

Review

Challenges and opportunities in environmental impact assessment and environmental audit practice in Kenya

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Environmental Impact Assessment and Environmental Audit are tools of trade which are available for use by environmental managers around the world. They are applied as early as possible in decision-making throughout the life cycle of proposed development projects and actions that may have potentially significant impacts on biophysical and socio-cultural environments. These instruments provide for individual stakeholder and community participation in screening, scoping, environmental impact identification and evaluation, prior to development of Environmental and Social Management plan. Despite the application of Environmental Impact Assessment and Environmental Audit techniques in environmental management in Kenya for the past two decades, environmental problems continue to persist as evidenced majorly by incessant flooding, drought conditions, collapsing buildings and dams. There are very high hopes in Kenya for environmental conservation and restoration following the roll out of the Competence Based Curriculum (CBC) which entrenches environmental activities on three strands; the environment and its resources, the social environment and the care of environment. Competence Based Curriculum will produce environmental conscious citizens who will contribute towards making the planetary earth a better place to live in. The paper examines Environmental Impact Assessment and Environmental Audit practice in Kenya and suggests measures for better environmental management.

Key words: Environment, impact, assessment, audit, competence based curriculum.

INTRODUCTION

Environmental Impact Assessment (EIA) refers to a systematic assessment which is conducted to determine whether or not a program, activity or project will have negative impacts on the environment. Environmental Audit (EA) on the other hand is the systematic, periodic,

objective and documented assessment of an operation, activity, project or a programme against selected audit criteria. Environmental Impact Assessment and Environmental Audit are tools of trade which are available for use by Environmental managers. EIA is applied in

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decision-making throughout the life cycle of proposed development projects and actions that may have potentially significant impacts on biophysical and socio-cultural environments. These instruments provide for citizen participation in screening, scoping, environmental impact identification and evaluation, prior to development of Environmental and Social Management plan. It is hypothesized that despite the application of Environmental Impact Assessment and Environmental Audit techniques in environmental management in Kenya for the past two decades, environmental problems continue to persist as evidenced mainly by incessant occurrences of flooding, drought conditions, collapsing buildings and dams. The paper discusses EIA/EA as it is practiced in Kenya and offers some insights on how it can be strengthened for better environmental management in Kenya.

Theoretical background

It should be noted that the National Environmental Policy Act (NEPA) was introduced in the United States in 1969 and which required Environmental Impact Statements (EIS) to be prepared for projects that were likely to have impacts on the environment. Environmental assessment was accepted in principle at the United Nations conference on human environment in 1972 at Stockholm when the framework of modern environmental international and national policy was laid down. The overall objective of EIA as designed was to ensure that environmental concerns are integrated in all development activities in order to contribute to sustainable development. The ultimate goal of EIA/EA is to have a better quality of life for present and future generations through sustainable management and use of the environment and its natural resources.

In Kenya environmental issues are anchored in the Constitution of Kenya 2010. Article 42 provides that every citizen has a right to a clean and healthy environment. Article 10 recognizes public participation as a principle of governance, while Article 69 gives the state a responsibility to encourage public participation in environmental management. Article 242 outlines transparency and timely provision to the public accurate information as a principle of public service and these include environmental information (Republic of Kenya, 2010).

The Environmental Management and Coordination Act (EMCA) 1999 and as amended in 2015 is the framework law that governs environmental issues in Kenya. Section 58 sets out the need for EIA for all projects listed on the second schedule of the Act. It further states the time period within which oral or written comments from members of the public and institutions should be submitted to the National Environmental Management Authority (NEMA). The Environmental Impact Assessment and Audit regulation of 2003, further spells out guidelines on how EIAs and EAs are conducted.

Entrenchment of Competence Based Curriculum (CBC) in Environmental Management in Kenya

There is a paradigm shift in the Kenyan education system following the introduction of competence-based curriculum (CBC). The CBC is set to replace the current 8-4-4 system of education which has been operational since 1986. The CBC adopts a 2-6-3-3-3 model. The CBC is a new system of education designed by the Kenya Institute of Curriculum Development team and launched by the Ministry of Education in 2017. The CBC is designed to emphasize on the significance of developing skills and knowledge and also applying those competencies to real life situations (Jackson and Felix, 2018).

The CBC has in its course content environmental activities in learning from pre-unit to grade 3. In terms of content there are three units of environment which are known as strands; strand one covers environment and its resources including water, soil, plants, animals and energy; strand two deals with social environment encompassing, harmonious living in the community, keeping safe in the community, safe travels, environmental culture events as well as enterprise projects. The third strand is on the duty to care for environment and it involves caring for plants and animals, soil, water, energy and waste management. The opportunity here is that the children under CBC curriculums are being inculcated with good ethos important for environmental conservation, as they will be the ones to contribute towards making EIA/EA practice more effective in the future.

Problem statement

Environmental issues have no boundaries and any human endeavor is likely to have negative environmental impacts if it is not properly monitored. With the burgeoning population coupled with a myriad of strategies targeted at meeting the needs of humanity, the capacity of the planetary earth to meet these demands will not be sustainable, unless EIA/EA is used by all as a technique for environmental management. Despite the application of Environmental Impact Assessment and Environmental Audits as a tool in the environmental managements in Kenya over the past two decades, environmental problems continue to persist as manifested by incessant incidences of floods and drought conditions, climate change, proliferation of informal settlements, deforestation, collapsing buildings and dams. This underscores the need for interventions through the use of EIA/EA for environmental enhancement.

METHODOLOGY

This is a review paper which seeks to enhance understanding of environmental issues within the context

of EIA/EA practice whereby the main source of information was derived from desktop review.

Literature review involved extensive reading of materials from library and internet sources. The Government of Kenya publications were scanned thoroughly including; constitution of Kenya (2010), Environmental Management and Coordination Act (EMCA cap387), Environmental Impact Assessment and Environmental Audits regulations and Environmental policies in Kenya. The reports from Environmental Institute of Kenya (EIK), a professional environmental body were useful. In addition, the EIA/EA reports from National Environmental Management Authority (NEMA) website provided the required data that informed the structure of the paper. Interviews were done with NEMA official as well as the Registered Lead Experts and where data on EIA/EA practice in Kenya was sourced.

Environmental impact assessment/environmental audit practice in Kenya

It should be noted that there is a Curriculum which is used to train environmental managers who are either designated as Lead Experts or Associate Experts. The Curriculum is approved by both NEMA and the relevant EIA/EA training institutions. The EIA/EA course objectives are to;

- (1) Prepare/ or write EIA study reports
- (2) Carry out Environment Audits and write EA report
- (3) Use EIA as a decision-making tool in project planning and management
- (4) Mainstream EIA /EA practices in organizations
- (5) Initiate Eco-friendly projects
- (6) Form a team and participate in EIA/EA report writing
- (7) Review EIA/EA study reports.

In terms of the course content; there are seventeen topics which are covered in the curriculum and which are outlined as;

- (1) Introduction to Environmental Impact Assessment, Auditing and Monitoring
- (2) Policy and legal framework for EIA/EA in Kenya and Multilateral Environmental Agreements
- (3) Stakeholder and public participation in EIA/EA
- (4) Environmental economics
- (5) Environmental Management Systems standard and practices
- (6) Environmental information systems and technology for EIA/EA
- (7) EIA methods
- (8) Environmental Auditing
- (9) Strategic Environmental Assessment
- (10) EIA/EA report writing
- (11) Review and decision-making process of EIA/EA study reports.

- (12) Environmental management Plan
- (13) EIA/EA Project management
- (14) Social Impact Assessment (SIA)
- (15) Health Impact Assessment (SIA)
- (16) Industrial Ecology
- (17) Occupational Health and Safety Management

Environmental impact assessment and environmental audit methodology

EIA is a process that requires consideration of the environment and public participation in the decision-making process of project development. An Environmental Impact Statement (EIS) is a review document prepared for assessment in the EIA process.

The stages in EIA process include the following:

- (1) Screening, to decide which projects should be subject to environmental assessment. Criteria used include threshold, size of the project and sensitivity of the environments,
- (2) Scoping is the process which defines the key issues that should be included in the environmental assessments,
- (3) EIS preparation is the scientific and objective analysis of the scale, significance and importance of impacts identified,
- (4) Review panel guides the study and then advises the decision-maker (Brilhante et al., 2002; Njuguna, 2007; Republic of Kenya, 2015).

The standard EIA process as it is practiced in Kenya is as shown in Figure 1.

RESULTS AND DISCUSSION

EIA/EA submission and review

Once the EIA/EA document is prepared and submitted to NEMA. EIS is reviewed with the possibility of a license being issued or not. When EIA/EA study reports are under review, consideration is put on whether projects fall in three categories; notably; Low, Moderate and High-risk projects. Table 1 shows some selected categories of Environmental risk projects which must undergo EIA process in Kenya.

The Low risk and the Medium Risk Impact projects are processed and approved at respective offices of County Directors of Environment, at the County or regional level; while the High-Risk Impact Projects, are sanctioned at NEMA headquarters based in Nairobi.

Role of environmental experts and the environment institute of Kenya

Environmental Impact Assessment Expert is a person or

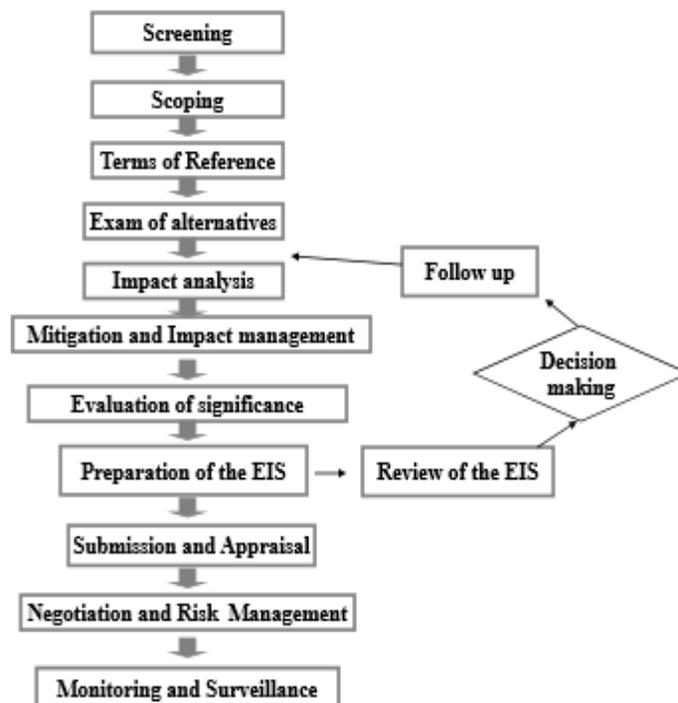


Figure 1. Standards EIA Process in Kenya.

Table 1. EIA Projects in Kenya.

S/N	Low risk projects	Medium risk projects	High risk projects
1	Establishment of places of worship including churches, mosques and temples	Shopping centers,	Water resources and related infrastructure
2	Dispensaries, health centers and clinics;	Construction and rehabilitation of roads	Marine resource exploitation and reclamation,
3	Car and bus parks;	Drilling for purposes of utilizing ground water resources	Waste disposal works,
4	Cottage industry,	Reforestation and afforestation;	Processing and manufacturing industries,
5	Schools and related infrastructure for learners one hundred	Artisanal mining	Mining and other related activities

Source: Republic of Kenya (2019).

a Firm registered by NEMA and Environment Institute of Kenya (EIK, 2019) to conduct Environmental Impact Assessment and Audit. EIK is a professional membership body for the professionals working in the field of environmental management and administration. The membership is drawn from various sectors of the economy including academia, agriculture, industry, consultancy, lead agencies, national and county governments and NGO’s. It was registered under societies Act Cap 108 laws of Kenya on the 4th August 2014 and has 1300 members since then. The aims and objectives of EIK are contained in its current constitution and are stated as:

i) to promote and advance the practice of integrated

environmental assessment,
 ii) to facilitate the acquisition of knowledge through collaboration with relevant parties,
 iii) to promote, maintain and advance the highest professional standards and best practice in the field of sustainable development, for the public good,
 iv) to engage in any other activities in the interest of the profession as may be approved by the committee from time to time,
 v) to establish branches and institutes as deemed necessary from time to time (EIK, 2019).

NEMA currently registers Lead Experts free of charge for the purpose of preparing EIA/EA reports on its behalf. The registered Experts fall in two categories of either,

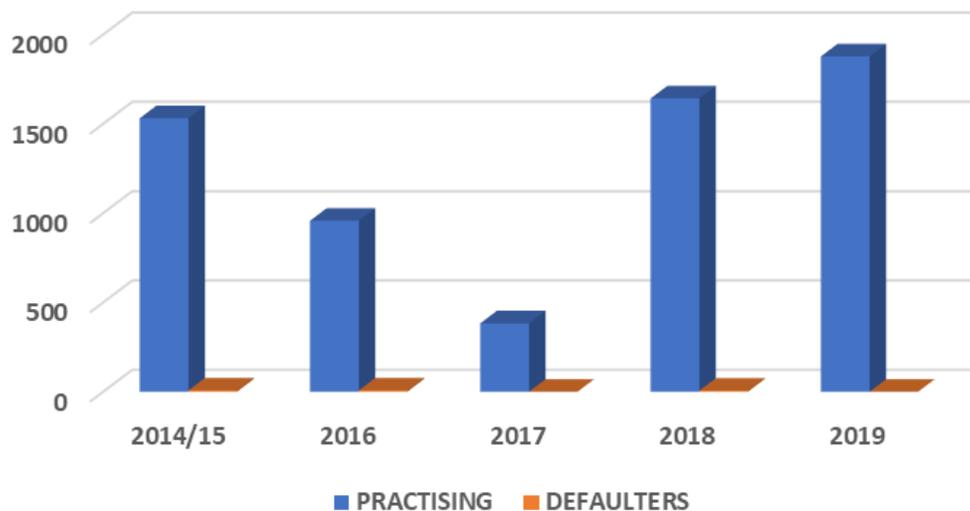


Figure 2. Licensed and Derigistered Experts
Source: www.eik.co.ke, June 2019.

Lead Experts or Associate Experts. Since its foundation, the number of Experts registered by EIK is on the increasing trend. In 2014/2015, there were 1531 Experts and the number increased to 1877 Experts in 2019. Figure 2 shows the number of licensed and deregistered Environmental Experts in Kenya. It should be noted that NEMA is responsible for disciplining Environmental Experts with unethical conducts and as such 7 Experts so far have been deregistered.

Once the Lead Experts have finalized the process of writing EIA/EA reports, the reports so prepared are submitted to NEMA for review and subsequent issuance of licenses. NEMA circulates reports to various Lead Agencies with clear instructions to give feedback of EIA/EA reports within 21 days, failure to which the project is considered approved. When reviewing EIA/EA study reports, the comments and inputs should revolve around the following concerns;

- i). Whether the project site is ideal for the proposed project,
- ii). Have the applicable legislations been cited and their compliance plans discussed?
- iii). Does the report identify potential positive and negative environmental, cultural and social impacts?
- iv). Has the report identified appropriate (including indigenous/local) mitigation measures for the impacts in (3) above?
- v). Has the report adequately considered alternative project site, technologies, materials, design, including re-routing beyond what is proposed?
- vi). Is the Environmental and Social Management Plan (ESMP) adequate, effective, efficacy, practical? and
- vii). Other issues of concern on the project (KIA, 2006; Gerald, 2015; UOE, 2019).

Challenges in environmental impact assessment and environmental practice

There are a number of challenges associated with EIA/EA practice in Kenya, which range from institutional, legal and operational to ethical concerns.

Structure of processing EIA/EA

NEMA is the recipient of all EIA/EA reports which are prepared by Lead Experts. Once received NEMA circulates EIA/EA study reports to various Lead agencies and institutions for comments. Among the Lead Agencies whose inputs are required include; the Lands Officer, the County Physical Planner, Public Officer, Kenya Road Authority, National Construction Authority, Water Resource Management Authorities and the like. When preparing the EIA/EA study reports NEMA requires the proponent to attached approved drawings, designs, and specification as part of appendices to justify the need for approval. It is at this point that the process of the regularization of unsuitable site for project is done which negates the objectives and purpose of EIA. The starting point should be to carry out site evaluation and due diligence to ascertain the suitability of the land and ownership details prior to preparation of any EIA study reports. It should be noted that some projects involve designs such as architectural and structural drawings which have financial implications to the proponent as they are prepared by professional designers and if the EIA/EA study reports are rejected on account of inappropriate locations, the proponents will incur heavy losses and as such NEMA should not put many demands on the applicants at the preliminary stages.

NEMA also requires that EIA/EA study reports which are normally circulated to the Lead Agencies for comments are to be received within 21 days; failure to submit comments for EIA/EA report renders the project approved. This legal requirement does not take into account the circumstances under which the Lead agencies operate. It may not be possible to give inputs within specified timeframe because of logistical issues which the Lead Agencies face including; lack of transport to the site, shortage of personnel and security concerns in some cases. There is need to facilitated the Lead Agencies in order to provide timely feedback to NEMA on EIA/EA projects.

Institutional and legal overlaps

Whereas the Constitution of Kenya 2010 is clear on distribution of functions between the National and County government, there are instances where the county government have enacted their own county specific laws which contradicts some sections of EMCA cap 387 and its supporting regulations. For example counties have a responsibility to monitor noise levels, but in case the matter touching on noise level lands in court, the County governments have no jurisdiction, but to turn to NEMA for help as it is empowered by law to appear and give the necessary evidences in court , and hence the need for clear definition of their mandates.

Environmental impact assessment and environmental audits for old projects

In Kenya, EIA/EA process was introduced in 1999. Although there was a window period when some projects were allowed to undergo through initial audits, only industrial establishments were given such preferential treatment and all other development were left out. In this regard most development project which had been carried out prior to 1999 stills exists and continuous to have significant impacts on the environment. The legal experts argue that the law cannot be applied in retroactive manner and this underscores the need to fix this EIA/EA lacuna.

Interrelations between zoning and environmental impact assessment

Urban areas and cities are governed by various planning norms which require that specific urban planning and development standards are adhered to in order to ensure sustainable urban livelihoods. Globally it is estimated that half of the population will be living in urban areas and cities by 2050. This calls for the need for meticulous planning, and zoning is one of the techniques which is used to create spatial order. Whereas zoning specifies

permissible planning standards, EIA on the other hand allows any development to be carried out in the zoned area so long as an EIA is done. This leads to change of user and attendant conflicting and competing land uses which go against sustainable human settlement planning. There is need to draw a line between zoning and the scope of Environmental Impact Assessment within the context of urbanization.

Unethical EIA/EA practices

It has been pointed out by various key informants that some Lead and Associate Experts who are registered by NEMA to prepare EIA/EA study reports are doing shoddy work. In some instance the Experts are involved in cutting and pasting of reports leading to production of EIA/EA reports which if they are used for decision making purpose will result in licensing of a project that will have long term negative environmental impacts. There is need for quality control of EIA/EA study reports which emanate from the Environmental Expert and due diligence must be ensured prior to approval of projects.

None- allocation of funds for EIA/EA projects

In an effort to ensure ease of doing business in Kenya, the Government suspended collection of licensing fees for Environmental Impact Assessment regulation. The decision has affected the revenue stream for NEMA as the regulator and thus militating against its efforts for ensuring environmental sustainability. It is notable that there are numerous public installations and projects which are ongoing and others are set to be implemented. During conceptualization of these projects and subsequence budgeting, the cost of undertaking EIA/EA projects are not factored in the annual budgets and as such, in some cases EIA/EAs are not done as required resulting in deleterious environments impacts. In some case, the County and National governments can bulldoze projects to be implemented without EIA/EA being done, a situation that makes the government to be seen as culprits in facilitating environmental deterioration and which should not be condoned. All stakeholders in environmental management should embrace the culture of transactive leadership where the principles of leading by example and role modeling are observed.

CONCLUSION AND RECOMMENDATIONS

As the country's population increases coupled with the need to meet associated development requirements, the ability of the planetary earth system to support these demands may not be sustainable, unless sound environmental planning and management practices are effectuated. In this regard both international and local

institutions should create synergies for conservation and protection of the environment. The National and County governments should re-engineer and re-aligned policies and legislations that govern EIA/EA practice. Currently the laws are implemented by two offices with diverse vertical and horizontal levels of command which do not auger well for environmental management. There should be one central unit which should be responsible for handling environmental litigation issues associated with EIA/EA practice.

There is need for an independent professional body to guide the operations of Registered Lead and Associate Experts in the industry. Currently the Environmental Institution (EIK) is more of club of Experts that is responsible for professional developments of its members and has no powers to discipline rogue environmental Experts who are involved in unethical practices such as cutting and pasting of reports as well as overcharging and undercharging on EIA/EA fees. NEMA should not overload itself with matters of handling professional misconduct but instead this should be relinquished to the proposed professional body and which should be made self-regulatory through its membership to ensure integrity of EIA/EA reports. There is also need for NEMA to change the circulation strategy of the EIA/EA reports to the Lead Agencies and to submit EIA/EA reports to independent Assessors or Experts in specific fields where the projects relate to. By so doing NEMA will be able to benefit from external checking and ensure environmental integrity. In order to maintain a serene and a health environment, financial health of EIA/EA stakeholders must be ensured and therefore the government and other partners should allocate adequate financial resources to EIA/EA activities in their budgets. Although Competence Based Curriculum (CBC, 2019) is in its nascent stage in Kenya, it recognizes environmental activities right from pre-school to grade 1, 2 and 3 where strands such as environment and its resources; social environment and care for the environment are inculcated in children and as such these offers EIA/EA an opportunity for it to withstand the test of times as tool for environmental management for now and in the future.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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