

Assessing the Contribution of Environmental Impact Assessments in Informing Decision Makers Concerning the Booming of FDI in Tanzania

Agnes G. Mwakaje¹

¹ Institute of Resource Assessment, University of Dar es Salaam, Tanzania

Correspondence: Agnes G. Mwakaje, Institute of Resource Assessment, University of Dar es Salaam, P. O. Box 35097, Tanzania. Tel: 255-255-(0)784-391-220. E-mail: amwakaje@udsm.ac.tz

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Abstract

Tanzania has become one of the best choices for foreign direct investment (FDI) in East Africa and sub-Saharan Africa in general. The country has been pulling in an average of US\$627 million a year and it is one of the continent's top foreign direct investment (FDI) performers. In 2011, the FDI value in the country reached \$1,095,401,000.00 and the trend has been increasing. The booming of FDI is believed to have created jobs, increased incomes and contributed significantly to the national economy. Despite that, a large number of ordinary citizens have indicated dissatisfaction with this boom in FDI, which has caused a lot of conflict between investors and the surrounding communities where projects are taking place. In addition, environmental pollution has been observed in connection with a number of new investments. This paper assesses the contribution of environmental impact assessment (EIA) in informing the policy and decision-making process with regard to the boom in FDI in the country. The main focus of the study was to investigate the quality of the EIA undertaken and the extent to which they have influenced decision making with regard to the investments in Tanzania. This was done by reviewing EIA reports and having consultations with developers and regulatory authorities. The main findings are that, despite the existence of EIA for almost all development projects in the country, few of the mitigation measures proposed in the EIA reports are implemented by the developers. The study also revealed a number of EIA reports which were weak in terms of informing decision and policy makers to ensure that FDI would result in a *win-win* outcome. In addition, the enforcement and monitoring of environmental management plans by the authorities responsible was weak, partly due to inadequate resources.

Keywords: FDI, EIA, sustainable development, Tanzania

1. Introduction

Tanzania has become “the best choice for FDI in East Africa and has emerged as one of the sub-Saharan Africa's top foreign investment destinations. The country is pulling in an average of US\$627 million a year and it is one of the continent's top FDI performers (Chiwango, 2012). In 2011 the figure for FDI in Tanzania reached \$1,095,401,000.00 (Omundi, 2012). This remarkable amount of FDI was mainly due to policy changes in the state-controlled economy, which started in the 1980s, aimed at involving more private investors (Nelson & Makko, 2013), There was also favorable investment laws and a decline in corruption (Chiwango, 2012).

However, the impact of the booming FDI is rather mixed (Carkovicand & Levine, 2002; Moss et al., 2004; Ngowi, 2012; Nunnenkamp & Spatz, 2003; Hansen & Rand, 2006). There are those who argue that the booming of FDI has created jobs and is contributing greatly to the national economy (Ngowi, 2012). It is also argued that FDI has had a positive impact on productivity, especially of smallholder farmers who are linked to integrated producer schemes (Elibariki, 2007). The tourist industry has been one of the most significant elements in the trend of FDI, as it grew around 10% annually during the 1990s (Msuya, 2013), currently contributing over 17% of the country's GDP. Gold mining has also attracted a remarkable number of foreign investors. The country has been a major focus for the exploration of gold on the African continent, receiving as much as 15% of exploration expenditure in Africa, and the mining industry in Tanzania grew by 27% in 1999. Tanzania has re-entered large-scale gold mining with a bang, with six gold mines having been opened since 1998. Production is high and rising, and today the country is the third largest gold producer on the continent after South Africa and Ghana. As

is stands, minerals make up over 52% of the country's exports, a large part of which comes from gold (Mbendi, 2013).

However, while decision makers and upper-class citizens are encouraged by the boom in FDI in the country, there has been a lack of appreciation by a high proportion of ordinary citizens. This applies to FDI in all sectors, including minerals, natural gas, biofuels and agriculture, and it remains an area of serious concern, as conflicts over land and licensing issues are prevalent among stakeholders, and ensuing conflicts indicate that mining contracts are lopsided (IPP media, 2012). While the New Mining Bill passed in 2010 by the Parliament has attempted to address some of the criticisms of the mineral sector in the country, conflicts between investors and surrounding communities are still ongoing. The public at large is still unhappy with the contribution of the mining sector *vis-a-vis* the price it is paying.

In addition, land use conflicts have been escalating with increasing land formalization and private ownership, a pre-condition for accommodating FDI. Consequently disputes over land between the community, the government and investors have intensified, with a broad range of stakeholders having expressed strong concern over the current unstable situation (IJP, 2013). For instance, community-based conservation initiatives in the form of Wildlife Management Areas represent a principal source of conflict and a challenge to the local wildlife conservation, tourism development and land-use agenda (IJP, 2013). We have witnessed Loliondo communities being at enmity with investors because of conflicts over the use of resources, especially grazing land. Moreover, investment in biofuels has led to the acquisition of thousands of acres of arable land for biofuel production. Consequently, protests by local environmental groups and civil society organizations have led to the suspension of all current and future biofuel developments until clear policies are defined (GGF, 2009). However, while all these are happening, the Tanzania National Environmental Act (EMA, 2004) requires all development projects (investments) with likely adverse impacts (social, economic and environment) to undergo an EIA. Section 81 of the Environmental Management Act (EMA, 2004) 81 (1) compels developers to undertake an EIA prior to development activities if these activities are taking place in classified areas that require EIA. The First Schedule of the EIA Regulations (2005) provides further information on the developments with mandatory EIA. Conducting an EIA has become part of the process for approving development projects in the country. It is argued that a good EIA will address all the negative impacts of the proposed development and propose mitigation measures and monitoring plans. EIA a process seeks to ensure that all negative impacts of the proposed project are internalized in the project design so that the costs the public incur are not greater than the benefits they get from the proposed development. Most of those FDI in Tanzania fall under EIA mandatory list, EIA was undertaken, so why are these unanticipated events involving FDI happening? Has the EIA played the role it is supposed to for sustainable development? Where are the gaps in the whole process of EIA in the country? This study attempts to provide answers to some of the pertinent questions raised.

The main objective of this study was to find out whether EIA as one of the key decision-making tools has helped in informing decision making concerning the sustainability of FDI in the country.

Specifically, it sought to:

- 1) Investigate whether an EIA had been undertaken for ongoing investments and highlight areas of strengths and weaknesses.
- 2) Assess the capacity of EIA expertise and the authority responsible for monitoring and enforcing EIA recommendations.

The study tests the hypothesis on whether EIA has had any significant contribution in informing decision making process with regard to the sustainability of the booming FDI in Tanzania.

The findings from this study will inform policy/decision makers on how EIA could ensure a *win-win* situation for investors, central government and the communities where projects are taking place. It will also inform investors, the government, development agencies and the donor community on how FDI could best be implemented for sustainable development (that addresses the three pillars of economy, social and the environment). Finally, the study contributes to the body of knowledge through this publication in the area of FDI, EIA and sustainable development.

2. The Profile of FDI in Developing Countries

2.1 FDI in Africa

FDI is the long-term participation of a specific country in another country. FDI involves two countries participating in a joint venture, management, expertise and technology transfer. FDI could also be defined as the investment made by a company or entity based in one country in a company or entity based in another country.

FDI is categorized as either “inward FDI” or “outward FDI” and such categorization results in a net FDI inflow, which may be positive or negative (Jodel, 2011).

Over the last two decades, FDI flows have grown rapidly all over the world. This is because many countries and especially developing countries see FDI as an important element in their strategy for developing the economy (Adams, 2009). The main attraction of FDI lies in the area of the availability of natural resources and large markets. However, low inflation, good infrastructure, an educated population, openness to FDI, less corruption; political stability and a reliable legal system have a similar effect (Asiedu, 2006). Hermes and Lensink (2003) also argue that for FDI to influence positively on economic growth of a recipient country the issue of sufficiently developed financial system is important. Adams (2009) elaborates further by arguing that FDI contributes to the economic development of the host country in two main ways. Firstly domestic capital is augmented and efficiency enhanced through the transfer of new technology, marketing and managerial skills, innovation and best practices. Secondly, FDI has both benefits and costs and its impact is determined by country-specific conditions in general and the policy environment in particular in terms of the ability to diversify, the level of absorption capacity, the targeting of FDI, and opportunities for linkages between FDI and domestic investment (Adam, 2009).

In 2006, about 40 African countries introduced 57 new measures affecting FDI, 49 of which encouraged inward FDI (UNCTAD, 2007). The increase in FDI inflows largely reflected relatively high economic growth and strong corporate performance in many parts of the world (FE, 2008). FDI can therefore help bridge shortfalls in capital (See Todaro, 1989). Access to markets is another asset that FDI may bring to host economies. FDI has a lasting impact on GDP via knowledge transfer and the adoption of new technologies. However, studies show that for relatively closed economies, growth and FDI are not mutually reinforcing under restrictive trade and investment regimes (Basu et al., 2003). Rather host country and industry characteristics and the interplay between both sets of characteristics have a major impact on what FDI can achieve in terms of growth in developing countries (Peter & Julius, 2003). Generally, Africa lags behind other regions in attracting FDI Carmen and Kenneth (2002), though the trend is increasing.

2.2 The Profile of FDI in Tanzania

FDI in Tanzania has been growing steadily since 2002. In 2002/3 FDI was valued at USD 430 million. This increased to USD 1,095 million in 2011 (TIC, 2011), more than double. However, new FDI declined modestly in 2009 (due to the global economic crisis) to USD 650 million from the 2008 record of USD 744 million (TIC, 2012). But it picked up again in 2011 to the tune of USD 1095 million (TIC, 2011). The countries leading in terms of FDI in Tanzania are the UK (23%), followed by India (15%), Kenya (15%), The Netherlands (10%), China (10%), the USA (10%) and South Africa (7%). Other countries involved in FDI in Tanzania are Canada (5%), Germany (3%) and Oman (2%). A high proportion of the investments in Tanzania involves local companies (48%), while pure foreign and joint ventures FDI make up 25% and 27%, respectively (UNCTAD, 2012). FDI is taking place mainly in the sectors of agriculture, manufacturing, tourism, telecommunications, services, petroleum and mining (Mnali, 2012).

2.3 The Impact of FDI on Tanzania's Economy

Earlier studies suggest that FDI is an important vehicle for the transfer of technology, contributing more to growth than domestic investment (Borensztein et al., 1998). Its impact on the Tanzanian economy has been in terms of creating jobs, contributing to government revenue, transferring technology and skills, increasing the amount of capital invested and foreign exchange earnings (Borensztein et al., 1998). Since then it has declined for reasons that are not clear, but global economic crisis could be one of the reasons. A study by Jensen et al. (2010) estimated the significant gains Tanzania could expect from a reform of the banking, maritime and road transport sectors. It has been observed that FDI makes a positive impact on productivity, especially of smallholder farmers, who are linked to integrated producer schemes (Msuya, 2006). Overall, the number of people employed as a result of FDI peaked at 110,000 in 2008.

However, Tanzania has also experienced a negative side of FDI. A number of large-scale biofuel investments have recently been abandoned or sold or their operations have ceased and therefore many promises (creation of new jobs, infrastructure, training and transfer of technology) have not been fulfilled, making farmers skeptical about expecting anything from biofuel investments. The reasons for failure of biofuel investments seem to be linked to poor initial analysis, difficulties in obtaining legitimate access to land and conflicts with local communities over land and water resources (Diop et al., 2012). Also the tax incentives provided by the government to the investors seem to be too generous, causing the country to lose a substantial amount of much-needed tax revenue (Lu & Marco, 2010). It should be noted that land in Tanzania and many other parts of

the world is a source of many conflicts. With these “investors” coming on stream since the 1980s there has been a proliferation of disputes over the use of natural resources. The main victims of this have been pastoralists, farmers and small-scale miners, who are accustomed to getting their daily bread and other social services from the land they own (HAKIARDHI, 2009).

While the above review shows that FDI could be good for the economy, nevertheless, the literature also suggests that this is not guaranteed. Despite the highlighted positive impacts in the country’s economy FDI has also faced resistance from communities in several parts of the country to the point of shedding of blood, and in other areas enmity between investors and local communities has remained a chronic problem. This is the case of, for instance, Mererani Tanzanite mining, Africa Mashariki Gold Mine, etc. The question is whether EIA played any role by informing policy and decision makers concerning the sustainability of FDI.

2.3.1 Defining Environmental Impact Assessment (EIA)

Principle 17 of the Rio Declaration states that:

“Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment (including socio-economic issues) and are subject to the decision of a competent national authority” (UNCED, 1992). The International Association for Impact Assessment defines EIA as “the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals prior to major decisions being taken and commitments made”. EIA is meant to ensure that all negative impacts of a proposed project are internalized in the project design so that the costs the public incurs are not greater than the benefits they get from the proposed development. If properly conducted, EIA is a useful tool for promoting sustainable development (Bruhn-Tysk & Eklund, 2002). That is to say that a good EIA must predict and evaluate the likely impact of the proposed development and propose mitigation measures for significant negative impacts and enhancement measures for significant positive impacts. Indeed, a good EIA must lead to a *win-win* situation that benefits society, the economy and the environment.

2.3.2 The Environmental Impact Assessment (EIA) Procedures in Tanzania

According to the Environmental Management Act (2004) and first Schedule of the Regulations for EIA (2005) in Tanzania, all development projects with likely adverse impacts must undergo an EIA. The mandatory EIA list includes all large-scale development projects and those in ecologically/socially sensitive areas, such as protected areas, wetlands, forests and densely populated areas.

In Tanzania, EIA procedures involve registering, screening, assessing impacts, reviewing, deciding on permits, monitoring, auditing and decommissioning. EIA is paid for by the developers, who normally commission the consultant(s) to conduct the EIA. The responsibility for determining the appropriate level of environmental assessment (screening) lies with the National Environmental Management Council (NEMC). In making a decision about the level of EIA required, the following factors are considered: project location and scale, technology used, public concern, land use considerations, the likely environmental impacts and any factors relevant to the particular project. Based on these criteria one of the following decisions is reached by NEMC: full EIA required, preliminary assessment required, EIA not required and project proposal rejected.

After an EIA study has been undertaken, a total of 90 days are required by law to review and approve the EIS. Of these, NEMC is given a maximum of 60 days to review the EIS and make recommendations to the Minister responsible for the Environment and the remaining month is for the Minister to approve or not approve the project. NEMC reviews the EIS in collaboration with the cross-sectoral Technical Advisory Committee (TAC), comprising members from government departments, academia, the private sector, NGOs and civil society organizations. Decisions concerning an EIS are guided by the criteria developed for approval, recommendations from the NEMC, recommendations from the Director of the Environment, political repercussions of the project and the Minister’s professional judgment. Normally the Minister approves an EIS with conditions attached for implementing the environmental management plan (which is a combination of mitigation measures and environmental (Note 1) monitoring plans). After an EIS has been approved by the Minister responsible, NEMC in collaboration with other stakeholders is required by law to monitor the implementation of mitigation and monitoring plans and to enforce the law in this regard.

A person who is aggrieved by the decision of the Minister to approve or disapprove an EIS may appeal to the Environmental Appeals Tribunal.

2.4 Conceptual Framework

Effectiveness of an EIS will depend on three main issues. One, how the EIA was conducted and key issues

addressed, how the developer has incorporated the mitigation measures and how effectively the monitoring plan has been included in the project design. Two, how competent the regulatory authority is in reviewing the EIS and making useful recommendations to the Minister; and three, how capable the regulatory authority is, in monitoring the implementation of mitigation measures and environmental monitoring plans, in enforcing the law and dealing with cases of non-compliance.

If the regulatory authority approved a weak EIS it will not aid or could mislead decision making. As pointed out earlier, to achieve sustainable development, an EIA must address the three pillars of sustainable development, i.e. economic, environmental and socio-cultural concerns to ensure a *win-win* situation. To achieve this, an EIA needs to consider several key issues. Nieslony (2004) referred to them as the *precautionary principle*, the *democratic principle*, the *polluter-pays principle*, the *public's awareness of EIA and sustainable development*, the *integrative principle* and the *competence of Review Authority*. According to Figure 1, key areas to be considered for an effective EIS are:

1) Issues relating to the *precautionary principle*, which include a consideration of the cumulative impacts of the project, indirect impacts and areas of risk and uncertainty.

2) *Democratic principle*, which involves consultations with stakeholders/public and minority groups, the consideration of gender, public access to decision making and, where applicable, the training of stakeholders. Their issues and concerns must be taken into consideration while determining the significance of impacts.

3) *Polluter-pays principle*. In this principle, areas of consideration may include an adequate analysis of project alternatives, comprehensive mitigation measures and monitoring plans. The polluter-pays principle also considers the issue of external costs, which must be internalized in the project design so that the costs the community incurs are not greater than the benefits they will reap from the proposed development.

4) *Public awareness and competence of EIA expertise*: Other factors include public awareness of the importance of EIA for sustainable development and EIA expertise available in the country with the capacity to hire international EIA practitioners to undertake comprehensive EIAs for proposed developments.

5) *Integrative principle*: EIS must be integrative, meaning that the three pillars of sustainable development are considered equally, i.e. society, the economy and the environment.

If the issues indicated in Figure 1 are not adequately addressed, the EIS is regarded as weak and therefore not useful for aiding decision making.

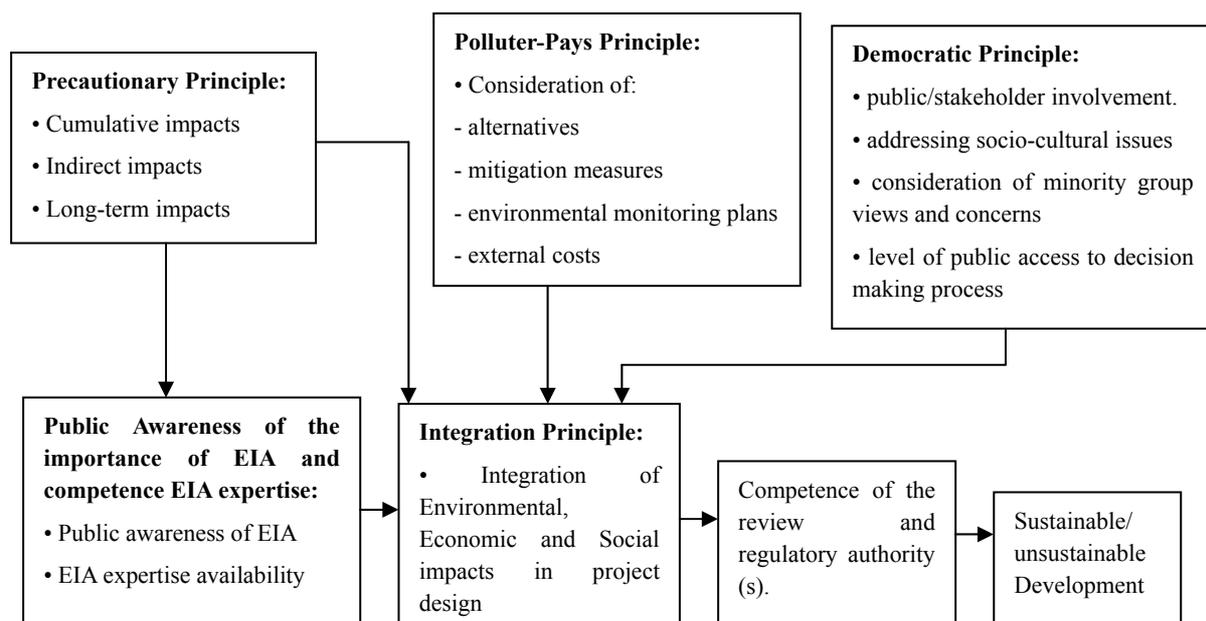


Figure 1. Conceptual framework. Source: Modified after Nieslony, (2004)

3.1 Brief Description of Tanzania

Tanzania is located in East Africa, bordering the Indian Ocean and lying between Kenya and Mozambique. It is the largest country in East Africa, occupying 945,087 sq km, of which 886,037 sq km is land and the remaining 59,050 sq km is water. The country is richly endowed with natural resources (wildlife, minerals, good land for agriculture and beautiful beaches and landscapes), with attractions like Mount Kilimanjaro, the Great Lakes, Ngorongoro, Serengeti National Park and the islands of Pemba and Zanzibar.

Tanzania became independent in 1961 but 6 years later in 1967 it devoted itself to the so-called Arusha declaration, whereby all pillars of the economy were nationalized and controlled by the State. However, in the 1980s when the structural adjustment programs were being implemented in most developing countries, Tanzania was not left out. It also had to undergo structural adjustments, which included liberalizing the economy, selling off almost all government parastatals and changing from a state-controlled economy to a more liberalized economy involving the private sector. This policy change led to a dramatic rise in private sector investments, both local and foreign. However, liberalization of the economy has faced more challenges than anticipated. While the international donor community promised that economic liberalization would provide a strong stimulus for Tanzanian agriculture, resulting in increased yields, increased labor productivity, rising agricultural production and higher incomes, the available data show that productivity based on these parameters stagnated or declined up to the end of the 1990s (Skarstein, 2005). Although the IMF reported that during the last two decades the Tanzanian economy has gone through a period of successful transition in which economic liberalization and institutional reform led to a recovery of GDP growth to more than 7% per year since 2000, this 'successful transition' has failed to reduce poverty and most of the progress has occurred in Dar es Salaam and not in rural areas, where the poorest are getting poorer and the richest richer (Eberlein, 2009). Also the booming of FDI has caused a number of resource-use conflicts between investors and surrounding communities, which has prompted more research on the subject.

3.2 Data Collection

The study collected both secondary and primary data. Secondary data involved reviewing and analyzing the quality of existing EIA at the NEMC and other documentation units. NEMC is the coordinating body for the EIA review process and the main regulatory authority on environmentally related issues. About 100 EIA reports for various development projects in the country were reviewed. Primary data were collected through consulting staff of the NEMC, the Division of the Environment; the Ministries of Agriculture, Food Security and Cooperatives; Natural Resource and Tourism; Energy and Minerals; Industry, Trade and Marketing and; Lands and Human Settlements Development. The aim of the consultation was to assess the review process and issues of coordination and/or cooperation among the regulators.

The focus of the review was on the comprehensiveness of the EIA as stipulated in the UNEP EIA Resource Training Manual (1996) and the Tanzania EIA guidelines and regulations (2005). The study also involved documentation of the review process and decision-making criteria. Furthermore, the study consulted a number of investors, with the aim of investigating issues relating to implementation of the mitigation measures and environmental monitoring plans as well as constraints encountered in the process. The data-collection tools were checklists and semi-structured questionnaires. The analysis was mainly descriptive using Excel and the Statistical Package for Social Sciences. For an EIS to be effective in informing decision making it must have the qualities as presented in Figure 1.

4. Results

Generally, findings show that out of the 100 environmental impact statements (EIS) reviewed; over 60% were not comprehensive and did not address adequately most of the critical issues for sustainable development. The following sections assess each of the attributes of a good quality EIS.

4.1 EIA and Precautionary Principle

The *precautionary principle* is proposed as a new guideline for environmental decision making (Skriebele et al., 2001). This principle focuses on the issues of cumulative impacts, indirect impacts and long-term impacts. In this study, precautionary issues were not well covered by a high proportion of the EIA reviewed. Only 30%, 30% and 20% of the EIA reviewed, adequately addressed the issues of cumulative impacts, indirect impacts and long-term impacts, respectively, and provided comprehensive mitigation measures and monitoring plans (Table 1). The remaining EIA documents mentioned these attributes partially, without any adequate analysis and synthesis of the precautionary issues. For example, on some occasions, biofuel projects were proposed in areas where there are already traditional irrigation schemes, but the EIS did not point out the likely cumulative impacts of the

proposed biofuel projects on water use. Also a high proportion of the EIA reviewed were weak (70%) in assessing the indirect and long-term impacts of the projects. For example, many EIS (70%) reviewed did not address long-term impacts relating to the end of the project. Furthermore, the EIS reviewed did not really address the issues of taking preventive action in the face of uncertainty, exploring a wide range of alternatives to possibly harmful actions and increasing public participation in decision making, which are critical in an EIA (Skriebel et al., 2000). Such EIS are not useful for informing decision making for the projects.

Table 1. Precautionary principle (%)

Parameter	Assessment	
	Comprehensive	Not comprehensive
Precautionary principle		
Cumulative impacts	30	70
Indirect impacts	30	70
Long-term impacts	20	80

Source Survey data 2013.

4.2 Democratic Principle

The *democratic principle* focuses on public/stakeholder involvement, socio-cultural issues, minority groups' involvement and access to the decision-making process. The *democratic principle* is important for making sure that local issues are incorporated in the EIA and project design. It also helps to win local people's cooperation and acceptance of the project. They feel they are part of the process and that their interests have been taken on board during the planning and implementation of the project. The results from this study show that democratic issues when undertaking EIA were as follows:

4.2.1 Social Impact Assessment (SIA)

SIA assumes a positive role in development planning if it is integrated with economic and natural environmental considerations. However, experience shows that bureaucratic rigidity and disciplinary inertia have been potential barriers to the adoption of SIA (Rickson et al., 2003).

In Tanzania, EIA regulations have provided a "table of contents" for an EIS report and SIA is a chapter in the EIS document. This undermines many important socio-cultural issues. Quite often many EIA studies have not done a good synthesis of social impact issues, especially those relating to culture and rituals. Inadequate coverage of socio-cultural issues also occurs partly because most developing countries have adopted EIA procedures that are linked more to Western Europe and North American models than the socio-economic and institutional conditions in developing nations (Appiah-Opoku, 2001). In this study, only 40% of the 100 EIA report reviewed had held comprehensive public consultations covering adequate socio-cultural issues. The inadequate coverage of social issues was obvious in 60% of the EIA reports, as in many project areas, communities were complaining about the destruction of cultural values, such as burial sites and rituals. EIA must promote the development of values that foster greater social responsibility and have the capacity to increase the importance of long-term environmental considerations when making decisions (Wilkins, 2003). Failure to address socio-cultural issues has been one of the reasons for conflicts relating to FDI.

4.2.2 Consultation with Stakeholders and Consideration of Their Views and Concerns

Most EIS lacked adequate consultation with stakeholders (Table 2). Only 40% of the 100 EIA reports reviewed had adequately involved stakeholders. A high proportion of them (60%) failed to consult a wide range of stakeholders and use different methods to capture their issues and concerns. Inadequate consultation of stakeholders in the EIA process led to the failure to address relevant issues, including those seen important by local communities and groups. A study by Silayo et al. (2008) reported that a village that owns a large share of a forest was not involved in the negotiations, although the people would lose access to the forest, which they greatly depended on for their livelihood. Under World Bank OP 4.12, "*Involuntary Resettlement*", such a project would have considered a Resettlement Action Plan (Silayo et al., 2008). Also about 1000 farmers in the Wami River Basin rice-growing area are currently facing eviction to make way for a sugarcane investment (ABN, 2007). Biofuel projects might also have a negative impact on women and minority groups mainly because of

inadequate consultation of stakeholders. Of the 100 EIS reviewed, only 30% had adequately consulted minority groups such as pastoralists and in-migrants. Stakeholders' participation is also important during decision making but this is hardly practiced in Tanzania (20%). Most decisions regarding projects are made by the developers, NEMC in collaboration with TAC and the government. It is also rare (10%) to find EIA training initiatives for stakeholders, especially where projects are taking place. However, with the increasing number of conflicts in project areas, such as the one between the people of Mtwara Region, the Government and investors in natural gas, providing training and implementing EIA recommendations becomes even more necessary. Findings from this study revealed that the *democratic principle* was found to be weakly applied and quite often the public was effectively excluded from project planning and decision making during project implementation. Involving local communities in the project planning process could address most of these weaknesses observed.

Table 2. Democratic principle (%)

Parameter	Assessment	
	Comprehensive	Not comprehensive
Democratic principle		
Public/stakeholder involvement	40	60
Minority groups	30	70
Public access to decision-making		
Process	20	80
Training	10	90

Source Survey data 2013.

4.3 Polluter-Pays Principle

The *polluter-pays principle* implies reward for environmental improvements and paying for environmental damage (Conway, 1991). The *polluter-pays principle* is especially important for addressing the negative impacts of the project and externalities. It covers issues relating to mitigation measures, monitoring plans and project alternatives. In this regard, the EIA has also to indicate the institution (s) and/or stakeholders responsible for implementing the proposed mitigation measures and monitoring plans. The *polluter-pays principle* is considered during the scoping exercise and further assessed when identifying and predicting the impact. A comprehensive EIA must also consider all possible alternatives and examine their environmental, economic and social ramifications. The alternative chosen must be the one that has minimum impact on the environment but is likely to be about the same or better than other alternatives in terms of its positive impact.

In this study most of the EIA reviewed had not done a good analysis (70%) of the different potential alternatives for the proposed projects (Table 3), nor had they considered adequately potential alternatives for the proposed project. Instead only a few pros and cons were mentioned for the potential alternatives. Some of the EIA reviewed did not even have the “no project” alternative, which is important in the EIA process as it forms the baseline on which impacts of the proposed project can be determined.

Government approval of an EIS is usually combined with different conditions that the project is required to meet (Lekne, 2001). These include mainly mitigation measures and environmental monitoring plans. In this study only 50% and 40% of the EIA reviewed properly covered mitigation measures and environmental monitoring plans, respectively. Nevertheless, there was good coverage of identifying institutions responsible for mitigating and monitoring the impacts. About 70% of the EIA reviewed addressed the issue of which institutions were responsible, while 30% of the EIAs were unsatisfactory (Table 3). These findings tally with those reported in earlier studies. A study by ELAW (2010) found that a river near Bulyanhulu mine in Kahama District had high levels of Zn, Ni and Fe, which were found to exceed the limit recommended by Tanzania Bureau of Standards (TBS) and hence WHO (Nkuli, 2008). Another study by Bitala (2008) in Nyakabale and Tarime found villages adjacent to the Geita and North Mara gold mines, respectively, to have high level of heavy metals than that recommended by TBS and WHO. This was reported to be due to mining waste overflowing the 82-hectare effluent dam into nearby streams. Kahatano et al., (1995) found high levels of Pb, Cu, Zn and Hg in some streams and rivers coming from the Lake Victoria goldfields, suggesting that these metals might be associated with mining activities and industrial discharge (Kishe & Mahiwa, 2001).

Table 3. Polluter-pays principle (%)

Parameter	Assessment	
	Comprehensive	Not comprehensive
Polluter-pays principle		
Consideration of alternatives	30	70
Mitigation measures	50	50
Environmental monitoring plans	40	60
Institutions responsible for mitigation/monitoring	70	30

Source Survey data 2013.

4.4 Benefits Vis-a-vis Cost of FDI

Tanzanians generally observe an imbalance in benefit sharing between citizens and investors. They argue that foreign investors have been given too generous conditions and the vast majority of direct taxes go to the national treasury, while local authorities have little or no tax income from mining (Lange 2006; Newenham-Kahindi 2011). Although there are legal provisions protecting the rights of the people affected in investment areas, they are not followed (Lange, 2011). People are worried that without a strong regulatory framework for managing investments in land and rural development, biofuel production could further exacerbate poverty and food insecurity in Tanzania (Habib-Mintz, 2010). Often, there is a high level of tension in the local communities affected and heightened criticism by them. Examples are the discontent of local communities and workers with companies like Barrick Gold Corp (Newenham-Kahindi, 2011). Knight (2001) reported that livestock died in less than 24 hours after drinking water from a stream near Geita Gold Mine in Tanzania; the deaths were linked to pollution from the mine. Many areas where projects are taking place do not seem to be better off than when there are no projects and the people there pay a high price in terms of the inflated prices of goods and services, which the majority cannot afford, the spread of diseases and the loss of properties. Displacing people to pave the way for project development dismantles productive systems, leading people into impoverishment when production assets or income sources are lost (Downing, 2002). A strategic approach is required to minimize risks and maximize the available benefits (O'Faircheallaigh, 2004).

4.5 Public Awareness and EIA Expertise

4.5.1 Inadequate Public Awareness of EIA for Sustainable Development

Awareness of EIA in Tanzania is still at a low level in rural areas but considerably advanced in urban areas (Table 4). A high proportion of local people are not conversant with EIA and its benefits. From the author's experience as an EIA practitioner, most people are unwilling to pay more than USD 10,000 for undertaking an EIA regardless of the value of the project. Consequently, they have been found using so-called "brief case" EIA consultants, the outcome of which has been weak EIAs that are not useful for informing decision making. Unfortunately, this has not been without cost. Quite often developers are asked by NEMC to repeat the EIA process or provide more information before the EIA could be considered for decision-making purposes. Although, environmental advocacy was found to be growing, it is still new and largely unappreciated by the government (Boyle, 1998).

Table 4. Other important issues

Parameter	Assessment	
	Comprehensive	Not comprehensive
Other important issues		
EIA Public awareness	Low in rural areas and considerable in rural areas	
EIA expertise availability	Inadequate	
Competence in review process and decision making	Satisfactory	

Source Survey data 2013.

4.5.2 Inadequate EIS Expertise

The quality of EIA in Tanzania also suffers from the unavailability of expertise to undertake comprehensive EIA. In addition, there is lack of a policy to guide practitioners on what to look for, how to monitor and determine non-compliance and how to make appropriate responses (WWF, 2008). The findings from this study show that the quality and depth of analysis provided by consultants was highly variable, with some key aspects either not covered or given insufficient attention. Throughout the African region there has been a gap between EIA legislation and practice, especially concerning interdisciplinary analysis of environmental impacts, public participation and utilization of EIA findings for decision-making (Cherp, 2001). Moreover, many of the indicators for sustainable development are not in place in Tanzania. This has led in many cases to frustration on the part of environmental impact assessors, government advisors and the public at large (Katima, 2008). For instance, the EIA carried out in Kilwa for a jatropha project described the intact miombo woodland as degraded, while those parts of the land were found to contain endemic and threatened species (WWF, 2008). Weak EIA also occur due to the limited capacity of the country to have its own natural resource database to give guidance to villagers and developers on which areas to invest in (Katima, 2008).

4.6 Competence in Review and Regulatory Processes

The assessment of the review process was found to be only satisfactory (Table 4) mainly due to insufficient staff, time and financial constraints, which may prevent NEMC staff from ground truthing EIA works. Although NEMC normally undertakes what it calls site verification visits, this is done quickly, with limited time for obtaining detailed information. Lack of adequate ground truthing leads to a lack of data generated independently of the consultants with which to assess certain claims (WWF, 2008). Also quite often decision making in the country has ignored environmental issues in favor of economic gain, regardless of the social and environmental consequences. The competition among developing countries to attract foreign investment has in many cases meant that policies geared at sustainable development are sacrificed for short-term economic gains (Katima, 2008). Sometime decisions are made by manipulating existing policies and laws to favor a certain kind of investment. In Serengeti National Park, one of the World's Heritage sites, a developer was allowed to construct a 180-bed five-star lodge against the General Management Plan (GMP) that stipulates a maximum of 50 beds and allows tented camps only. The GMP was forced to change to allow this development to take place. Also the findings show that most development projects in Tanzania started before their EIA had been approved. This occurs partly due to the lack of coordination of government regulatory agencies and/or their lack of resources. On the other hand, some EIA done are reasonably comprehensive, but the proposed mitigation and monitoring plans are inadequately implemented by the developers. The main argument on the failure to implement adequately mitigation measures by the developers was mentioned to be high cost. However, the fact is that many developers are likely to undermine proper mitigation and monitoring plans of the impacts due to the perceived weak regulation and law enforcement by the responsible authorities in the country. Also although the review process is required to last for 90 days by law, this is hardly achieved. Many EIA review and approval take a year or more. This occurs due to a number of reasons including the limited capacity of human resources as well as the lack of funds and equipment.

5. Discussion

The overall results above suggest that EIA practices in Tanzania have had no significant contribution in informing decision making process with regard to the sustainability of the booming FDI in the country. The results show that most of the reviewed EIA reports as well as the review process by Technical advisory committee (TAC) and regulatory issues fell short of the stated indicators for a good quality EIA. These indicators included precautionary principle (Section 4.2), democratic principle (Section 4.3), polluter-pays principle (Section 4.4), public awareness on the importance of EIA, competence of the EIA expertise (4.6); integration principle and; competence of the review and regulatory authority (Section 4.7).

While a high proportion of the development projects consulted (90%) had undergone the EIA process, most of them had low quality to make an informed decision making. The study found that most of the EIA undertaken in the country were found to be still donor driven. Projects funded by donors, especially those from Western Europe and America (e.g. USAID, DANIDA, NORAD, and DFID), as well multilateral organizations such the World Bank require EIA to be undertaken before a project is fully funded. Unfortunately, a high proportion of Tanzanians still see EIA as an unnecessary condition and an unwarranted additional cost for the developer (Mwalyosi & Hughes, 1998). However, because of the legal requirement (EMA, 2004), most developers tend to look for cheap bids to fulfill the obligation, but unfortunately these results in poor quality EIA work. Many people, including some high profile government officials in the country, undermine EIA mainly because of

ignorance. They are not conversant with the importance of EIA as a decision-aiding tool, leading to sustainable development. Failure of EIA to adequately inform decision making process has led to a situation where FDI have raised conflicts over resource use between local communities and investors and the contribution of FDI to the national economy has been unimpressive e.g. minerals. Also in developing countries like Tanzania, conflicting policies, extreme poverty and ignorance affect the EIA process. Because of poverty and ignorance, people especially in rural areas accept even detrimental projects for short-term gains such as employment and market access for farm products. There is also the issue of conflicting policies. For example, the Ministry of Agriculture and Livestock Policy (1997) advocates the need to increase agricultural productivity through promoting irrigation agriculture. The Ministry's Irrigation Master Plan has identified areas with potential for irrigation. Unfortunately, some of these areas are also ecologically sensitive, such as wetlands, rivers and lakes. Implementing such a Master Plan will create conflicts between those involved in conservation and users of the resource. It is also threatening sustainable development. Nevertheless, the government is commended for undertaking a strategic environmental assessment study before this Master Plan could be implemented.

Generally, there has been low appreciation of the booming FDI by the majority of the Tanzanians and this is mainly due to the fact that FDI lacks the sustainability attributes which is built in three pillars of social, economic and environment equitability. It seems the weak of EIA in informing decision making applies to many countries in sub-Saharan Africa. Kakone and Imevbore (1993) report that African countries fail to benefit from EIA due to such problems as inadequate environmental legislation; inappropriate institutional framework for coordinating and monitoring government activities; a shortage of qualified manpower, inadequate financial resources; absence of public awareness of the need for EIA and lack of suitable screening procedures to determine which development projects require an EIA. Infield and Namara (2001) also report similar findings in their study in Uganda's national parks. On the other hand, Appiah-Opoku (2001) blames African countries for adopting EIA procedures that have more linkage with Western European and North American models than with the socio-economic and institutional conditions in developing nations. Citing specifically on the weaknesses related to social impact assessment (SIA) in South Africa, du Pisani and Sandham (2006) argue that the practice of SIA in South Africa is not yet on a sound footing, and that it does not receive the professional attention it deserves in a country beset by enormous social challenges. In order for FDI to have positive impacts and sustainable development in Africa and Tanzania in particular, the observed weaknesses must be addressed.

6. Conclusions and Recommendations

The booming of FDI in Tanzania creates both hope and fear. If run properly, FDI are likely to benefit the nation in terms of forex generation, employment creation, market access, government revenue, technology transfer and income generation by rural communities. The opposite of this is that poor implementation of FDI is likely to create food insecurity, resource-use conflicts, degradation of biodiversity and generally unsustainable development.

Generally, this study found that the influence of EIA in FDI decision making has been weak and more efforts need to be undertaken. A high proportion of EIA reviewed have failed to capture issues of polluter pays principle, democratic principle, integrative principle and precautionary principle. There is also generally low public awareness on the importance of EIA, competence of the EIA expertise as well as competence of the review and regulatory authorities. Developers are also failing to adequately implementing EIA mitigation and monitoring plans due to avoiding costs and this is done partly because of the perceived weaknesses in the regulatory and enforcement systems.

It is recommended that the government, in collaboration with other stakeholders, should build the capacity of EIA practitioners, reviewers and law enforcers to make the EIA principles of precautionary, democratic, integrative and polluter pays principle applied adequately in the EIA process. EIA process should include leaders of local society and direct affected communities in FDI decision making, implementation and monitoring. Furthermore, decision making should base on EIA and other policies that support sustainable development and, EIA practices must take into consideration the three pillars of sustainable development, i.e. the economy, social and the environment to create a *win-win* situation. Monitoring and enforcement of the approved EIA mitigation and monitoring plans should be strengthened by the responsible authorities. Environmental auditing should also be carried out after every two years to determine the performance of the predicted impacts and act promptly for unanticipated outcomes. The establishment of Environmental Units in each of the Ministries and Government Agencies as one of the legal requirements is commendable. However, to make them effective there should be capacity building and these activities should have its own budget for implementation.

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Notes

Note 1. This includes social and economic monitoring.

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