

National Environmental Impact Assessment and Challenges: Scoping Review in Ethiopia Context

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ABSTRACT

Introduction: Economic development can have major impacts on the environment by degrading soils, polluting bodies of water, altering landscapes and threatening biodiversity, in some cases driving species into extinction. Under this circumstances, Environmental impact assessment (EIA) has emerged in Ethiopia in the last five decades as one of the primary management tools for protecting the environment as well as social from the environmental threats and impacts.

Objective: The aim of this review was to provide general information on national Environmental Impact Assessment (EIA), its methodological approach and challenges.

Methods: Narrative information were found using the EndNote online search tool, Google, Google Scholar, PubMed, Medline, Embase, and Global Health electronic databases, government web sites and reports. The current EIA approaches, Policy frame work, proclamation and Gaps and Challenges of EIA implementation at national spectrum were reviewed under the scope of the review.

Result: A total of 42 studies/ reports/grey documents were identified from government web sites(n=3), National proclamation (n=7), Reports (n=6), International Initiatives (n=3), Google Scholar (n=4), PubMed (n=4), Medline (n=3), Embase (n=3), Google (n=6) and Global Health (n=3). Finally, ten documents were considered for the narrative of this scoping review. The review revealed that development programs and projects in the country are not conducted according to EIA compliance, which have the impact on both environment and social. The review also found that there were challenges for implementation of EIA across the countries due to lack of inherent evaluation mechanisms, quantifying impact and attribution gap, lack of awareness, absence of effective mechanisms for process, lack of incentives, problems of capacity, weak political commitment, and weak public participation.

Conclusion: Ethiopian Constitution provides a strong constitutional foundation for the introduction of EIA but lack of follow-up about effective implementation of the EIA system. The review advises that the right of citizens to live in a healthy and clean environment and the right to be consulted and to express their views on the planning and implementation of plans, programs, strategies, policies and projects that affect them. The review also recommends that every of project owner should aware about the interactions of development, environment and sustainability while we plan any project within the country.

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Abbreviations

EIA: Environmental Impact Assessment

EPA: Environmental Protection Authority

EISR: Environmental Impact Study Report

MoARD: Ministry of Agriculture and Rural Development

SIA: Social Impact Assessment

SNNPRS: South Nation and National and peoples Regional States

MoWR: Ministry of Water Resources

WRB: Water Resources Bureau

Introduction

Economic development can have major impacts on the environment by degrading soils, polluting bodies of water, altering

landscapes and threatening biodiversity, in some cases driving species into extinction. In turn, environmental impacts can impose significant economic and social costs on society, especially with regard to human health. As the result, Environmental impact assessment (EIA) has emerged in the last five decades as one of the primary management tools for protecting the environment. However, despite substantial theoretical development and practical experience, there are concerns that EA is not meeting its objectives of protecting the environment and ensuring sustainability [1-3]. However, EIA can predict development's negative effects and reveal strategies to avoid and mitigate them, and EIA can also point to possibilities to enhance the positive effects of development activities [4].

According to UNEP reports, EIA arose in response to the pollution and the unnecessary degradation of natural resources

caused by rapid and unsustainable industrialization, agricultural development, and technological progress. EIA recognizes that natural resources are finite and incapable of absorbing the unchecked demands of modern society [4]. EIA assesses the impacts of proposed initiatives before work on the initiatives begins. EIA is a formal study process and is used to predict the environmental consequences of a proposed major development project. As UNEP [4], the main reasons for conducting EIA are: 1) To provide effective means of harmonizing and integrating environmental, economic, cultural and social considerations into a decision-making process in a manner that promotes sustainable development — prior to approval of a project or a public instrument; 2) To bring about administrative transparency and accountability, as well as to involve the public and, in particular, communities in the planning of and decision-making on development which may affect them and their environment; 3) To ensure the respect of the constitutionally guaranteed right of the people to live in a clean and healthy environment; 4) To ensure that potential problems are foreseen and addressed at an early stage in the project's planning and design.

Environmental impact assessment (EIA) is a recent phenomenon in Ethiopia. It became a legally required procedure toward the end of year 2002, though emerged de facto before 2002 when a few land developers, including state-owned agencies, approached the Environmental Protection Authority (EPA) to have their environmental impact studies reviewed. Since the Environmental Impact Assessment Proclamation № 299 of 2002 was adopted by the House of Peoples' Representatives, some efforts have been made to implement the law by the EPA and the relevant regional environmental organs, which were themselves established by Proclamation № 295 of 2002 [5]. In spite of these efforts, EIA in Ethiopia has until now remained weak. Though five years have elapsed since the adoption of the EIA law in Ethiopia, the practice is still in its infantile stage, owing to a number of interacting factors that have slowed progress. This short study tries to identify the problems preventing the full realization of the EIA Proclamation in Ethiopia and to recommend some solutions. The study is based on key informant interviews and an extensive review of academic and grey literature and official documents, especially those available at the Federal EPA's office [6].

In Ethiopia, there is now an urgent need for the development of effective EIA. As casual observation suggests and studies confirm, the environment is not featured highly on the development agenda; the major preoccupation in project evaluation has been with short term technical feasibility and economic benefits. Many development practices have not anticipated, eliminated or mitigated potential environmental problems early in the planning process. This has resulted in a seriously degraded natural environment. For instance, according to a survey of 118 industrial establishments in Addis Ababa, waste containing hazardous pollutants has been discharged into all-purpose streams, water bodies and the air [6].

A survey conducted by the Environmental Protection Authority (EPA) also revealed that most factories located in Addis Ababa do not have any way of treating waste. Evident environmental illnesses in urban centers, especially in Addis Ababa, are the manifestations of the growing challenges [7]. Another study conducted by the EPA revealed that privately-owned Ethio Coffee and Tea Development and Marketing PLC established the Gemadro Coffee Plantation Project* without going through any EIA process, even using land that was not allocated to it [5]. Such actions can have devastating impacts unless they are subject to the EIA process. EIA must not be seen as merely an additional bureaucratic burden when a number

of studies and policy documents attest that the environmental condition of the country is alarming. The overall objective of this study is to critically and qualitatively assess the implementation of that proclamation, considering the level of public participation and the adequacy and effectiveness of legally established laws in the EIA process [8]. Even though these efforts were limited to the irrigation sector and narrow in scope, and despite that they were donor-driven, they have nonetheless contributed to the emergence of the system of EIA that exists in the country at present. But the system should fulfill the compliance of methods, participation right and resource capacity (Details are attached through the paragraphs as Supplementary reading (Sup. Reading)

Methods

Study Eligibility Criteria

STT, MM and BMA contributed on identification of articles using the following study eligibility criteria. Published article reports or grey document were included from emerging of occupational injuries concepts up to 2023. The outcome review limited to occupational related injuries those studies published in English Language. Studies published with non-English languages and those haven't clear objective and methodology, studies excluded

Searched Databases

STT, MM and BMA contributed on searching article from the following data bases. The published studies were found using the EndNote online search tool, Google, Google Scholar, PubMed, Medline, Embase, and Global Health electronic databases, among other Government web sites and reports.

Searched Strategies

STT, MM and BMA contributed on searching article using the following strategies. The keywords and MeSH phrases combined with the Boolean logic operators (AND, OR): [Environmental and Impact Assessment AND Ethiopia.

Data Screening

STT, MM and BMA screened data from different source mentioned above. Microsoft Excel was used to filter the titles and abstracts that the search yielded, and complete copies of the titles and abstracts were acquired. Finally, EndNote 20.4.1 and Zotero were used to manage and remove the references.

Data Extraction and Collection Process

STT, MM and BMA contributed on data extraction tasks. A Microsoft Excel spreadsheet was used to create the required extraction form, which was used to extract the data.

Data Synthesis

STT, MM and BMA contributed on data synthesis. The type of injuries, their cost, the compensation for common parts of wounded bodies and their causes, and the connected factors of injuries were all considered while tabulating, describing, and synthesizing data from published studies, reported data, or data retrieved via government links or web pages.

Results

Review Articles

A total of 42 studies/ reports/grey documents were identified from Google Scholar (n=4), PubMed (n=4), Medline (n=3), Embase (n=3), Google (n=6), Global Health (n=3), Government web sites (n=3), International Initiatives (n=3), National proclamation (n=7) and Reports (n=6). Finally, ten documents were considered for the narrative of this scoping review (Figure 1).

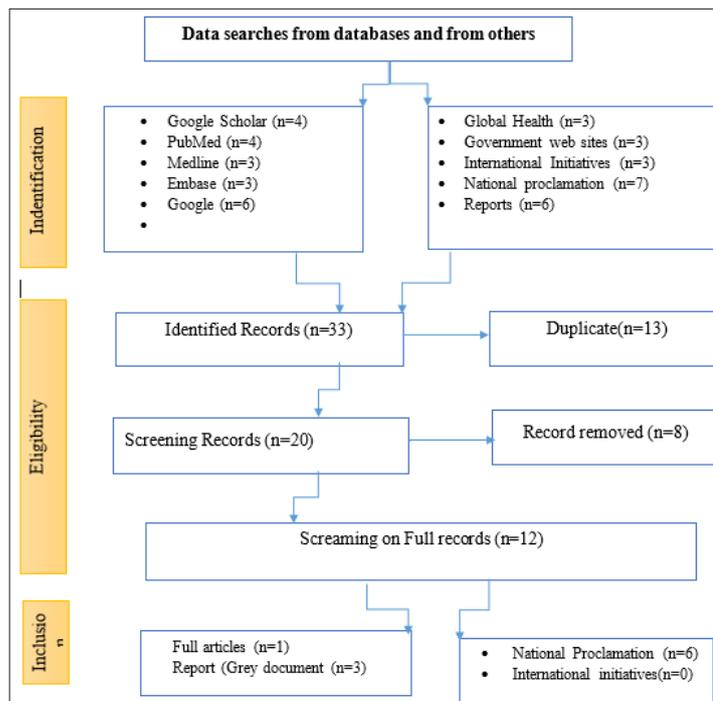


Figure 1: Flow Diagram for Systematic Reviews Adopted from Preferred Reporting Items for Systematic Reviews, 2024.

Ethiopia EIA Methodological Approaches

Alike of other countries, Ethiopia EIA Methodological approaches followed four principal components, which has their own sub-categories. These are Project Phase I (Initiative and Scoping), Phase II in EIA (Specialist study), phase III (Report of EIA) and Phase IV (Environmental Management Plan (EMP))

Policy Framework for EIA in Ethiopia

The overall objective of the environmental policy is to promote the sustainable social and economic development of the country through, inter alia, sustainable management and utilization of the natural resources of the country. Among the specific objectives the environmental policy seeks to achieve are ensuring the conservation, development and sustainable use of essential ecological processes and life support systems, biological diversity and renewable natural resources; and the empowerment and participation of the people in environmental management. It provides for the enactment of a law which requires that an appropriate EIA and environmental audits be undertaken on private and state development projects; and the development of detailed technical guidelines that direct the undertaking of EIA and environmental audits in the various sectors. It also provides for the establishment of an institutional arrangement responsible for undertaking, coordinating and approving EIA and the subsequent environmental audits.

Proclamation with Legal Framework

According to national document review, the legal Framework for EIA in Ethiopia included The FDRE Constitution, Environmental impact assessment law, Sectorial Laws Relevant to EIA (such as: Business law, Investment law, Land law, Fishery law, Wildlife law, Water law, Mining law, Genetic resource law), the Institutional Framework of EIA (i.e. Environmental protection organs and Sectorial institutions relevant to EIA).

Gaps and Challenges of EIA

In Ethiopia, there were challenges of EIA implementation across the national level includes EIA systems lack inherent evaluation

mechanisms, quantifying impact, lack of awareness, problems of capacity, effective mechanisms, lack of incentives, political commitment and weak public participation.

Discussion

The review found that until 1997, Ethiopia did not have a comprehensive environment policy as such. However, the Environmental Policy of Ethiopia was issued in 1997 to provide overall guidance in the conservation and sustainable utilization of the country’s environmental resources in general. According to the review, prior to becoming a legal requirement in 2002, the application of EIA in Ethiopia was introduced by a few sectors. The practice of contemplating environmental and health impacts was introduced as early as 1980 into water resources development projects assisted by UNDP/WHO, though the main focus was limited to water-related and water-based health problems [9].

The 1995 Constitution of the Federal Democratic Republic of Ethiopia contains provisions that support the enactment of EIA legislation. It stipulates that the design and implementation of development programs and projects in the country should not damage or destroy the environment; and recognizes the right of the people to be consulted and express their views on the planning and implementation of environmental policies and projects that affect them (Art. 92) including relocation with adequate state assistance. Following the provisions of the environment policy, the Ethiopian government introduced the EIA Proclamation [10]. With regard to development projects, the proclamation stipulates that no person shall commence implementation of a proposed project identified by directive as requiring EIA without first passing through EIA process and obtaining authorization from the competent environmental agency and fulfillment will be carried out the terms and conditions of the EIA authorization given (Art. 7).

Furthermore, sectorial laws relevant to EIA the other laws keep EIA implementations are included the business law, investment law and land law are the most laws in the country. In addition to these,

wildlife law, water law and mining law, and genetic resource law are the other common type of laws support EIA implementation. Of these, “Business Law” aimed on the licensing and operation of business activities in the country at present are regulated by the Trade Registration and Business Licensing Proclamation [10]. While, “Investment Law” is an expenditure of capital by private individuals to establish a new business or to expand or upgrade a business that already exists, which is detailed in the Investment Proclamation № 280 of 2002 (as amended by Proclamation № 375/2003). Regarding the utilization of land for investment, Ethiopia’s 1995 Constitution provides for the right of investors to obtain land for investment purpose on lease in accordance with conditions to be specified by subsidiary laws. In line with this, it recognizes the right of investors to obtain and use rural land, provided that priority is given to peasants and pastoralists including rural land administration and use proclamation [11].

On the other hands, “Fishery Law”, has been ratified fishery legislation with a view to ensure the conservation, development and utilization of fishery resources in the country, which details under [11]. This proclamation stipulates that federal or regional organs should ensure that development programs and projects will not have a negative impact on the fishery resources of a basin. Besides, “Wildlife Law” is the other one where the management and utilization of wildlife resources in the country was regulated, until recently, by the wildlife legislation issued in 1980, which remained unchanged in spite of the new trends in wildlife management [11]. “Water Law” is also regulated by the 2000 Water Resources Proclamation and the 2005 water resources regulation [11]. It aims on the conservation, utilization and development of water resources in the country should keep without endanger it. Also, “Mining Law” aimed to the Mining Proclamation and the Mining Operations Regulation regulate the mining of mineral resources in the country [11]. In this respect, the mining laws determine the rules on the utilization of water and timber resources in a mining area. The final law is “Genetic Resource Law”, which aimed on the convention on biological diversity, the government of Ethiopia enacted legislation which provides for community rights and access to genetic resources and traditional knowledge [11].

Regarding the Institutional Framework of EIA, the current system of government in Ethiopia is organized into a federal structure, comprised of a federal government and regional states. Government administration of EIA in Ethiopia is thus shared between the federal government and regional states. Accordingly, the most important EIA implementations are Environmental protection organs, where it established the institutions responsible for regulation of EIA; these include Environmental protection authority, which is responsible for developing a directive that identifies categories of projects likely to have negative impact and thus require EIA, and for issuing guidelines that direct the preparation and evaluation of EIA study reports [12].

Regional environmental agencies can establish or designate their own regional environmental agencies for the Environmental Protection Organs, that stated under Establishment Proclamation [12]. Sectorial environmental units, which are mandated to be established at every competent agency with the responsibility of coordinating and following up activities in harmony with environmental protection laws and requirements (article 14), stated under [12]. However, sectorial environmental units have not been established as yet in most of the relevant federal institutions, except at the Ethiopian Roads Authority, Ethiopian Electric Power Corporation and the Ministry of Water Resource [9].

Sectorial institutions relevant to EIA included licensing institutions Ministry/Bureau of Trade and Industry, Ministry/Agency of Mines and Energy, Natural resources management institutions Ministry/Bureau of Agriculture and Rural Development, The Ministry of Agriculture and Rural Development (MoARD) has both development and natural resource management responsibilities [12]. The Ministry of Water Resources (MoWR) is the lead federal institution responsible for the conservation, utilization and development of water resources in the country (Proclamation No 4/95). The Water Resources Bureau (WRB) is a regional institution responsible for the management and use of water resources [12]. Financial institutions: Financial institutions should also incorporate EIA into their procedures. By incorporating EIA authorization into their loan policies, financial institutions can help ensure that development projects comply with the EIA requirement.

Regarding national challenges of EIA implementation, lack inherent evaluation mechanisms for EIA systems, quantifying impact and attribution gaps are the most common, which are also common in Ethiopia [13]. Others like Lack of Awareness also known, where very little is known about EIA in Ethiopia. One of the reasons for such low level of knowledge about EIA is that the lawmaking process has not been participatory. Local communities who can be directly affected by a development project have never been consulted during the lawmaking process that finally resulted in Proclamation № 299/2002 [9]. The other challenge is problems of capacity_ is best seen from the perspective of consultants and of the EPA itself. Consultants are very important actors in the EIA process as they are the ones who are preparing EISR on behalf of the applicant [9,14]. Besides, absence of effective mechanisms_ In the absence of an effective EIA process, it would be not possible to guide the development initiatives in the direction that they shall operate without causing serious damage to the environment [9]. Lack of Incentives_ the EIA Proclamation provides for incentives to be available for project owners. As Article 16 Incentives: 1) The Authority (EPA) or the relevant regional environmental agency shall, within the capacity available to it. 2) Without prejudice to Sub-article (1) of this Article, the Authority may, to the extent that its capacity allows, provide any environmental rehabilitation or pollution prevention, also cleanup project with financial and technical support [9]. In addition, weak Political Commitment_ it has been repeatedly mentioned that EIA is a tool to achieve sustainable development. The Ethiopian government now is highly involved in activities with the intent to alleviate poverty as soon as possible. The final one is Weak Public Participation_ It done during the making of the EISR and during the review process of EISR, however, it is very weak. Some project owners list the names of a few individuals – together with their signatures or thumb marks – as those who have participated in the EISR. As examination of some documents reveal that the participants’ names are predominantly of male, and the documents leave doubt that those who signed with their thumb marks, who are presumably illiterate, actually participated.

Conclusion

Many development initiatives and investment projects are causing huge damage to the forest and wildlife resources of the country indicates the absence of effective EIA process. Thus, EIA is a formal study process and is used to predict the environmental consequences of a proposed major development project. The main reasons for conducting EIA are to provide effective means of harmonizing and integrating environmental, economic, cultural and social considerations into a decision-making process with administrative transparency and accountability to ensure the

respect of the constitutionally guaranteed right of the people to live in a clean and healthy environment. Under this circumstances, Ethiopian Constitution provides a strong constitutional foundation for the introduction of EIA but lack of follow-up about effective implementation of the EIA system. There are various gaps and challenges that hinder the effective enforcement of EIA.

Therefore, based on the review analysis, the authors advised all development initiatives and projects designated to pass through the EIA process must be obliged to do so through various mechanisms of opening discussion forums with proponents (both private and government) to raise awareness on the importance of EIA. The finding ways to impose EIA as a condition for access to credit, business licenses, access to market and getting land for the operation of the project or the initiative; establishing the public interest litigation in relation to the EIA system; insurance schemes must exist to cover the environmental liability held by development programs and projects should be implemented. In addition, strictly applying both the EIA law and the Criminal Code to punish those who do not submit their EISR to EPA. Furthermore, the constitutionally guaranteed rights of the people to participate and be consulted in any development activity that could affect them must be realized in its full sense, both during the preparation of the EISR and the review process [15,16].

Declaration

Ethics Approval and Consent to Participate
Not applicable

Consent for Publication

Not applicable

Competing Interests

Not applicable

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