Environmental impact assessment from a Sudanese perspective

Osman Mirghani Mohamed Ali

ABSTRACT

Sudan, the largest country in Africa and the Middle East and an independent State since 1956, has witnessed profound climatic and political shifts within the last twenty years. Both have had serious implications for the environment, and natural resources as well as the sociosphere of the country. The major environmental problems befalling Sudan are desertification, depletion of natural resources and social disruption.

The history of the EIA process in Sudan as well as its *status quo* are reviewed. Examples are cited of ElAs conducted and appraised in the light of legislation, participation, environmental sustainability and capacity building. Emphasis is laid upon developmental projects related to the Nile System in Sudan.

Problems negatively impacting the efficiency of the EIA process in Sudan fall into internal and external categories. The former are related to the origin, procedure and fate of the EIA as follows :

- legislation and institutional aspects of EIA;
- lateness of the ElA in the project cycle;
- inadequate time allotted for completion of EIA ;
- composition of the EIA Team and qualification of team members ; and
- fate of the accomplished EIA .

The latter are accentuated by, *inter alia,* globalisation trends, ISOs (9001-14001) requirements and financial aspects.

Recommendations are made to alleviate/mitigate the constraints and increase the efficiency of the process of the EIA in Sudan. Three areas are most important: legislation, training and international collaboration.

See Section B

UNEP EIA Training Resource Manual

Capacity building

INTRODUCTION

Sudan, the largest country in Africa and an independent State since 1956, has an area of 2,506,000km^2 and hosts an estimated population of 26 million people. It is a country in a continent with mosaic variations in climate, ecological zones and ethnic structures. Within the last twenty years, the country has witnessed profound climatic as well as political shifts. The

drought of the seventies/early eighties has had devastating effects on the natural environment and has led to reduction of vegetation cover and food production, immigration of people and the upset of the economic as well as the social spheres of many areas. The floods and rains of the late eighties/nineties have been a mixed blessing for both the people and the natural environment. The political regime of Sudan has been an alternation of democracy/multiparty system and military/uniparty system. The implication of this has been reflected on the country's stability, economic policies and developmental strategies. Looming over and exacerbating all this, heavily taxing the natural as well as the human resources, is the 30-year civil war in the Southern Sudan.

Despite the bleak picture depicted above, Sudan has taken considerable steps regarding the issue of the environment. NGOs were active as early as the seventies, raising the Sudanese awareness of, and perception towards, the country's environmental problems. The Hydrobiological Research Unit (1953) and the Institute of Environmental Studies (1979) of the University of Khartoum could be regarded as landmarks in the environmental history of Sudan, the former for pioneering integrated, multidisciplinary research in natural resources management in Sudan, and the later for being the first institute to offer M.Sc. degrees in Environmental Studies in Africa and the Middle East. The State has adopted the National Strategy for Development for the Decade (92-2002). Within this Strategy, the environment has a committee to itself. 1992 saw the establishment of the Higher Council for Environment and Natural Resources (HCENR) to oversee, coordinate and liaise on issues pertaining to, and linked with, the environment. The culmination of these governmental steps occurred in 1995 when the environment portfolio was promoted to ministerial level. The country is currently involved, at the governmental and non-governmental level, in establishing a National Environmental Action Plan (N.E.A.P) (Ministry of Environment and Tourism & SECS, 1996).

ENVIRONMENTAL ASSESSMENT IN SUDAN

A history of EIA in Sudan shows that the report of the Equatorial Nile Project (ENP) of 1954 is probably the first ever environmental impact assessment endeavour carried out in the developing world (Moghraby, 1997). That was an EIA in function but not in name! Recent environmental and socio-economic evaluations were also carried out (Moghraby, 1982; Moghraby & El Sammani, 1985). It is worth-mentioning that EIA requirements were first introduced by the World Bank in 1989 through its Operational Directive 4.01 on Environmental Assessment, now Operational Policy 4.01 (Freestone, 1996). Some of the ElAs undertaken in Sudan are shown in Table I.

Project	*Year*	*Executor*	*Funding Agent*
Sudan's Southern Stock Route	1985	IES*	US-AID
The Locust Control Projet	1988	IES	US-AID
UNICEF Hand-pumps Program in Kordofan	1988	IES	US-AID
The hamadab Dam	1991	Monenco Consultant	Government of Sudan
The Heightening of Roseiris Dam	1992	G Karrar and Partners	Government of Sudan
En-Nuhoud-El Fashir Road	1995	W Kirkpatrick and S&S Cons.	African Development Bank

Table 1: Some of the EIAs conducted in Sudan (1984-1995)

Sudan is currently embarking on ambitious developmental programmes such as rehabilitation of agricultural schemes, construction of transcountry roads, digging of irrigation canals, building and heightening of dams and extraction and transportation of crude oil as well as a number of new industries. Each of these projects could have diverse and significant environmental impacts. For each of these projects an EIA is either in progress or is planned.

FEATURES OF THE PROCESS OF EIA IN SUDAN

Legislation

As most of the developing projects in Sudan are sponsored and implemented by overseas donors, it is the donors who require and usually supervise the implementation of particular ElAs. Sudan itself has not legislated for EIA as a mandatory requirement as is the case, for example, in the German Act on the Assessment of Environmental Impacts (Tier, 1998). Instead, there are over 150 natural resources laws and sectoral regulations dealing with health, water supply, land tenure, game, protected areas, fisheries and marine resources and other sectors of natural resources. More recently, Sudan has taken a remarkable step towards promulgating comprehensive environmental legislation, the *Environmental Protection Policy Act*, awaiting the signature of the President before being implemented, which states that: 'Any large developmental project, which construction might negatively impact the quality of the environment should undergo an Environment Feasibility Study (EFS).'

Stipulated in the EFS is the requirement for the following information:

- effect of proposed project/action on the environment;
- any unavoidable negative environmental impact; and
- available alternatives for proposed actions.)

AGENCIES CONDUCTING EIA

For an effective implementation of an EIA two pre-requisites are vital: proper qualification of the conducting agency and its independence and non-polarity. Unfortunately, these two conditions are not strictly observed. An array of agencies and consultants are available, all claiming to be qualified and experienced in conducting ElAs for all types of projects. As for the second condition, in a particular irrigation project, the constructing firm entrusted with the implementation of the rehabilitation protocol won the tender for carrying out the EIA for the same project This no doubt undermines the integrity of the bidding authority and blemishes the value and goal of the process itself.

THE TIMING OF THE EIA

The implementation of an EIA has to insure that, should an adverse environmental impact be foreseen, the necessary corrective measures are formulated in the early stages of preparation of the proposed project. The prerequisite of this is that the EIA should be started and accomplished before the proposed date of the project execution. However, this is not always the case. In Zimbabwe the EIA was carried out for the proposed Osbome Dam while the construction of the dam was already under way with the engineers, surveyors and other staff working on the dam site! (ICEA, 1989). In Sudan, the rehabilitation of canals and other irrigation structures as well as the construction of the pump stations in all four schemes of the Northern Province Irrigation Rehabilitation Project were in progress when the tenders for the EIA were opened! This delay in starting the EIA process happened even though the feasibility study of the Rehabilitation Project was conducted 16 years ago! In both cases such efforts cannot be deemed as EIA and can only rank as environmental evaluation studies (EES). The time factor affects the quality of EIA in so far as the lateness of the EIA would not permit meticulous, integrated conduct of the assignment, nor would it allow for application of the recommended mitigation procedures.

PARTICIPATION

The participation of the local people and NGOs will no doubt act as a safeguard ensuring that the EIA has not overlooked the envisaged impacts on the community concerned. This participatory involvement should begin from the point of the project identification and continue throughout the project cycle. However, this is loosely, if at all, adhered to. Similar to the findings of Gutman (1997), public participation, with a few exception, did not rank high among the ElAs. It was either ruled out, omitted by the EIA team or was acknowledged as too late and too limited. Such practices as the coopting of local expertise in the EIA team and in the administration of questionnaires are not enough. This calls for remedial measures such as spelling out in the EIA Act that the participation of the local people is of

equal importance and inseparable from the process itself. Concomitant with that, if not prior to it, is the training of NGOS, CBOs and affected groups to take part in the EIA protocols. Good ElAs are expected to contribute to the final project design, give the public a say in the project, and add to overall environmental awareness among involved parties (Gutman, 1997).

THE FATE OF THE EIA

Bad as it is not to undertake an EIS, it is worse to ignore the results of an EIA once accomplished. The monitoring of mitigation measures calls for a responsible body. Such an agency as the environment management agency (PEA) is lacking in Sudan. The HCENR, if institutionally upgraded and financially supported, could fill that gap. Otherwise, questions as to

- who will implement the findings of the EIA?
- who will supervise the implementation? and
- who will supervise the implementation? remain unanswered.

THE FEDERAL SYSTEM

The federal governing system adopted by Sudan casts heavy shadows over the EIA process. Conflict over natural resources could occur between various States. The devolution of the Comprehensive Environmental Legislation to State levels needs the executive power to make it effective. It is suggested that the Central Government should have a stronger grip on policies, legislation, foreign affairs and coordination.

RECOMMENDATIONS

- The country should hasten its steps towards the adoption of the NEAP and the signing of the EPA.
- Qualified firms, institutions and personnel should be involved in EIA. The quality of EIA should comply with ISO 14001.
- Manuals and EIA software should be available in English and, if possible, in Arabic languages.
- Manuals and software should be tailored to Sudanese circumstances or to similar developing countries.
- The HCENR should be upgraded institutionally and supported financially.
- Research and training institutes such as the Institute of Environmental Studies should be supported to be the focal point of all ElAs in Sudan.
- Popular participation should be an integral part of the EIA.
- ElAs should be open to competition by consultants firms via invitation to tender.

- It should be obligatory for overseas implementing firms to consult with Sudanese experts to enhance the Environment Assessment (EA) capabilities in the country.
- Enough time should be available between the completion of the EIA and the execution of the project.
- Social and economic issues should receive equal weight as the natural environment.

LIST OF RELEVANT PUBLISHED PAPERS AND OTHER SOURCE MATERIAL

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The author:

Osman Mirghani Ali
Institute of Environmental Studies
University of Khartoum
PO Box 321
Khartoum
SUDAN

Key words

capacity building

climatic/ political shifts

environmental problems