

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

**MINISTRY OF ENVIRONMENT AND PHYSICAL DEVELOPMENT
GOVERNMENT OF NATIONAL UNITY**

Higher Council for Environment and Natural Resources



In Collaboration with

**MINISTRY OF ENVIRONMENT, WILDLIFE CONSERVATION AND TOURISM
GOVERNMENT OF SOUTHERN SUDAN**

**NATIONAL PLAN FOR ENVIRONMENTAL
MANAGEMENT (NPEM) IN POST-CONFLICT SUDAN**

Supported by



European Commission



Nile TEAP



United Nations
Environment Program

Preface

During the past three decades of war, limited efforts were exerted to streamline environmental dimension in development programs. Most of these efforts were triggered by the donor community and yielded development of environmental strategies that only address specific environmental aspects such as Biodiversity, Climate change etc. However, the implementation of these strategies/action plans were hindered by lack of resources, most of which were directed to finance the civil war. Moreover, most of these strategies/studies did not cover the Southern Sudan due to security reasons.

Sustainable environmental management must be based on strategies and policies adopted at all levels of government and stakeholders including grass roots and civil societies. I am glad that for the first time Sudan was able to prepare this national Plan for Environmental Management (NPEM) in post-conflict era. This draft of NPEM is the result of wide consultation and dialogue among line ministries, state authorities, and NGOs guided by the Higher Council for Environment and Natural Resources and the Ministry of Environment, Wild life Conservation and Tourism of the Government of Southern Sudan.

This draft document is submitted for further discussion before approval by the Council of Ministers and other legislative bodies.

Dr. Ahmed Babikir Ahmed Nahar

Chairman of the Higher Council for Environment and Natural Resources
Minister of Environment and Physical Development
Government of National Unity

Forward

Environmental degradation is accelerated by mismanagement of natural resources, poverty and conflicts. On the other hand development has and may continue to result in serious environmental problems if it ignored the issues of resource sustainability. For all these, it is imperative that the economic and environmental agendas be reconciled to ensure proper balance between economic development and environmental conservation.

Hence the Higher Council for Environment and Natural Resources of the Ministry of Environment and Physical Development of GONU and the Ministry of Environment, Wildlife Conservation and Tourism of the Government of GOSS have recognized the need for sustainable economic development based on sound environmental management, and embarked on a serious process for the preparation of this National Plan for Environmental Management (NPEM). The Plan comes as a response to these challenges which provides coherent actions to balance development issues and environmental concerns into concerted, coordinated and integrated actions on both economic and environmental fronts.

Taking into consideration the previous efforts in the field of environment and the documents produced from the various activities, the process took the following steps:

1. The HCENR developed a project proposal and solicited technical and financial assistance from development partners working in the field of environment in Sudan. The Nile Transboundary Environmental Action Project (NTEAP), The European Community (EC), The United Nations Environment Program (UNEP) supported the process.
2. An advisory body composed of relevant national and international partners was established to provide guidance and technical support to the process.
3. A small secretariat office was established under the HCENR consisting of two national coordinators; one representing the North and the other representing the South, supported by senior national consultants who provided technical assistance.
4. The process started by situation assessment and identification of environmental issues through task forces (commissioned technical background papers which were presented in a series of workshops).
5. The first workshop was convened in Khartoum during 18- 20/07/06. It helped in mapping out the process, discussed major environmental issues

and provided broad recommendations for addressing the identified issues; moreover, it recommended a second workshop to address the gaps identified in the first workshop especially in the South.

6. The second workshop took place in Juba during 31 Oct- 2 November 2006, where South Sudan-specific environment papers were presented and the workshop concluded with a presentation that summarized the main issues and highlighted a proposal representing an outline proposal for the National Plan for Environmental Management in the closing session.
7. The NPEM Secretariat then embarked on analyzing and consolidating the more than 40 papers and the outcome of the two workshops and hence formulated this National Plan for Environmental Management.

I would like to thank the Minister Dr. Ahmed Babikir Nahar, the State Minister Ms. Thresa Crisio and the staff of the Ministry of Environment and Physical Development and the line ministries of the GONU and the Ministry of Environment, Wildlife Conservation and the other concerned line ministries of the GOSS for their diligent commitment.

Many thanks are extended to the European Commission, the World Bank- Nile Transboundary Environment Action Project, and the United Nations Environment Program for their support that led to the success of the process.

We also appreciate the sincere efforts and contribution of the Advisory Committee, the national consultants and the national coordinators. Thanks are also extended to all consultants who presented papers on the various issues of environmental concern and best regards to all the participants for having warmly contributed to the discussion of the various papers. Last but not least my sincere appreciation to Dr. Yagoub Abdalla Mohamed and Dr. Izzat Mirghani Taha who drafted this manuscript.

Dr. Saadeldin Ibrahim Izzeldin
General Secretary, HCENR
February 2007

EXECUTIVE SUMMARY

The constitution of the Republic of Sudan adopted and the Comprehensive Peace Agreement (CPA), 2005 define new set of rules for governance in general, and land in particular. The two main elements of this new policy context are; a high level of decentralization giving considerable powers to States and with the creation of the Government of Southern Sudan (GOSS)

The CPA also has not only ended Africa's longest civil war, but has ushered in new opportunities for national reconciliation, healing, reconstruction and development. The key elements of the agreement, which include decentralization and devolution of power and equitable sharing of national wealth and development opportunities, greatly influenced the post conflict reconstruction plan for the Sudan. Moreover, decentralization and devolution of powers that address the post conflict reconstruction and sustainable natural resources management represent the key themes in improving livelihood and income of the poor rural population in Sudan.

During the past three decades of war, limited efforts were exerted to streamline environmental concerns in development programs and most of these efforts were triggered by the donor community and yielded development of environmental strategies that addressed specific environmental aspects such as Biodiversity, Climate change etc. However, the implementation of these strategies/action plans was hindered by lack of a holistic view on environment and development and of sufficient financial resources. These strategies, however, did not cover the Southern Sudan due to security reasons.

Environmental and natural resource management and conservation must be streamlined into every decision making process to achieve long-term prosperity, economic security and sustainable livelihoods. Urgently needed infrastructure, especially in the South, must be planned in consultation with affected people in order to minimize environmental impacts and provide local benefits. Important national and regional environmental issues that need to be addressed include desertification, land degradation, wildlife depletion, water scarcity and pollution. Furthermore, increased pressure on natural resources from agriculture, grazing, building materials, and fuel wood is expected to increase as a result of the normal increase of population and the expected influx of Internally Displaced People (IDP) and refugees back to the South.

All these require a comprehensive environmental diagnostic and action plan for restoration, protection and sustainable management of natural resources. Furthermore, it should insured that planning and implementation of different environment related activities be entrusted to the proper institutions that are capable in shouldering the above responsibilities and able to identify the capacity and competency gaps existing at all levels of government, to effectively manage Sudan's environmental resources and ensure that appropriate institutional arrangements are in place in the context of the CPA.

This draft for the National Plan for Environmental Management (NPEM) in post-conflict Sudan is developed by the Higher Council for Environment and Natural Resources (HCENR) of the

Ministry of Environment and Physical Development of the Government of National Unity (GONU) and the Ministry of Environment, Wildlife Conservation and Tourism (MEWCT) of the Government of Southern Sudan (GOSS). The Plan is supported by the development partners working in the field of environment in Sudan; the Nile Transboundary Environmental Action Project (NTEAP), the European Community (EC), and the United Nations Environment Program (UNEP).

The NPEM illustrates the shared vision of the stakeholders across Sudan and highlights important priority actions to address the pressing challenges facing the state of environment in Sudan. It builds on a process involving a country-wide and special partnership in South Sudan. The present draft builds upon the Comprehensive Peace Agreement (CPA) that acknowledges one country of two governance systems, and that provides opportunities to act on environmental management and promote sustainable development through capacity building and key investment across the whole country.

Sudan Government had recognized the importance of environmental and natural resources management since the beginning of the 20th century. It had established the first Government Department dealing with environment in 1977. It is signatory to most of the key global conventions to protect the environment. Nevertheless, capacities of the responsible agencies to address environmental issues remain weak. Furthermore, agencies capacity is limited to the national and Southern Sudan capitals.

Proper implementation of Multilateral International Environment Agreements (MEA) in Sudan requires restructuring of the existing national institutions, formulation of national programs, coordination and synergy between the different MEA's national focal points especially in similar activities such as public awareness. It also requires development of mechanisms whereby civil society organizations can participate in decision making process and implementation of MEA's. Furthermore, it requires the promotion of scientific research in relationship to development.

The GONU and the GOSS are both keen to protect the natural biological heritage and biological diversity and for this they have adopted a number of measures within their policies, strategies and legislation frameworks to address them. Furthermore, the government of Sudan enacted the Environmental Protection Act 2000 and launched the ten-year Comprehensive National Strategy-1992/2002), submitted its National Biodiversity Strategy and Action Plan in May 2000 and its first Country Study on Biological Diversity in April 2001. As part of its commitments under desertification convention, a National Action Programme (NAP) has been prepared by the Ministry of Agriculture and Forestry (MOAF) in April 2002, and culminated its efforts by a proposal for environment strategic plan in 2005.

Reflecting the high priority and the urgent need for establishing a mutual understanding among all relevant partners and developing the environment management for post-conflict Sudan this NPEM is prepared to address issues of sustainable environmental management in a coordinated approach. NPEM is drawn from analysis of some 40 commissioned papers presented in two major workshops and discussions during the consultation process in order to present strategy for reorienting national and local efforts

to address environmental problems in a more comprehensive, coordinated and integrated manner.

The NPEM is structured to address the following major issues:

- A. Common program of priority action
- B. Special action to Northern States
- C. Special action to Southern Sudan

Based on the CPA and the interim constitution certain elements of environment and natural resources are to be addressed on nation-wide level. Others are addressed through coordinated actions by either GONU or GOSS within the Sudan one country/two systems of governance. It is further recognized that the principle of subsidiary acting on lowest appropriate level undermines effective natural resources management which is resolved by more decentralization anchored in the Interim Constitution.

The proposed NPEM is therefore structured into common priority actions. Priority actions mainly for both Northern States, and the Southern States as outlined below:

Priority Program 1: Capacity Building in Environment Management

- Reform of Environmental Councils in North and Southern Sudan
- Establishment of National Environment Information Centre in HCENR and the proposed council in the South
- Capacity Building in Environmental Economic Analysis
- Support for the Decentralization of Natural Resource Management
- Environmental Management Training Support Project
- Policy and Legislation Review
- Development of Guidelines and Standards for Environmental Protection
- Capacity Building in Climate Monitoring
- Strengthening of Institutional Capacity for Health and Safety in the Working Environment
- Total budget for 2 years USD 12,500,000

Priority Program 2: Enhancing Resource (Land and Water) Productivity

- National Forest Action Plan
- Environmental and Natural Resource Degradation Studies
- Sudan National Soils Survey
- Formulation of the National Land – Use Plan
- Enhancing Soil Productivity through Improved Farming Systems
- Establishment / Rehabilitation of Water Resources Monitoring and Assessment Services
- Fisheries Master Plan
- Community Forestry initiatives
- Improved Dry land Farming Systems

VIII

- Pilot Wildlife / Livestock Ranching Scheme
- National Energy Supply and Efficient Utilization
- Total budget for 2 years USD 8,000,000

Priority Program 3: Biodiversity Conservation and Use

- Maintain essential ecological processes and life – support systems on which human survival and development depends;
- Preserve genetic diversity on which the functioning of many of the above processes depends;
- Ensure living resource conservation for sustainable development and rational utilization of species and natural ecosystems to support rural communities and industries; and
- Update and implement NBSAP (2000).
- Total budget for 2 years USD 10,000,000

Priority Program 4: Environmental Education and Public Awareness:

- Primary School Environmental Education Development Project
- Secondary School Environmental Education Development Project
- Environmental Media Network
- Environmental Education Project for Rural Out – of School Youths in Sudan
- Total budget for 2 years USD 4,500,000

Priority Program 5: Environmental Health and Pollution Management

- Medical Waste Management
- Assessment of Industrial Pollution and its Impact on the Environment
- Chemical Safety
- Total budget for 2 years USD 2,000,000

These priorities are further translated into action plans and programs. In order to properly implement this National Plan for Environmental Management, there is need to reform the HCENR and to create a similar Council/Authority in Southern Sudan. Moreover, because of financial constrains and poor managerial skills, the NPEM suggest an investment plan and areas for such investment, and it spells out conditions necessary for implementation. These include, enabling political and support climate, availability of financial resources, institutional capacities and public awareness.

The NPEM concludes by presenting a detailed monitoring and evaluation plan. Such monitoring is to be performed by coordinating agencies and sectoral institutions.

Annex 1:**Advisory Committee**

Dr. Saadeldin Ibrahim Izzeldin,	General Secretary HCENR	Chairman
Dr. Salah Hakim,	Deputy GS, HCENR	Co/chairman
Mr. Gedion Asfaw,	Regional Project Manager / Nile Transboundry Environment Action Program (NTEAP)	
Ms. Intisar Ali Salih,		Lead Specialist/ NTEAP
Mr. Paul Symonds,		Representative, European Commission
Mr. Andrew Morton,		Representative United Nations Environment Program
Dr. Hassan M Hassan,		Consultant NBI/ World Bank
Dr. Abdelsalam Ahmed Abdelsalam,		National Project Coordinator. NTEAP
Ms. Astrid Hillers,		Water Resources Specialist, World Bank
Ms. Aida Mohamed Eltayb,		UNESCO Chair for Women in science and Technology
Ms. Noha Faroug,		UNESCO Chair for Women in science and Technology
Prof. Suad Sulieman,		Sudanese Environment Conservation Society (SECS)
Prof. Abdalla Abdelsalam,		UNESCO Chair In Water Resources
Dr. Eltigani Mohd Salih,		UNESCO Chair of Desertification
Ms. Hanan Mutwakil,	Representative,	United Nations Development Program
Mr. Victor Wurda,	Representative, M O Environment, Wildlife Conservation and Tourism, GoSS	
Ms. Mariam ElAgib Mahmoud,	Human Settlement Department (Ministry of Environment and Physical Development	
Dr. Mirghani Tagelseed,		Institute of Environmental Studies, University of Khartoum
Representative,		Ministry of Water and Irrigation
HE Dr. Ann ITTO,		State Minister, Ministry of Agriculture and Forestry
HE Thresa Cirisio Iro,		State Minister, Ministry of Environment and Physical Development

Secretariat

Dr. Gafaar Karar, Consultant,
 Dr. James Odra, University of Juba, Consultant
 Dr. Hassan Abdelatti, Consultant, Edge for Consultancy and Research, Consultant
 Ms. Susan Ayot Jackson, National Coordinator (South Sudan)
 Dr. Izzat Mirghani Taha, National Coordinator (North)

Editors of NPEM

Dr. Yagoub Abdalla Mohamed
Dr. Izzat Mirghani Taha
Reviewer: Prof. Ahmed Mahgoub Elhindi

Translators to Arabic Language:

Kamal Hassan Badi
Dr. Talaat Dafalla Abdelmagid

Annex II

Situation Analysis Workshop- 18- 20 July 2006 Friendship Hall- Khartoum

Session 1: Information, research and public participation

1. The State of environmental information in the Sudan- Dr. Mustafa M Elhag- Dr. Amna A. Hamid
2. Environmental research capacity in the Sudan- Dr. Migdam A. Abdelgani- Prof. Zuhair E. Alabjar
3. Environmental Education and Public Awareness- Moshi Kudundu- Dr. Elagba Hamad- Dr. Mirghani Tagelseed
4. Public participation in natural resources management- Dr. Yagoub Abdalla
5. Major environmental groups; distribution, effectiveness and handicaps- Niemat Kuku- Prof. Galaeldien Eltayeb

Session 2: Natural resources management and conservation

6. Forestry management and conservation; policies and practice- Mr. Kamal Badai, Dr. Abdelazeem Mirghani
7. Forestry management and conservation in South Sudan- John Choul, Jaden Tongun
8. Range management and conservation- Hussein Mustafa Ahmed
9. The Socio-economic parameters of Natural Resources- Mohamed Elamin, Mohamed Osman Sammani
10. Management of protected areas: with special focus on Dinder National Park- Dr. Mutasim Bashir Nimir and Frazer Tong
11. Boma National Park- Victor Wurda (MEWCT)
12. Wetland Management- Dr. Elfatih Eltagei

Session 3: 19/07/07: Water Resources Management and Food Security

13. Conservation of marine and coastal environment in Sudan: the role of marine protected areas- Mohamed Younis Abdelsalam
14. Global management system of fresh water resources, the Nile Basin perspective- John Omwenga
15. Water resources management in the Southern Sudan- Eng. Isaac Liabwell
16. Linkages between food security and resource condition- Dr. Ali Taha Ayoub

Session 4: International and regional cooperation and practices

17. International and regional environmental agreements- Dr. Nadir Mohamed Awad
18. Partnership for sustainable development in the Red Sea Coast of Sudan- Mohamed Satti
19. Nile Transboundary Environmental Action Project- Amir Baker
20. Save the Nile campaign “fight against sand encroachment around the River Nile- Dr. Tagelsir Bashir
21. Provisions in the CPA pertaining to environment and natural resources management- Hashim Mohamed Elhassan

Session 5: Environmental Threats

22. Desert encroachment in the northern states & Rehabilitation of desertified areas- Salah Elobaid
23. Resource based conflict and land use system- Dr. Babikir Mohamed Hassan
24. Environmental impact of oil industry- Dr. Salah Mohamed Nour
25. Impact of pesticides and other hazardous chemicals on the environment- Prof. Azhari Abdelbagi, Prof. Ahmed Elhindi, Ali Mohamed Ali, and Dr. Adam Ali
26. Urban environmental problems- Dr. Elfadil Adam

Session 6: 20/07/06: Environmental Policies and Legislation

27. Draft National Strategy Proposal for Conserving the Environment- Prof. Hassan Fadul
28. Environment and natural resources legislations and practices- Dr. El Tayeb Murkaz and Dr. Imedeldin Bashir
29. Environmental institutions and implementation capacity: an assessment- Dr. Mirghani Ibn Auf
30. Environment management in Sudan: an assessment of practices- Prof. Asim Moghrabi
31. Status of Environment in the Sudan- Mamoun Eisa

Session 7: International Experiences

32. UNEP 2006 Post-conflict environmental assessment- progress report- Andrew Morton
33. Coastal Zone Management – experiences in Africa- Astrid Hillers,

Closing Session: Way forward

A summary of key points presented, major issues raised and general situation assessment:
Rapid consultation on an NPEM draft- Victor Wurda- Astrid Hillers

Annex III Post conflict Workshop on National Plan for Environmental Management (NPEM) 31 October- 2 November 2006 Juba Raha hotel

- 1. Summary of past events in the preparation of NPEM by Dr. Izzat Mirghani NPEM coordinator (North)**
2. UNEP 2006 Post-conflict assessment – progress report- Andrew Morton
3. Population dynamics- Dr. Paul Wani
4. Agriculture and rural development in the Southern Sudan- John Chuol

Session 3 cont: Environment Situation

5. Agriculture and climate change indicators relevant to food security- Dr. Kamil Ibrahim Hassan
6. Water resources in the South- Engineer Isaac Liabwel

Session 4: Natural Resources Management and Conservation

7. Livestock production challenges in the range land ecosystem of Southern Sudan
8. Range and livestock/ pasture management in Southern Sudan- Prof Abate
9. Wildlife tourism and poverty: present state and strategy for development in Southern Sudan- Moses Bojoj
10. Wildlife management in Southern Sudan- Dr. Joseph Jamus
11. USAID STEP program

Session 5: 08: 30 am 02/11/06 Environmental Threats

12. Land degradation and land use system in the South- Prof. Scopas J Dima
13. Impact of oil exploration and extraction on the environment- Bashir Badawi
14. Sustainable Livestock- **Mathew Udo**

Session 6: Environmental Policies and Legislation

15. Environmental institutions and implementation capacity in the south- Victor Wurda
16. Policies and institution setup – Prof Akolda M. Tier
17. Status of Environment in the Sudan- Dr. Izzat Mirghani Taha- Mamoun Eisa

Closing Session: Way forward

A summary of key points presented, major issues raised and general situation assessment- Dr. Izzat Mirghani Taha