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Environment Impact Assessments in developing economies

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### **Abstract**

**Purpose:** Environmental Impact Assessment (EIA) is scientific and legal system for identifying and introducing measures to prevent environmental adverse impacts caused by development project. Developing countries have continuously and vigorously pursued economic growth; they have awakened to the fact that there is need for environmental compliance. This is evident in the numerous contemporary debates on various environmental issues and the increased awareness among the citizenry about environmental matters.

**Conclusions:** In Africa, many countries have instituted EIA regulations relatively recently. The adoption of EIAs in Africa is the result of a number of recent initiatives, including the 1995 African Ministerial Conference on Environment that committed African environment ministers to formalize the use of EIAs, an EIA stakeholders meeting in Nairobi in 1998, and the work of the Pan-African Initiative for Capacity Development and Linkages for EIA in Africa (CLEIAA). The Asian countries vary in terms of legislation, ranging from none to very recent and not widely applied legislation to extensive and robust EIA regulation set within a broader planning framework (Japan, Hong Kong, South Korea). Briffett asserts that many EIAs in the poorer Asian countries are of inadequate quality, with poor scoping, poor impact prediction, and limited public participation. This is largely attributed to the fact that most of these countries are preoccupied with economic growth, and EIAs are considered potential brakes on economic growth.

**Policy Recommendations:** This study provides implications for both policy and practice. This study recommends that developing countries should borrow a leaf from developed countries on EIA systems in their quest to attain sustainable development.

**Key Words:** *Environment, impact Assessments, developing economies*

## 1.0 INTRODUCTION

Environmental Impact Assessment (EIA) is scientific and legal system for identifying and introducing measures to prevent environmental adverse impacts caused by development project (Maeda, 2003). EIA could be an effective instrument to achieve sustainable development. The concept of sustainable development was introduced at United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil in 1992. Principle 4 of the Rio Declaration, stated “In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.” Principle 17 stated that “Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have significant adverse impacts on the environment and are subject to a decision of a competent national authority.” In other words, integration of environmental consideration into any development project is required and EIA is the system to achieve the goal. EIA has become increasingly significant in recent years. (Maeda, 2003)

Developing countries have continuously and vigorously pursued economic growth; they have awakened to the fact that there is need for environmental compliance. This is evident in the numerous contemporary debates on various environmental issues and the increased awareness among the citizenry about environmental matters. There is now a realization within government circles that economic development and environmental issues are heavily interdependent. It has been insisted on the international arena that a country should not just seek to develop by any means. The pursuit of development should be in manner that is sustainable hence the term sustainable development was coined. This is for the sake of future generations. The concept was stated in the United Nations Commission on Environment and Development of 1987. In order to promote sustainable economic development countries like Kenya have formulated and adopted national environmental policies. The formulation of these policies has been supported by the donor community, most notably the World Bank which has stipulated that these policies must be in place to ensure continued and future financial support for development projects.

### 1.1 Environment Impact Assessments in developing economies.

Most developing countries in Africa have evolved substantially over the past decade due to the introduction of legal requirements or general procedures for EIA. This is the case of Kenya, Tanzania and Mozambique. All three African countries have legal provisions for EIA. Mozambique has the oldest legislation (Decree 76/98 of 29 December) and Tanzania has the most recent legislation (The Environmental Management Act, 2004 and EIA regulations at the end of 2005). In Kenya, the legal requirements of EIA appeared first in the Environmental Management and Coordination Act (EMCA) of 1999 and then in the Environmental (Impact Assessment and Audit) Regulations of 2002. Although EIA legal provisions appeared in Tanzania only in 2004, the country had already been applying them for several years. The Tanzania EIA Procedure and Guidelines were drafted by the National Environment Management Council (NEMC) in 2002.

Until recently, EIA as a new concept was not readily understood and accepted as a tool in developing countries. Developers resisted and argued that it was anti development because laws and policies supporting it dictated that lands developments causing negative impacts should be discontinued. In a nutshell, EIA was considered just another bureaucratic stumbling block in the path of development. Secondly, it was conceived as a sinister means by which industrialized

nations intend to keep developing countries from breaking the vicious cycle of poverty. Thirdly, the experts in the developing countries were foreigners who were viewed as agents of colonization. The need for EIAs has become increasingly important and is now a statutory requirement in many developing countries. Historically, the choice of new projects was primarily based on one criterion: economic viability. Today, a second and a third choice criteria, environmental and social impact, have become a strong yardstick, hence the triple bottom-line approach (economic, environmental and social) to project viability (Modak & Biswas, 1999)

On the other hand, note coastal areas in the developing world receive extensive amounts of untreated sewage, which is typically discharged into creeks lined by mangrove forests. Mangroves in all probability filter this discharge wastewater, thereby limiting coastal sewage pollution. Coastal cities of East Africa are expanding rapidly. Population growth is high and there is constant migration from inland areas (UNEP 1998, Shunula 2002). The consequence is a rapid increase in urban wastewater production, which is putting breakpoint pressures on already inadequate sewerage systems. Consequently, although East Africa urgently needs to modernize its sewerage infrastructures, few developing nations can afford conventional sewerage systems. PUMPSEA (Peri-urban mangrove forests as filters and potential phytoremediators of domestic sewage in East Africa) is a three year EU-funded project being applied in Mozambique, Tanzania and Kenya.

### **1.2 Environment Impact Assessments in Developed economies**

Environmental Impact Assessment (EIA) was formally introduced in the United States through the National Environmental Policy Act (NEPA) of 1969. EIA regulations rapidly spread to other mainly industrialized countries. EIA is a key instrument of European Union (EU) environmental policy. The first Directive on the Assessment of the Effects of Certain Public and Private Projects on the Environment (EIA Directive) was enacted in 1985 (85/337/EEC). After having been applied for several years, the directive was substantially amended through Directive 97/11/EC. EIA practice and laws have been significantly improved since Directive 85/337/EEC came into effect (Hirji & Ortolano, 1991).

Convention on Environmental Impact Assessment in a Trans-boundary Context (Espoo, 1991) was the first multi-lateral EIA treaty. It looks at EIA in a trans-boundary context and entered into force in 1997. The Espoo Convention sets out the obligations of Parties to assess the environmental impact of certain activities at an early stage of planning. It also lays down the general obligation of states to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across borders. Apart from stipulating responsibility of signatory countries with regards to proposals that have trans-boundary impacts, it describes the principles, provisions, procedures to be followed and list of activities, contents of documentation and criteria of significance that apply.

Rio Declaration (1992) Principle 17 of Rio Declaration on Environment and Development calls for use of EIA as a national decision making instrument to be used in assessing whether proposed activities are likely to have significant adverse impact on the environment. It also emphasized the role of competent national authority in the decision making process. The other principle of this declaration that is relevant to EIA practice is the application of the precautionary principle.



### **1.3 problem statement**

Developing countries face a dilemma that once developed countries experienced during the days of rapid economic growth. The pressure to escape poverty creates more demands for continual economic development, regardless of the grave pollution and destruction on natural environment, and emerging of global environmental problems. Recently, developed countries and international donor agencies increasingly demand developing countries for environmental considerations when providing development assistance. With these backgrounds, many developing countries have seen the need to introduce EIA systems. Demand to introduce and implement EIA system is critical for developing countries, for those driving towards economic expansion and seeking the equilibrium for sustainable development. (Abaza, Bisset, & Sadler, 2004)

Developing and transitional countries to provide points of reference for EIA practitioners to review or develop EIA guidelines appropriate to the specific needs, development priorities and socio-economic and cultural background of countries. More than ever, the discussion here confirms the findings of the previous volume that EIA exhibits many of the requirements for establishing an integrated approach to implement sustainable development. Specifically, EIA provides: a legal basis for development of an integrated approach, a stepping stone towards other integrative and strategic modes of analysis, a tool for adding value to decision-making and demonstrable benefits in the form of environmentally sound development and the inculcation of new policy values, and hands on means of professional and institutional capacity enhancement. (Abaza, Bisset, & Sadler, 2004)

### **1.4 Objectives of the Study**

1. To review the best practices of environmental impact assessment adopted by developed economies
2. To review environmental impact assessment systems adopted by developing economies
3. To identify gaps in environmental impact assessment systems adopted by developing economies
4. To recommend potential solutions for addressing the gaps in environmental impact assessment systems adopted by developing economies

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical framework**

The study presents various theories that inform the variables underlined in the current study. These theories emphasized the need to have EIA system. These theories include: theory of natural law and pain and pleasure.

#### **2.1.1 Theory of Natural law**

Theories of natural law are reflective critical accounts of the constitutive aspects of the wellbeing and fulfillment of human persons and the communities they form. The propositions that pick out fundamental aspects of human flourishing are directive that is, prescriptive in our thinking about what to do and refrain from doing our practical reason they are, or provide, more than merely instrumental reasons for action and self restraint (Simon, 1965). When these foundational

principles of practical reflection are taken together that is, integrally, they entail norms that may exclude certain options and require other options in situations of morally significant choosing. Natural law theories, then, propose to identify principles of right action (moral principles) specifying the first and most general principle of morality, namely, that one should choose and act in ways that are compatible with a will towards integral human fulfillment. Among these principles is a respect for rights people possess simply by virtue of their humanity rights which, as a matter of justice, others are bound to respect and governments are bound not only to respect but, to the extent possible also to protect (George, 1992).

Natural law theorists are interested in the intelligible reasons people have for their choices and actions. We are particularly interested in reasons that can be identified without appeal to any authority apart from the authority of reason itself. This is not to deny that it is often reasonable to recognize and submit to religious or secular for example, legal authority in deciding what to do and not do. Indeed, natural law theorists such as (Simon, 1965) have made important contributions to understanding why and how people can sometimes be morally bound to submit to, and be guided in their actions. Therefore natural laws provide the baseline reasoning why having EIA systems to manage human activities since humans submit to legal authority.

Kelsen, (1970) in his study discusses rules and prescriptions in relation to natural law theory. He discusses why one should respect the natural order of the human world. Rules that indicate how people should act if they want to respect the natural order properly may be called „rules of law“: they are neither the natural law itself nor its elements nor patterns of order (natural laws) that we can discern in it. To identify rules of law and the conditions of their application are problems that belong to such disciplines as the ethics and the jurisprudence of natural law. Because these are far from exact sciences it often is debatable whether a rule is a rule of law and, if it is, in just what circumstances it will achieve its purpose. However, the primary task of natural law theory in the strict sense is merely to describe the natural law and the patterns of order or natural laws that its study and analysis reveal.

### **2.1.2 Pain and pleasure theory**

To understand the theory of pain and pleasure we analyze the study by (Helm, 2002). Who in his study for more understanding took another way to make sense of the evaluation implicit in pleasure and pain: in terms of an associated desire. The idea here is that the sensation that is the pleasure or pain causes us to desire to keep it or get rid of (or mitigate) it, and it is in virtue of such a desire that we can make sense of the goodness or badness of pleasure or pain. Thus, (Stephens & Graham, 2009) understand pain to be a composite state consisting of the awareness of a certain phenomenological quale and a desire for relief. Similarly, (Tye, 2006) understands pain to be an experience of a disordered state of the body that “elicits an immediate dislike for itself together with anxiety about, or concern for, the state of the bodily region where the disturbance feels located. Basically pain and pleasure theory suggests that we tend to keep what brings pleasure and get rid of what pains us. Therefore EIA systems must ensure that those with project that affect the environment negatively are punished. By feeling the pain they will get rid of such project in order to mitigate the pain.

## **2.2 Empirical Review**

### **2.2.1 Environmental impact assessment systems in developed countries**

The main steps in the European Directive EIA procedure are shown in Figure 4. All projects listed in Annex I of Directive 97/11/EC are subject to assessment. Annex II covers projects for which member states are to determine whether or not EIA is required, on the basis of either a case-by-case examination or by applying criteria thresholds. Annex III stipulates selection criteria, indicating the likelihood of significant environmental effects, which are to be used in Annex II screening decisions. The 97/11/EC Directive requires that screening decisions in relation to Annex II projects must be available to the public. (Balsam and Wood, 2002)

There is no formal requirement for scoping in the Directive. However, a number of member states (for example, Germany) had made provisions for scoping in their legislation. Other member states (for example, Ireland) either had some non-mandatory arrangements for scoping or encouraged developers to use this practice. Under the Directive's provisions, consultation and participation are limited to commenting on the EIA report. Member states are required to designate the environmental authorities that should receive copies of the environmental information and that must be consulted about their opinions on the consent application. Similarly, member states must ensure that both the consent application and the environmental information are made available to the public and that the concerned public is given an opportunity to comment before the project is initiated. Moreover, to comply with the Espoo Convention on EIA in a Trans-boundary Context, the 97/11/EC Directive strengthened the provision requiring member states to supply information, as a basis for consultation and public participation, to other member states if the project is likely to have significant Trans-boundary effects on their environments (Article 7). There is no provision for third-party to appeal decision involving EIA. There is a provision in the Directive for EIA system monitoring.

Telfer, Atkin, & Corner, (2009) in their study "Review of environmental impact assessment and monitoring in aquaculture in Europe and North America" discusses how the concept of environmental impact assessment (EIA) came about in the United States of America in 1970, implemented under the United States National Environmental Policy Act (NEPA, 1969). Prior to this it existed only in rudimentary form. Multilateral organizations have also adopted many of the principles of EIA, including, for example, the Organization of Economic Cooperation and Development (OECD), which adopted recommendations concerning EIA within its constituent states in 1974. Since then many other countries have implemented their own EIA procedures, including Canada (1973), Australia (1974), the Netherlands (1981), Japan (1984) and the European Community (1985). This list is far from exhaustive but the combination of these implementations means the system of environmental assessment has now been adopted by more than 100 countries throughout the world. For further reference, UNEP has produced a training resource manual on EIA (Sadler and McCabe, 2002). In this review both generally applicable and aquaculture specific environmental impact assessment processes will be reviewed.

The process of environmental impact assessment defines the relevant likely effects of development activity but an important strand, post-development, is the requirement for postauthorization monitoring. Monitoring, however, refers to the conduct of procedures to assess the state of the system. Generally this often means it is limited as an assessment of the environment. It is used to

evaluate changes to the system and in this context monitoring can be used to evaluate the changes against a measured pre-development state. This might manifest itself as an assessment of the sediment characteristic before an aquaculture facility is located and again after it has been in operation for some pre-determined time. More often, however, monitoring of aquaculture is used to assess state against some pre-determined quality standards that are regarded as needing to be maintained. Environmental monitoring is key to the implementation and follow-up of an EIA, as other components of the EIA process are dependent on the scope and type of monitoring information that is provided. The primary aim of monitoring is to provide information that will aid impact management; to help achieve a better understanding of cause-effect relationships and to improve EIA impact prediction and mitigation methods. Environmental monitoring is used to (Telfer & Beveridge, 2001); establish baseline conditions (a critical reference point); measure the impacts that occur during project construction and operation; check compliance with agreed conditions and standards; verify the accuracy of impact predictions and determine the effectiveness of mitigation measures. The practice, methods and procedures for monitoring in the various countries under consideration is, in itself, an onerous task and the detailed elements of this are not dwelt on during this review. Regulations and monitoring requirements used in marine aquaculture throughout Europe were reviewed and compared in 1999 by the MARAQUA project (Fernandes *et al.*, 2000). Across the countries under consideration there will be material differences in the type and number of samples required to assess benthic impacts in sea cages, for example, while such data may not be relevant at all for production in ponds and raceways. Similarly chemical parameters may be of less importance in marine systems because of its large buffering capacity, but are highly important in pond and raceway culture, where water exchange is limited. Consideration of methods and procedures are further complicated by amongst others

### **2.2.2 Environmental impact assessment systems in developing countries**

Kibutu, & Mwenda (2003) in their review of EIA systems analyzed the following process involved in the EIA systems in Kenya. The processes were as follows: The first step of the EIA procedure is developing and submitting a project report by the proponent. This report should state: the nature of the project; the location of the project including the physical area that may be affected by the project's activities; the type of activities to be carried out during the project construction, operation and decommissioning phases;- the project design; the materials to be used, products and by-products, including waste to be generated by the project and the respective disposal methods; the project's potential environmental impacts and the mitigation measures to be taken during and after project implementation; an action plan for the prevention and management of possible accidents during the project cycle; a plan to ensure the health and safety of the workers and neighbouring communities; the economic and socio-cultural impacts to the local community and the nation in general; the project budget; any other information the authorities may require. The project report shall be prepared by a registered environmental impact assessment expert. The authorities will issue the license when they consider that the project will have no significant environmental impacts or that the project report discloses sufficient mitigation measures. On the other hand, when the project will have a significant environmental impact and the project report discloses no sufficient mitigation measures, the authorities will request the proponent to perform an environmental impact assessment study. During the process of conducting an environmental assessment study, the



proponent will, in consultation with the authorities, seek the views of persons who may be affected by the project. After the authorities have approved the project report, the proponent will obtain a public opinion by: publicizing the project and its anticipated effects and benefits; holding at least three public meetings with the affected parties and communities to explain the project and its effects and to obtain their oral or written comments, ensuring that appropriate notices are sent out at least one week prior to the meetings and that the venue and times of the meetings are convenient for the affected communities and other concerned parties; and ensuring, in consultation with the authorities, that a suitably qualified coordinator is appointed to receive and record both oral and written comments and any translations thereof received during all public meetings for onward transmission to the authorities (Kibutu, & Mwenda, 2003).

In Tanzania, EIA procedures involve the following stages: registration, screening, impact assessment, reviewing, permit decision, monitoring, auditing and decommissioning. Responsibility for determining the appropriate level of environmental assessment screening lies with National Environmental Management Council in consultation with a cross-sectoral Technical Review Committee (TRC) where necessary. In making the decision, the following factors are considered: project location and scale, applied technology, public concerns, land use considerations, environmental impacts and any factors relevant to the particular project. One of the following decisions will be reached: full EIA required, preliminary assessment required, EIA not required and project proposal rejected. (Wood, 2003) The preliminary Assessment is an investigation to obtain just enough information to determine whether or not there will be significant adverse environmental impacts based on existing information. The assessment may require extra information to be gathered in the field. The proposal will be submitted for review when the development might not result in adverse environmental impacts and meets the planning requirements. (Wood, 2003)

The Mozambique EIA procedure steps include Definition of project, Pre-assessment, EIA required, Proponent prepares Terms of Reference (ToR), Proponent prepares, EIA report, Environmental Implication study report review, Result communication, Approval, Environmental license, Project implementation, Monitoring, Environmental auditing and finally Decommission. All activities capable of causing a significant environmental impact will be subject to a pre-assessment by the Ministry for Environmental Coordination (MICOA). When the pre-assessment indicates that an activity's environmental impact is already known, MICOA will issue the respective environmental license. (Kakonge, 2006)

### **2.2.3 Gaps in environmental impact assessment systems adopted by developing economies**

Jay, Jones, Slinn, & Wood, (2007) in their review of Environmental impact assessment identified the following gaps in EIA systems of developing countries in relation to developed countries. In developed countries with better EIA systems, the systems Facilitates informed decision making by providing clear, well-structured, dispassionate analysis of the effects and consequences of proposed actions. The EIA assists the selection of alternatives, including the selection of the best practicable or most environmentally friendly option. It also Influences both project selection and policy design by screening out environmentally unsound proposals, as well as modifying feasible action. It Facilitates meaningful public engagement and review in at least two stages of the process:

once when scoping the impacts and issues to be considered, and again during the presentation of initial findings of the EIA, including a non-technical summary. It encompasses all relevant issues and factors, including cumulative effects, social impacts, and health risks. The EIA directs (not dictates) formal approvals, including the establishment of terms and conditions of implementation and follow-up. It also Results in the satisfactory prediction of the adverse effects of proposed actions and their mitigation using conventional and customized techniques. In this countries EIA Serves as an adaptive, organizational learning process in which the lessons experienced are fed back into policy, institutions, and project designs (Jay, Jones, Slinn, & Wood, 2007)

On other hand for developing countries according to (Jay, Jones, Slinn, & Wood, 2007), EIA is inconsistently applied to development proposals with many sectors and classes of activity omitted. It operates as a “stand alone” process, poorly related to the project cycle and approval process and consequently is of marginal influence. In most developing countries EIA has a nonexistent or weak follow-up process, lacking surveillance and enforcement of terms and conditions, effects monitoring, etc. EIA in developing countries does not consider cumulative effects or social, health, and risk factors and makes little or no reference to the public or public consultation is perfunctory, substandard, and takes no account of the specific requirements of affected groups. Results in EA reports in these countries are voluminous, poorly organized, descriptive, and overly technical and information provided is unhelpful or irrelevant to decision making. The systems are inefficient, time consuming, and costly in relation to the benefits delivered and also understates and insufficiently mitigates environmental impacts and loses credibility. (Jay, Jones, Slinn, & Wood, 2007)

Countries with longer experience and more advanced EIA practices tend to include a standard set of components in their EIAs, while EIAs in developing countries often fail to include certain elements. Comparing and contrasting EIA processes in selected advanced and developing countries brings out this fact and highlights the deficiencies in the latter. In developing countries, EIAs most often lack a public announcement or “notice of intent” advising about the imminent preparation of an EIA, a well-designed process for involving the public, and post-EIA monitoring.

#### **2.2.4 Potential solutions for addressing the gaps in environmental impact assessment systems adopted by developing economies**

It is necessary to note, however, that even those countries implementing EIA best practices still have a long way to go with regard to the incorporation of indirect impacts, the interaction of impacts, and the uncertainty of predicted impacts (Glasson et al. 2005). However, both developed and developing countries have continued to improve, harmonize, and increase the coherence of EIA practices. The European Union member states, for instance, have completed two five-year reviews of the 1985 EU Directive for EIAs; a third review commenced in 2003. The objective of the reviews is both better environmental protection and greater harmonization. There also have been international efforts to encourage the adoption of EIAs in developing countries, including numerous cross-country training and capacity-building activities. Such efforts include the EIA Capacity Building Program of United Nations Environment Program; the EIA training component of the Support to Human Resources Development for Sustainable

Agriculture and Rural Development Project of the UN Food and Agriculture Organization; the Environmental Training program of the U.S. Environmental Protection Agency (Luecht, 2007);

and environmental assessment training organized by the World Bank (World Bank 2006). Issues still debated worldwide with respect to EIAs involve scope, quality, methods (e.g., how to capture and integrate complex interactions), public participation, and actions after the decision stage for example monitoring of impacts, thus far required only in California and Western Australia) (Glasson *et al.*, 2005). Much of the debate is driven by political factors, although in the case of developing countries, capacity issues also have limited greatly the scope and application of EIAs. In general, however, there is a worldwide trend toward undertaking EIAs earlier in the development process, making them mandatory in a greater number of cases, applying them to a wider range of projects, increasing their comprehensiveness, and making them more integrative and open (Gibson, 2002)

### 3.0 SUMMARY OF RESEARCH GAPS

Jay, Jones, Slinn, & Wood, (2007) carried out a study on environmental impact assessment review. Their main objective was analyzing EIA systems in different countries. This study focuses on adoption of EIA systems in developing countries and lessons to learned from develop, therefore their a conceptual gap in the two studies.

Jay, Jones, Slinn, & Wood, (2007), Kibutu, & Mwenda (2003) and Kakonge (2006) used both primary and secondary data in their studies. This study used literature review/desktop study method. Therefore, there exists a methodological gap.

Jay, Jones, Slinn, & Wood, (2007) and Kakonge (2006) carried out their studies in America and Southern Africa respectively. The current study was done on Kenya, Tanzania and Mozambique which are developing countries.

## 4.0 CONCLUSION, AND POLICY IMPLICATION AND FURTHER STUDY

### 4.1 Conclusions

The field of environmental impact assessment has been evolving rapidly worldwide. (Glasson *et al.*, 2005) compares the relative status of EIA by continent by the end of 2005. More than 100 countries had some form of EIA regulation, although EIA practices vary widely across countries. In Africa, many countries have instituted EIA regulations relatively recently. The adoption of EIAs in Africa is the result of a number of recent initiatives, including the 1995 African Ministerial Conference on Environment that committed African environment ministers to formalize the use of EIAs, an EIA stakeholders meeting in Nairobi in 1998, and the work of the Pan-African Initiative for Capacity Development and Linkages for EIA in Africa (CLEIAA).

In general, however, EIAs in Africa still appear plagued by a lack of trained personnel, inadequate budgets, and the concern that EIAs might hold back economic development (Kakonge, 1999). All countries in South and Central America have environmental protection legislation that includes requirements for at least some aspects of EIAs. Specifically, in South America the development of EIAs has been hampered by political instability, inefficient bureaucracy, economic stagnation, and external debt (Brito & Verocai, 1999). According to Glasson and Salvador (2000), EIA in South

America often is carried out after a project has been authorized and with little or no public participation.

EIA regulations were established in most Asian countries in the 1980s and 1990s. The Asian countries vary in terms of legislation, ranging from none to very recent and not widely applied legislation to extensive and robust EIA regulation set within a broader planning framework (Japan, Hong Kong, South Korea). Briffett (1999) asserts that many EIAs in the poorer Asian countries are of inadequate quality, with poor scoping, poor impact prediction, and limited public participation. This is largely attributed to the fact that most of these countries are preoccupied with economic growth, and EIAs are considered potential brakes on economic growth. Additionally, EIAs are believed to discourage large infrastructure projects that are symbols of economic wealth (Briffett, 1999).

#### **4.2 Policy Implication**

This study provides implications for both policy and practice. This study recommends that developing countries should borrow a leaf from developed countries on EIA systems in their quest to attain sustainable development.

#### **4.3: Area for Future Studies.**

Matters on environment are widely becoming a point of concern globally. Researchers should carried studies on environment protection systems to give recommendation on how to protect and manage the environment for future generations.

### **REFERENCE**

- Abaza, H., Bisset, R., & Sadler, B. (2004). Environmental impact assessment and strategic environmental assessment: towards an integrated approach. UNEP/Earthprint.
- Ahmad Balsam and Christopher Wood, 2002. A comparative evaluation of the EIA systems in Egypt, Turkey and Tunisia. *Environ Impact Assess Rev* 22, 213-234.
- Briffett, C., Obbard, J. P., & Mackee, J. (2003). Towards SEA for the developing nations of Asia. *Environmental Impact Assessment Review*, 23(2), 171-196.
- Declaration, R. (1992). Rio declaration on environment and development.
- George, R. P. (1992). *Natural law theory: contemporary essays*.
- Glasson, J., & Salvador, N. N. B. (2000). EIA in Brazil: a procedures–practice gap. A comparative study with reference to the European Union, and especially the UK. *Environmental Impact Assessment Review*, 20(2), 191-225.



- Helm, B. W. (2002). Felt evaluations: A theory of pleasure and pain. *American Philosophical Quarterly*, 13-30.
- Hirji, R., & Ortolano, L. (1991). Strategies for managing uncertainties imposed by environmental impact assessment analysis of a Kenyan river development authority. *Environmental Impact Assessment Review*, 11(3), 203-230.
- Jay, S., Jones, C., Slinn, P., & Wood, C. (2007). Environmental impact assessment: Retrospect and prospect. *Environmental impact assessment review*, 27(4), 287-300.
- Kakonge, J. O. (2006). Environmental planning in Sub-Saharan Africa: Environmental impact assessment at the crossroads. *Yale School of Forestry & Environmental Studies*.
- Kelsen, H. (1970). *Pure theory of law*. Univ of California Press.
- Kibutu, T. N., & Mwenda, A. Provision for Environmental Impact Assessment (EIA) in Kenya's legislation: A review of the Environmental Management & Coordination Act (EMCA) & the Environmental (Impact Assessment & Audit) Regulations (EIAAR).
- Li, J. (2008). Environmental impact assessments in developing countries: An opportunity for greater environmental security. *USAID FESS*.
- Maeda, A. (2003). Innovation in fuel cell technologies in Japan: Development and commercialization of polymer electrolyte fuel cells. Retrieved on May, 20, 2005.
- Perdicoúlis, A., & Glasson, J. (2006). Causal networks in EIA. *Environmental Impact Assessment Review*, 26(6), 553-569.
- Read, P., & Fernandes, T. (2003). Management of environmental impacts of marine aquaculture in Europe. *Aquaculture*, 226(1), 139-163.
- Rogerson, C. M. (2008, March). Tracking SMME development in South Africa: Issues of finance, training and the regulatory environment. In *Urban Forum* (Vol. 19, No. 1, pp. 61-81). Springer Netherlands.
- Sadler, B., & McCabe, M. (2002). *Environmental impact assessment training resource manual*

(Vol. 1). UNEP Division of Technology, Industry and Economics Economics and Trade Branch.

Stephens, G. L., & Graham, G. (2009). Mental illness and the consciousness thesis. The neuropsychology of mental illness, 390.

Telfer, T. C., & Beveridge, M. C. M. (2001). Monitoring environmental effects of marine fish aquaculture. Cahiers Options Mediterranennes, 55, 75-84.

Telfer, T. C., Atkin, H., & Corner, R. A. (2009). Review of environmental impact assessment and monitoring in aquaculture in Europe and North America. FAO fisheries and aquaculture technical paper, (527).

Tye, M. (2006). The thesis of nonconceptual content. European Review of Philosophy, 6, 7-30.

Wood, C. (2003, November). Environmental impact assessment in developing countries: an overview. In Conference on New Directions in Impact Assessment for Development: Methods and Practice (pp. 24-25).

Wood, C. (2003, November). Environmental impact assessment in developing countries: an overview. In Conference on New Directions in Impact Assessment for Development: Methods and Practice (pp. 24-25).