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Strategic Impact Assessment: A Potential Tool in Achieving Sustainable Development in the Sudan in the Wake of the Severance of Southern Sudan

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Abstract:

This paper appraises the process and performance of Environmental Impact Assessment (EIA) in the Sudan. The implications of the severance of Southern Sudan on the country's natural resources and development policies are underscored. The main legislative and institutional constraints of (EIA) efficient application are highlighted, emphasizing its limitations to developmental projects. The new trend in addressing the complicated issues salient to policies, plans and programmes that calls for a higher tier of impact assessment is illustrated. Strategic Environmental Impact Assessments (SEA) which operates at the policies, plans and programmes level is defined. A comparison between (EIA) and (SEA) is portrayed. Justifications for the application of (SEA) in the Sudan and the steps and prerequisites needed are expressed. The institutional and legislative reforms as well as human resources capacity building are underlined.

Keywords: *Sustainable Development, Environmental Impact Assessment, Strategic Impact Assessment, Environmental Legislation*

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Introduction

Sudan is a country endowed with a variety of natural resources, both biotic and abiotic. Even prior to its independence in 1956, the country has administrated several management instruments towards conserving its environment and natural resources. There are over 150 natural resources laws and sectoral regulations dealing with forests, health, water supply, land tenure, game, protected areas, fisheries and marine resources among other sectors of natural resources. Some of these laws date back to the first years of the Anglo-Egyptian Condominium. The Forest Protection Act, to give an example, was passed in 1902. Prominent landmarks in the realm of the environment protection and natural resources conservation were achieved in the last decade of the 20th century. The year 1991 saw the establishment of the Higher Council for Environment and Natural Resources (HCENR) to oversee, co-ordinate and liaise on issues pertaining to, and linked with the environment and natural resources. The State had adopted the National Strategy for Development (NSCD) from 1992 to 2002. The culmination of these governmental steps occurred in 1994 when the environment portfolio was promoted to a ministerial level. The country, at the governmental as well as the non-governmental levels, made an initiative towards establishing a National Environmental Action Plan (NEAP). On the legislative arena the Environment Protection Act was passed by the National Assembly in 2001. A quarter century development strategy for the period 2007-2032 is being implemented at shorter phases' intervals.

On the community level, many NGOs and CBOs are playing a watchdog role, advocating initiatives, implementing projects and raising awareness in the realm of environmental protection and natural resources conservation.

Despite these official and non-official efforts, the country is beset with a multitude of natural resources-related problems. Desertification is the major environmental problem in the Sudan. Wildlife is dwindling due to poaching, desertification, encroachment of agriculture into rangelands.

Lamentably, the advent of peace that ended a twenty-year civil war in southern Sudan has also culminated in the creation of the Republic of Southern Sudan. This momentous event hurled into history archives attributes that were for more than a century became synonymous with Sudan. Phrases like "the biggest country in Africa and the Middle East", "the third source of the Nile" and "the breadbasket of the Arab World" are no longer valid. However, the severance of southern Sudan has an even more far reaching implication that transcends the political arena. The country has lost the richest third segment in water resources, wetlands, wildlife, forests, biodiversity and oil reserves.

The current conditions of political stability afford the country to be poised on the prospect of rehabilitation and development era. However, the policy makers have to take on board the repercussions of losing the vital resources and make do with whatever available resources. This is a huge challenge and as aptly put by Denny (1984) "Exploitation need not be the antithesis of conservation", the country has to manage its resources now within a more stringent, holistic, sustainable –oriented perspective. One of the indispensable tools in the strive for realizing sustainable development is Environmental Impact Assessment. There is no unambiguous definition for EIA but as a concept, EIA could be defined as an activity designed to identify and predict the impact of legislative proposals, policies, programmes and projects on the biophysical environment and on man's health and well-being, and to propose measures to eliminate, avoid or mitigate foreseen adverse impacts (Clark, 1994).

The benefits of conducting impact assessment activities are too many to be contained in this article and, therefore, some are highlighted below:

1. Contribute to high level of efficiency in utilizing natural resources
2. Contribute to decreasing the project cost in the long run
3. Decrease probability of disaster occurring
4. Decrease/ avoid judiciary liability and processes
5. Avoid correction costs and measures later
6. One of the feedback mechanisms to enhance the process of future developmental projects
7. Enroot the concept of sustainable development
8. Public is aware of environmental impacts
9. Avenue for people to air their views and express their interests
10. Achieve transparency
11. A tool of good governance
12. People have faith in their government

Within the country's new development in the framework of politics, economy, natural resources and socio-demographic dynamics, it is deemed a crucial priority to review, appraise, and reform the process of Environmental Impact Assessment in Sudan

The Profile and Status Quo of Environmental Impact Assessment in Sudan

History records that Environmental Impact Assessment - without giving it the trade mark- was practiced in the Sudan prior to the 1950s when the Equatorial Nile Project Study, motivated by the proposed Jonglei Canal Project, was completed (JIT, 1954). This could be envisaged, not as regarded by Moghraby (1997) as the first EIA in the Developing World, but as the first ever endeavour in this realm. More than thirty years passed where no EIAs were carried out and with no legislations specifically tailored to the process of EIA. The establishment within the University of Khartoum of the Institute of Environmental Studies (IES) in 1978 provided a scientific arena for commencing and carrying out proper EIAs. The first EIA study conducted by Sudanese experts was for Sudan's Southern Route in 1984 (IES, 1985). The tempo of conducting EIAs has accelerated since the last decade of the last century, linked primarily with the onset of oil activities and the construction of roads (Ali, 2007).

The process of EIA system in the Sudan eventually received formal legal support when the *Environmental Protection Act* (EPA) was passed in 2001. This is a policy- oriented framework legislation for the protection of the environment and natural resources. Article 17, Chapter III mandates the conductance of an environmental feasibility study to be accepted by the (HCEN).

To put it in a world context, the development of the EIA process in the Sudan against selected international events in the realm of EIA is illustrated in Table 1.

Table 1. International EIA Events against EIA milestone developments in Sudan (Ali, 2007)

Year	EIA Event	Country/Region
1954	The "Equatorial Nile Project and its effects on the Anglo-Egyptian Sudan, 1948-1953"	Anglo-Egyptian Sudan
1969	USA NEPA Enactment	USA
1973	EIA system established	Canada
1974	EIA system established	Australia
1975	EIA system established	West Germany
1976	EIA system established	France
1984	EIA system established	Japan
1984	Sudan's Southern Stock Route EIA	Sudan
1989	Operation (OD) 4.00	The World bank
1989	Lome IV Convention	EC/ACP countries
1990	Initial proposal for SEA Directive	European Community
1991	Establishment of HCENRs	Sudan
1992	Agenda 21 Earth Summit on Environment and Development	Brazil
2001	"The SEA Directive" EU's Directive 2001/42/EC	European Union
2001	Environmental Protection Act	Sudan

A comprehensive review and assessment of the EIA performance in the Sudan is available in Ali (2005; 2007). The assessment underscored legislative, administrative, institutional and procedural constraining the efficient conductance EIA. Despite the 2001 EPA has made the practice of EIA mandatory, no regulations have as yet been stipulated from it. Paradoxically, the picture is brighter in the petroleum arena and at the State of Khartoum. The Ministry of Energy and Mining has enacted the "Protection of the Environment in Petroleum Industry Regulations" in 2002, now the Health, Safety and Environment Regulations of 2011, while the Ministry of Environmental Protection and Water Utilities in Khartoum State has passed the "Environmental Assessment Regulations" in 2010.

Perhaps a major institutional feature that casts its shadow on the status of EIA implementation in Sudan is the fact that there is no ministry solely dedicated to the caring of the environment. The HCENR, as the environment technical arm, could only fulfil its mandate if it is well -funded, well- staffed body with a

clear efficient organizational structure and operating under a reasonable degree of independence (Ali, 2007).

The participation of local communities in the process of EIA is one of the major issues underpinning the efficiency of the practice. The concepts that people should participate in development not just as beneficiaries but as contributors to planning, implementation, monitoring and evaluation, and that participation is an end as well as a means of development, are now part of the ethic, if not yet the practice, of the sustainable development (Heaver, 1999).

Strategic Impact Assessment (SEA)

The practice of EIA in the Sudan shares the same feature with other countries viz-a -viz it has not been applied on the many programmes, policies that have been proposed and implemented in the realms of education, health and housing. The scope of EIA has been restricted to development projects dealing with natural resources only. During the last sixteen years, the country has witnessed profound changes in policies, legislations and plans. None has been subjected to impact analysis prior to passing and implementation!

There is a growing contention worldwide that classical EIA falls short of addressing the complicated issues underling developmental policies and plans. When limited to project stage, EIA will interact with readymade proposals for development projects but do not participate in the development of their perception. To meet this shortfall a new philosophy has emerged known as strategic environmental assessment. This modern approach calls for the application of EIA at an earlier stage of the developmental chain i.e. the stages of policies, plans and programmes. Therefore, the concept of strategic environmental assessment indicates the type of environmental assessment which can help managers and leaders in policy decision making in policies, plans and programmes. According to this vision, the policy outlines the framework for the development of plans, plans define the framework of programmes and from programmes projects are emanated. The State policy for transport provides the framework for a national road plan included in the national programme for the roads with temporal and spatial dimensions. This programme in turn provides the basis to propose specific road projects. In other words, whereas EIA keep dormant to be approached by a specific project delineated in space and time, SEA addresses such projects while they are in the womb of plans and polices (Ali, 2005). Policy EIAs present an opportunity to examine the environmental implications of national and regional development policies and proposals before decisions are made to implement specific projects conceived under such policies. The main differences between (EIA) and (SEA) are portrayed in table 2.

Table 2: Comparison between EIA and SEA (UNEP, 2002)

EIA	SEA
For projects	For policies, plans and programmes
Takes place at the end of decision-making cycle	Takes place at earlier stages of decision-making cycle
Reactive approach to development proposal	Pro-active approach to developmental proposals
Identifies specific impacts on the environment	Identifies environmental implications on issues of sustainable development
Considers limited number of feasible alternatives	Considers broad range of potential alternatives
Limited review of cumulative effects	Early warning of cumulative impacts
Emphasis on mitigating and minimizing impacts	Emphasis on meeting environmental impacts objectives, maintaining natural systems
Narrow perspective, high level of detail	Braod perspective, lower level of detail to provide a vision and overall framework
Well-defined process, clear beginning and end	Multi-stage process, overlapping components, policy level is continuing iterative.
Focuses on standard agenda, treats symptoms of environmental deterioration	Focuses on sustainability agenda, gets at sources of environmental deterioration

Justification for the Need to Apply SEA in Sudan

There is a six-fold driving force spurring the shift from classical project impact assessment to the higher tier of policy and plans SEA:

- The country is a multi-governed State with its vital sectors of economy, agriculture, power generation, education and governance in transition phase.
- The vital sectors exhibit intra/inter integration cross-cutting issues.
- The loss of the rich resources (water, wetlands, wildlife, forests, biodiversity and oil reserves) as a result of the severance of Southern Sudan.
- The impinging impact of climate change and the further stress it would exert on the degraded and over exploited resources.
- Environmental impacts at macro spatial and temporal scale are missing in The River Nile, the Savannah Region and the Red Sea, all are depicted as fragile ecosystems.
- The increased tempo of development, and the wide spectrum of alternatives and scenarios.
- The signs of stability in the political system which is being reflected in attracting large investments in the natural resources.

Within this context there is a wide spectrum of opportunities and avenues subject to SEA in the Sudan, such as:

- Spatial and land use plans
- Regional development programmes
- Natural resource management strategies
- Legislative and regulatory bills
- Investment and borrowing activities
- International aid and development assistance
- Structural adjustment funds and operations
- Macro-economic policy
- Budgets and fiscal plans
- Sector-specific policy, plans and programmes
- International trade agreements

Steps and Prerequisites towards the Application of SEA in the Sudan

For Sudan to apply SEA, intuitional and legislative reforms are required. These include, but not limited to:

- On the legislative side, two actions are urgently needed: The ECA 2001 need to be reviewed and upgraded to incorporate explicitly the conductance of SEA. The general and sectoral regulations for EIA and SEA implementations should be stipulated and promulgated.
- To address the intricate issues of State-Federal natural resources, strategic environmental assessment regulations on both the federal and State levels are needed.
- An Environmental Commission – a national EIA body- mandated solely to oversee all the SEA/EIA processes is needed.
- Human resources capacity building is needed for developing SEA skills.
- The designation of a higher degree institute as a centre of excellence in environmental management in general, and in SEA/EIA in particular. The Institute of Environmental Studies (IES) of the University of Khartoum with its history and experience in EIA aspects (teaching, research and practice), could fill in this niche and further, create a regional and international EIA address
- Sufficient funds need be availed by both the proponents and government for conducting SEA.

While addressing the above prerequisites and during the endeavour to institutionalize the conducting of SEA in Sudan, it is very pertinent to take on board the practice of Sea in other countries. As Ali (2007) compared the profile and performance of EIA in Egypt, Uganda and Sudan, it is even more apt to do the same for SEA. However, the task is not that easy as the practice of SEA in Africa is either lacking or new and within such a context the appraisal of the experience is not easy. In Sudan SEA as yet to be practiced although there are many development projects which are implemented at the ecosystem level as well as the legislations that control the utilization of natural resources at the federal level. One case in example is the ambitious programme of the Dams Implementation Unit in building Merowe Dam and heightening Roseires dam as well as setting plans to build more than five dams in the River Nile in Sudan. According to the author's contention, this was missed valuable chance for the conducting of SEA. Instead each of built or proposed dam has undergone a separate EIA study with no or insignificant attention to the cumulative impacts of building and operating these dams in one single water system. On the other hand , the theatre is now opportune for the country to embark on the higher tier of impact assessment equipped with its experience in EIA and augmented with experiences and lessons learnt at both regional and international level. Nevertheless, within such meagre information, the research of Retief (2007) on the effectiveness of SEA in South Africa is very valuable and his conclusion and recommendations need to be taken on board by the Sudanese policy and decision makers. Retief's research outcome is that SEA has failed to inform or influence decision making in South Africa and the shortcoming is attributed the non-conformance of SEA practice to the main international effectiveness criterion or the 'litmus test' for SEA (Sadler, 2004). For countries like Sudan just on the threshold of treading into the uncharted land of SEA, Retief's suggestion that "*the practitioners need to either redefine the purpose of SEA, or fundamentally rethink the way in which SEA is being applied*" should be taken at the back mind of policy makers decision takers in the realm of impact assessment.

Conclusion

The formidable task facing the policy makers in the Sudan after 2011 is how to strike a delicate balance between developing and utilizing the country's remaining natural base. The environmental assessment model the country needs and should aspire to is the one that is carried out within a strategic framework of capacity building, improving legislation. Strategic Impact Assessment is advocated as tool for achieving sustainable development. This tool could contribute to the direction of development towards regions with environmental persistence or redirected away from fragile and environmentally sensitive areas. SEA is an opportunity for policy-makers in the Sudan for providing a new mindset approach for laying more realistic, sustainable national development strategy. The application of SEA requires intuitional and legislative reforms as well as human resource capacity building. The experience of other countries in SEA application, and in particular those of African countries, should be sought, reviewed and the lesson learnt from them are incorporated.

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