at a crossroads. While the country clearly faces many severe environmental challenges, the combination of the 2005 Comprehensive Peace Agreement and the oil-driven economic boom represents a major opportunity for positive change.

The sustainable management of the country's natural resources is part of the solution for achieving social stability, sustainable livelihoods and development in the country. For this goal to be reached, however, it will be necessary to deeply embed a comprehensive understanding of environmental issues in the culture, policies, plans and programmes of the Government of Sudan and its international partners, such as the United Nations.

This will require a long-term process and a multi-year commitment from both the Government of Sudan and its international partners. As the environmental expert of the United Nations, UNEP is ready to assist the Government and people of Sudan, as well as their international partners, in taking forward the recommendations developed from this assessment.

