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Review Article

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# A critical review of environmental assessment legislation in the Democratic Republic of the Congo

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**Abstract**

**Background:** Many countries undertake development activities that utilize resources from the environment. In the Democratic Republic of the Congo (DRC), the Congolese Environmental Agency is supervised by the Ministry of Environment and Sustainable Development to undertake an environmental assessment of all projects that pose risks to the environment. The present study conducted a critical review of the country's existing environmental assessment legislation, identifying strengths and weaknesses in the Environmental and Social Impact Assessment (ESIA) system.

**Methods:** A literature survey was done in the Google Scholar, Taylor & Francis, and Elsevier databases, which were also guided by the PRISMA. All full-text articles included in the study were written or translated (using online translation software) into the English language, and also, reported on environmental impact assessment as well as legislation. A textual examination of the included literature was done. A set of adapted analytical criteria was used to critically review the ESIA system in the DRC. The results were discussed, and recommendations were given.

**Results:** It was found that the decree was not effective and efficient for the ESIA study. Some of the key limitations of the ESIA decree included the lack of scoping in the entire ESIA process, alternatives that were limited in scope, fees and charges that were not explicitly stated in the legislation, and the lack of public participation at some stages.

**Conclusion:** The ESIA system in the DRC is ineffective and needs revision to improve its effectiveness.

**Keywords:** Environmental impact, Social impact, Legislation, Environment, Democratic Republic of the Congo

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## Introduction

The National Environmental Policy Act (NEPA) of 1969 established environmental impact assessment (EIA) in the United States of America (1), and the Act served as a foundation for the EIA legislation in many countries that later implemented their own EIA processes (2). When compared to other environmental protection systems, its emphasis is on "prevention". The United Nations Environment Programme (UNEP) has proposed that EIA be incorporated into the design and implementation of projects in any country concerned with environmental management (3). Several international bodies such as the Organization for Economic Cooperation and Development and the World Bank have engaged in EIA (4,5). Furthermore, UNEP recommended EIA mechanisms to member countries, issued guidance on EIA in developing countries, and instituted goals and principles for EIA (6). The historic Earth Summit also stated in Principle 17 of the Rio Declaration that EIA, as a national tool, shall be applied to all undertakings likely to negatively affect the environment, with a national authority responsible for its implementation (7).

During the project planning stage, ESIA is a useful tool because it enables project proponents to evaluate the environmental impacts of their projects. It investigates, analyses, and evaluates proposed projects in the hopes of ensuring environmentally sound and long-term development (2). The outcomes of this assessment aid in the development of Environmental and Social Management Plans (ESMPs) for mitigating those effects (8). The EIA employs a holistic, systematic, and multi-sectoral way of assessing the impacts of development activities on the environment (9), and its outcome is usually an official document widely known as an Environmental Impact Statement (EIS) (10). The implementation of EIA policies and programs has been difficult and has not produced all

of the expected results due to the late application of the processes. Also, project advocates are preoccupied with meeting administrative requirements. Resources have not been invested in a systematic investigation of what the EIA has achieved (11). During the mid-1970s, many developing countries enacted EIA mechanisms, which vary from one country to the next, but the performance of the EIA in developed countries falls far beyond that of developing countries (12). The EIA mechanisms in most developing countries are in their initial stages of appraisal to determine their effectiveness since the EIA's emergence in 1969. Mostly, when EIA results in ameliorated protection of the environment, enhanced decision-making, and the attainment of sustainable development, it is termed "effective" (13). Until Decree No. 14/019 of August 2, 2014, the DRC's legislation had no provisions on the activities that needed to be subject to ESIA and lacked technical details on the ESIA development. Before the evolution of ESIA, many projects were implemented based on technical feasibility with no consideration of environmental consequences (14). In July 2002, the DRC's Mining Code noted an initial step toward the creation of a regulatory framework for the environment. The Mining Regulation of 2003 followed and required that the EIA system be applied to mining exploration and development projects while promoting public inquiry and consultation in the EIA process. The DR Congo government passed the Environmental Framework Law, which established fundamental principles for environmental management and protection, in July 2011. However, there was no practical guidance on project types, specific environmental standards, or information on the ESIA development and validation in the law. Therefore, on August 2, 2014, Decree No. 14/019, which established the rules for the functioning of environmental protection processes, was enacted. This decree was adopted to clearly establish the rules of the various environmental protection systems enumerated in Law No. 11/009 of July 9, 2011, on fundamental environmental principles applicable in the DRC. The limited ESIA regulation presented a great challenge to project initiation and completion, which ultimately affects the projects' success (15).

Therefore, this paper critically analysed the ESIA legislation in the DRC using integrated evaluative criteria to achieve results that will help revamp the existing legislation.

## Materials and Methods

Google Scholar, Taylor & Francis, and Elsevier databases were searched for all related studies from October 1, 2022, to October 21, 2022, using Medical Subject Heading (MeSH) terms such as [(environment impact) or (social impact) AND (legislation) or (laws) or (regulation) AND (environment) AND (Democratic Republic of the Congo)]. The PRISMA guideline (16) guided the study selection.

### *Inclusion and exclusion criteria*

*Inclusion criteria*: All full-text articles in the study were written or translated (using DeepL Translate software) into English language, and also, reported on EIA as well as legislation on ESIA in the DRC and books. The full texts were evaluated by authors before inclusion.

*Exclusion criteria:* Duplicated articles, unrelated articles, only abstracts, and articles unable to be completely translated into English language after a literature survey were excluded.

With article abstraction, three stages were involved (identification, eligibility, and screening). 556 articles were identified in the identification stage. In the eligibility phase, 45 duplicate articles and 214 unrelated articles were excluded. 297 full texts were screened, and lastly, 22 articles met the inclusion criteria. Figure 1 depicts the PRISMA flowchart (17) for study selection. A textual examination of 22 pieces of relevant literature was performed. The related key DRC legal and regulatory frameworks, were the 2006 Democratic Republic of the Congo Constitution, the Environmental Protection Act, Law No. 11/009 of July 9, 2011, and Decree No. 14/019 of August 2, 2014. These key documents contained information on environmental protection and the DRC's ESIA system. A set of adapted analytical criteria (Table 1) was used to critically review the ESIA system in the Democratic Republic of the Congo. The results were discussed, and recommendations were given.

## Results

556 articles were obtained after a literature survey in three databases (Google Scholar, Taylor & Francis, and Elsevier). Excluding articles that did not meet the criteria resulted in only 22 articles being finally included in the study (Figure 1).

The analytical standards exposed strengths and limitations of the DRC's ESIA process. The ESIA process in DRC is shown in the below Figure 2. The DRC has a legal framework that makes it possible to undertake ESIA procedurally. When a state, province, decentralized territorial body, public or private natural person or legal entity takes any action, the ESIA study is applied to all of that activity, and that action is screened for environmental significance.

A list of sectors and economic activities in the DRC that require an ESIA was also found (Table 2) in the regulatory framework.

The legislation's strengths include accreditation of ESIA consultants by the Minister with environmental credentials and a public hearing before the crucial decision regarding whether or not to move forward with the proposal in the ESIA process. The weaknesses of the ESIA system that render it inefficient and ineffective include the lack of a scoping stage, the lack of specific and detailed costing of the ESIA study, the lack of detailed and

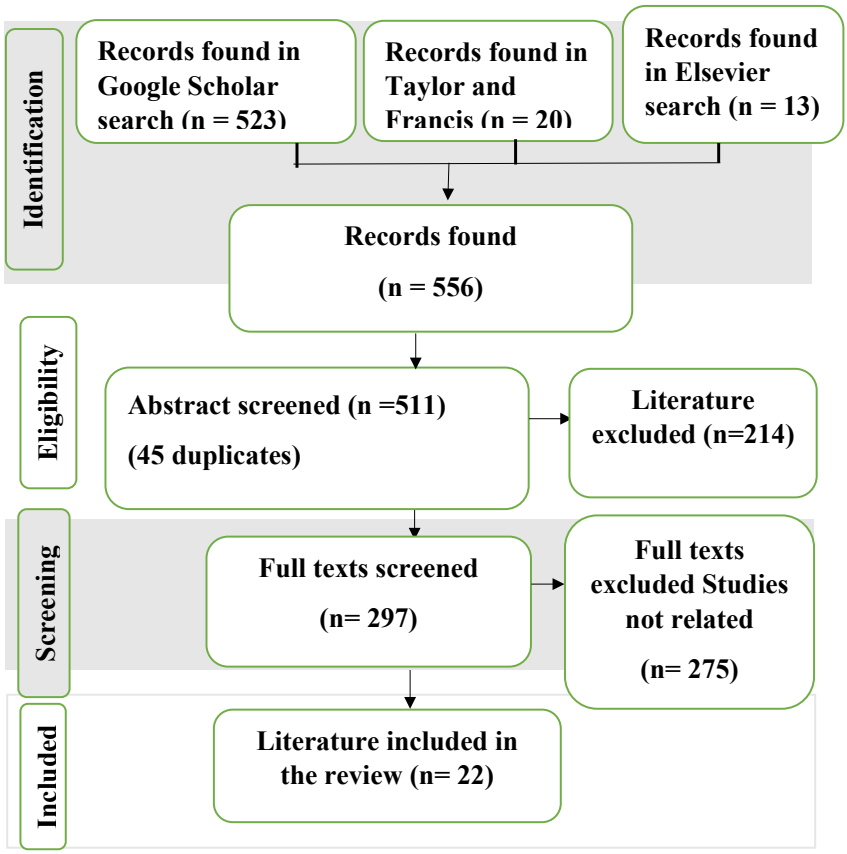


**Figure 1.** Flow chart for study selection using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) (16)

**Table 1.** Criteria for EIA system analysis

| No. | Criteria |
|---|---|
| 1 | Is the EIA system based on clear-cut legal rules and regulations? |
| 2 | Is it necessary to assess the environmental impacts of all significant actions? |
| 3 | Must there be proof that the proponent considered the environmental effects of feasible alternative measures during the EIA process? |
| 4 | Must actions be screened for environmental significance? |
| 5 | Is it necessary to conduct a scoping of the environmental impacts of actions and develop specific guidelines? |
| 6 | Do EIA reports have to meet prescribed content requirements, and are there checks in place to prevent the release of insufficient EIA reports? |
| 7 | Must EIA reports be made public and the proponent respond to the criticisms? |
| 8 | Is it essential that the EIA report and review's conclusions serve as the primary deciding factor in the decision to take action? |
| 9 | Is it necessary to conduct monitoring of action impacts, and is it linked to earlier stages of the EIA process? |
| 10 | At what points in the EIA process should the mitigation of action impacts be taken into account? |
| 11 | Before and after an EIA report is published, must there be consultation and participation? |
| 12 | Is it necessary to keep an eye on the EIA system and, if necessary, make changes to it to reflect experience-based feedback? |
| 13 | Are the participants in the EIA system satisfied with the time and money commitments required, and do they believe the environmental benefits justify these costs? |

Source: (17).

extensive alternatives, the absence of public participation at some stages of the ESIA study, the absence of the content of the manual of operations and procedures for carrying out the ESIA in the appendix to the legislation, and the absence of any provision indicating which actions should be evaluated using which criteria. The rising level of political influence on ESIA decision-making remains a great threat because it gives room for subjective, partial, imbalanced, and unfair treatment, resulting in an incredible ESIA process and its subsequent reflection on environmental impacts when activities are executed.

## Discussion

A summary of key legal and regulatory frameworks, a

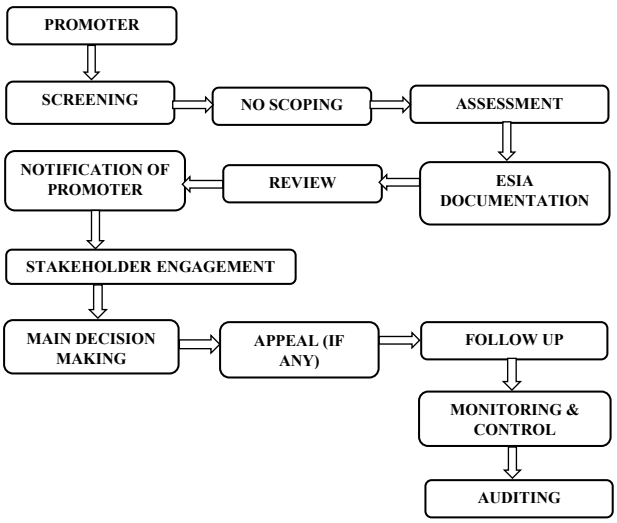


**Figure 2.** System for the ESIA in the Democratic Republic of the Congo

critical analysis of the ESIA system in the DRC, and key recommendations are discussed below.

### *August 2, 2014, Decree No. 14/019*

Chapter three of Law No. 11/009 of July 9, 2011, adopts a procedural system that needs to be implemented by all operators of facilities or projects, and the reason for this decree is to set forth the operating rules of the varying procedural mechanisms for environmental protection. Decree No. 14/019 of 2014 sets out the procedural requirements for the ESIA and pronounces that infrastructural projects, industrial, commercial, agricultural projects, forestry, mining, cement, telecommunications development, and hydrocarbon projects are all likely to undergo the ESIA. The twenty-page document contains six titles and an annex. Titles I, II, and III expand on the general provisions, strategic environmental assessment, and ESIA. Audit, public consultation, and final provisions are also expanded on from titles IV to VI, respectively. The annex to this decree provides a list of undertakings, for which an ESIA report must be turned in with a management plan (18).

### *Constitution of the Democratic Republic of the Congo, 2006*

The eighty-page document was adopted in 2006 and modified in 2011 as the highest law and norm in the DR Congo. The constitution has eight titles, including general provisions, human rights, fundamental freedoms and duties of citizens, organization and exercise of power, economic and social council, democracy support institutions, international treaties and agreements, constitutional revision, and finally, transitional and final provisions. Some of these titles are subdivided into chapters, sections, and paragraphs. Within the constitution, there are some provisions relating to environmental rights and protection. Section 53 of Chapter Three under Title Two indicates that all citizens have the right to have a healthy environment that supports their development, and therefore, there is a need for environmental protection. The state is obliged to ensure a safe and healthy population through the environment. Furthermore, the constitution establishes the essential principles concerning tourism and environmental protection under Title 3, Chapter 1, paragraph 5, Section 123. Protection and conservation of the environment and natural resources are also supported by provisions in Section 203, number 18 of the Constitution on Page 69. Section 150 warrants the fundamental rights and freedoms of citizens as the judiciary defends the rule of law. The environmental provisions are meant to affect healthy populations and development (19).

### *The Environmental Protection Act, Law No. 11/009 of July 9, 2011*

This law was enacted by Joseph Kabila Kabange, the former President of the DR Congo, in accordance with Section 123 of the constitution. It has 32 pages, including the title page, and documents the fundamental principles of environmental protection, as well as promoting the prudent and just use and management of the country's natural resources. With the implementation of this law, a healthy population and environment are also expected. The document has nine chapters covering the general provisions, institutional framework, procedural mechanisms, funding, natural resource conservation, risk and pollution abstention, civil liability, offenses, and their sanctions, with chapter nine covering the final, transitional, and repealing provisions. Chapter three of this law adopts procedural systems that need to be implemented by all operators of facilities or projects. It includes policy and program environmental assessments, environmental and social impact assessments, auditing, and public consultation or inquiry. All of these mechanisms are in place to ensure sound environmental management and protection before, during, and after the operation of activities that may have a negative environmental impact. Sections 21 and 22 of this law are specific to the ESIA; they declare the study as the property of the DR Congo and subject projects to its mechanisms, content, terms of approval, and method of public consultation. The Congolese Environmental Agency is in charge of evaluating, approving, and monitoring the implementation of an environmental impact study. Sections 72 and 73, once again, spell out the penalties that will be imposed on anyone who refuses to conduct an environmental and social impact study on a project required by this law. The penalty includes the payment of a fine and/or the demolition of the work concerning the provisions made in Article 86 of this law (20).

### *Critical analysis of the ESIA system in the DRC*

The analysis of the ESIA system provides an understanding

**Table 2.** The list of sectors and economic activities in the DRC that require an environmental and social impact assessment

| Sector | Economic Activities |
|---|---|
| 1. Infrastructure and facilities, agriculture, livestock | • Construction of development projects and roads, whether paved or not<br>• Railway building<br>• Railway rehabilitation work/project<br>• Any airport and/or runway construction, development, or rehabilitation project, whether international, regional, or national<br>• Any project involving the construction, development, or rehabilitation and maintenance (particularly dredging) of ports<br>• Sea or river port project<br>• Any excavation and backfilling activity of more than 10 000 $m^3$<br>• Any economic and social development zone development project<br>• Nuclear power project<br>• Solar energy initiative<br>• Hydro-wind project<br>• Project to install wind turbines<br>• Setup of telecommunication antennas<br>• Any industry that is in the exploitation stage<br>• Project of a thermal power plant<br>• Any power line installation project<br>• Dam projects for hydroelectricity<br>• Waterway development project<br>• Any hydro-agricultural/agricultural/rehabilitation project spanning more than 500 hectares (500 ha)<br>• Project on industrial breeding<br>• More than 30 cubic meters per hour (30 $m^3$/h) of surface or underground water withdrawal<br>• Due to the scope of any project involving the spread of chemical products, harmonizing the environment and human health is a necessity.<br>• Land development projects aimed at providing collective facilities for over 5,000 spectators. |
| 2. Natural resources that regenerate | • Any introduction of new animal or plant species, as well as genetically modified organisms (GMOs), into the national territory is prohibited.<br>• Logging undertaking<br>• Projects involving the capture and sale of wildlife species for export<br>• National and regional parks and reserves, both terrestrial and marine<br>• Project for sport and hunting fishing<br>• Marine fishing effort by resource type |
| 3. Catering and tourism | • Hotel construction and operations (> 20 rooms)<br>• Recreational and tourist development projects<br>• Restaurant with a seating capacity of more than 250 people |
| 4. Industrial | • Industrial units that require approval<br>• Processing facilities for products of animal origin (canning, salting, charcuterie, tannery, etc.)<br>• Livestock feed manufacturing unit. |
| 5. Management of miscellaneous products and waste | • Storage unit projects for pesticides, chemical products, and pharmaceuticals with a capacity greater than 10 tons<br>• Any unit that recovers, disposes of, or treats household, industrial, or other hazardous waste<br>• Medical waste disposal sites<br>• Any kind of radioactive product and/or waste storage<br>• Any dangerous product storage<br>• Plants for treating domestic wastewater |
| 6. Mining | • Project/activity involving mining or quarrying<br>• Exploitation of radioactive substances<br>• Treatment projects for mineral substances (physical/chemical) |
| 7. Hydrocarbons and fossil energy | • Any hydrocarbon or natural gas exploration or production project<br>• Pipeline transportation projects (hydrocarbons and natural gas)<br>• Coal extraction and industrialization projects<br>• Facilities/projects for crude oil refining, gasification, and liquefaction<br>• Projects for off-shore and on-shore installation<br>• Extraction of bituminous mineral substances<br>• Storage facilities for petroleum or natural gas<br>• Project involving geothermal energy<br>• Degassing initiative<br>• Works/projects involving biofuel production |

Source: (18).

of how such a system works and allows for the evaluation of the ESIA process's results (21). A proposal from such an analysis can help the ESIA system function more effectively by recognizing the process's advantages and disadvantages. The rules of operation of the procedural systems for environmental protection are outlined in Chapter 3 of Law No. ll/009 of July 9, 2011, and the executive regulation, Decree No. 14/019 of August 2, 2014. To begin, the DRC's ESIA system is founded on clear and specific legal provisions.

The decree specifies the procedures (Figure 2) for assessing the environmental impacts of projects. Even though this is a legally mandated ESIA system with all of its benefits, it retains a discretionary aspect, in which the content of the manual of operations and procedures for conducting environmental and social impact assessment

studies is not explicitly stated in the legislation. Furthermore, scoping is omitted from their ESIA procedure. The process is quite timed, having a duration in which the promoter has to comply, and failure to comply will cause the study to be rejected. Nevertheless, there is room for appeal at the discretion of the promoter when an environmental certificate has not been delivered by the Congolese Environmental Agency (ACE) responsible for issuance. The requirements for the ESIA are clearly distinguished from other legal provisions, and the legal basis for the ESIA is mandated by legislation. As much as the ESIA process is legally binding, the ACE should relax the duration of each step of the process. This is not intended to make the process less effective but to ensure the ESIA system is concerned with the desired result, ecologically responsible actions, and not merely the administrative process. The provisions made in the legislation apply to all actions by the state, province, decentralized territorial entity, or public or private natural or legal person, which is laudable. Furthermore, environmental assessments of policies, plans, and programs developed and intended for national security are stated to be covered by the secrecy defense but are not explicitly stated in the legislation. On the other side, the law does not mention anything about subjecting projects of national security to the ESIA or not. This presents a limitation to the wide coverage of actions whose environmental impacts should be assessed. Specific environmental impacts are comprehensively covered in the law, including foreseeable, direct, indirect, and cumulative, with no mention of the unforeseeable impact, which could be predicted. In our view, the rejection of the unforeseeable impacts still presents a gap in the existing ESIA process. The recognition of unforeseeable impacts calls for the inclusion of alternatives in the ESIA procedure. The ESIA report should include a comparative analysis of the implementation options or alternatives, technical justifications for the choice made, and the procedures to be adopted by the promoter, according to the decree, Division 19f. This is not intended to be detailed or exhaustive because alternatives to implementation and technologies are not anticipated. The ESIA procedural mechanism should take alternatives into account for designs, fuels, raw materials, building techniques, and phases. The DR Congo's ESIA system does not prioritize the treatment of alternatives, unlike the EIA system in the United States of America (3). Our perspective is that there is little or no practice in this aspect. The legislation also lacks provisions on the inclusion of alternatives in preliminary documents produced before the ESIA report. The assumption is that without it, no consideration of the environmental consequences of alternative mitigation strategies is made. Screening of actions for environmental significance is very important and takes place per the provisions in the legislation. There is a clear description of the types of actions subject to the ESIA, the submission of requests to assist screening, and information on actions and the screening process readily accessible with the ACE accountable for screening decisions. The DRC's approach for establishing significance in the EIA system is based on a compilation of activities with significant adverse effects. The approach aids in avoiding the unnecessary assessment of a large number of actions, particularly those with findings of no significant impact. However, there are no provisions for acts for which criteria or thresholds should be used to determine whether they must be analyzed or not, nor is there a process for the discretionary selection of actions to be evaluated. Sometimes, depending on the nature, size, and location of a proposed project, there will be a need for the ESIA even when the action is not captured in the annex, where there is a list of actions mandatory to undergo the ESIA. Other limitations in the screening process are the lack of public participation and the lack of provision on the part of the promoter to appeal against the screening decision by the ACE. These provisions, when made, will instill confidence in the screening process. Because of these limitations, we are tempted to call the overall practice ineffective, even though it occurs. Furthermore, the ESIA system as described in the legislation, contains no statutory requirement for scoping via a useful tool throughout the entire process. Because of this, action-specific scoping guidelines and procedural guides have not been prepared to ensure relevant environmental impacts, are covered in the ESIA report. The lack of this step in the process presents a great limitation to the efficiency and effectiveness of the ESIA system in the DR Congo. Divisions 21 and 22 of the Decree were provided for the accreditation of ESIA consultants by the Minister with environmental responsibilities. The legislation permits international design offices to undertake the study but states emphatically that any international design office recruited joins a national design office. This is indeed a good measure, as the competence of national consultants is not undermined. It also establishes a platform for intellectual collaborations between nationals and internationals in the course of conducting the ESIA. However, concerning the ESIA reports, the legislation prescribes the content, and there is no formal requirement for the promoter, after consulting a design office for the study, to have another official body review the report to ascertain its adequacy before it finally gets to the ACE. No specific EIA methods or techniques are required. The ESIA report, upon receipt by the ACE, undergoes review by a panel of experts to determine the study's feasibility, need for amendment, or rejection, which is worthy of a time frame of three months (90 days) during which the study is subjected to scrutiny. The environmental certificate is issued if no response comes from the ACE for the stipulated three months. The legislation specifies a 30-

day period from the date of notification to the promoter of the observations made following the review, which must be incorporated into the study for re-examination. Failure to respond within the specified period will cause the study to be rejected. This, in our opinion, is not appreciable; promoters should be given enough time but not more than 60 days to take such a step. The main reason is that a substantive and effective outcome remains better than just a speedy reply. Also, there is an indication concerning the cost of the expert evaluation of the ESIA report, which the promoter has to bear without a clear specification and description of charges. Also, the review lacks public participation, which at its best offers invaluable checks on the quality of the ESIA reports, especially where such checks have not been applied earlier in the ESIA process. As such, there is no requirement for the promoter to respond to public comments. The ESIA Decree does not specify how the outcomes of the public hearing link with the ESIA report and its approval. The legislation also makes no mention of the publication of the advice on the review of the report. The lack of the above-mentioned requirements would make decision-making ineffective and the review more subjective than objective. Lastly, there are no laid-down criteria to provide a useful focus for the review of the ESIA reports. Also, the entire review process of the ESIA report in the DRC could be described as ineffective. During the ESIA process, decisions are made. Many decisions are made by the promoter, while others, such as screening decisions, are made jointly by the promoter and the ACE. However, the primary choice in the ESIA process—whether to approve the plan or not—is always made following a public hearing, which is common in the Democratic Republic of the Congo. As evident in the provisions made in sections 52 to 54, there is room for political influence over the ESIA decision-making process, so the main decision on the proposal is not based on the merits or findings of the technical evaluation and is seldom straightforward. In such a case, favoritism trumps equitability, and there will be numerous trade-offs in the database. On the contrary, the power of refusal, which ensures that the ESIA's goals are met, is clearly stated in the legislation, as is the right to appeal decisions. The ESMP addresses monitoring and mitigation of action impacts, with provisions in Title 4 of the legislation outlining the conditions and methods for conducting an environmental audit to assess the impact that all or part of a project or activity generates or is likely to generate, directly or indirectly, on the environment and the population. In the long run, the effectiveness of particular forecasting techniques will be tested to ensure better future practices. This is a remarkable strength of the legislation.

The monitoring and control of the ESIA system is captured in Chapter 6 of Decree No. 14/019 of August 2, 2014, with the ACE charged with oversight for its implementation. The ACE suspends work for noncompliance, which is something to get used to. The dissemination of the ESIA practice, modification of the ESIA system to take into account experience-based feedback, and addressing any shortcomings found are the main objectives of the ESIA system monitoring. The ESIA system monitoring information will make it easier to review the ESIA system regularly (22). A promoter who fails to comply within a time frame depending on the negative impact will have the environmental certificate cancelled. This also presents a strength in the legislation to ensure practicable compliance. One of the main limitations is that the ACE has not recorded the financial costs of the ESIA study, making it difficult to obtain accurate information on this topic. Legal persons interested in the ESIA reports consult the ACE when needed, though some technical details may be withheld for good reasons. Yet the legal person has room to appeal using procedures available in administrative law, which is remarkable. It is clearly seen throughout the ESIA system that the promoter is responsible for unspecified costs. A very substantial cost analysis cannot be made, even though it is needed. This also presents a major gap in the legislation. Finally, according to Title 6, Division 62 of the Decree, any (no exceptions) violator of the provisions will be punished in accordance with Articles 72 and 73 of Law No. 11/009 of July 9, 2011. Those who fail to conduct the ESIA face a five-fold fine, and those who provide false or erroneous information about the study face a two-fold fine. Here again, the charges for evaluation and validation are not specified. The provision of such punitive measures, on the other hand, will keep promoters on their toes, with a strong value for the ESIA study on all proposals.

## Recommendations

Based on the preceding critical analysis of the ESIA system in the DR Congo, the following recommendations regarding the legislation have been made:

- More independent follow-up verifiers should be engaged in the ESIA system.
- Public participation and the right for promoters to appeal screening decisions should be stated and implemented.
- An official body should review the EIS to assess its adequacy before final review by the ACE.
- Scoping, as a missing stage in the current ESIA process, should be included and made mandatory.
- The legislation should make clear and specific provisions on all fees and charges, stating the specific amounts that will be subject to review whenever the need arises.
- There should be flexibility in the deadlines attached to each stage of the ESIA process.
- Alternatives should be extended to designs, fuels, raw materials, construction methods, and phases while

treating them as priorities.
- There should be a provision on actions for which criteria should be applied to determine whether they must be evaluated.
- Place a premium on the public's right to obtain all available information from the ACE or administrative authorities at any time during the process.
- Throughout the ESIA process, all participants should be transparent, and the promoter has the right to access any information about the ESIA study and to challenge any judgment rendered at any time.
- In the appendix to the legislation, there should be a brief description of the content of the manual of operations and procedures for carrying out the ESIA.

## Conclusion

Like many other countries, the DRC has enacted environmental assessment legislation that protects our environment from the negative impacts of projects and development activities. This review revealed that the current legislation, Decree No. 14/019 of August 2, 2014, is not effective and efficient for the ESIA studies in the DRC, therefore, it requires a revision.

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## Authors' contribution

**Conceptualization:** Francis Acheampong Osei.
**Data curation:** Esther Asantewaa Effah.
**Formal analysis:** Francis Acheampong Osei.
**Investigation**: Francis Acheampong Osei, Esther Asantewaa Effah.
**Methodology:** Francis Acheampong Osei.
**Project administration**: Francis Acheampong Osei, Esther Asantewaa Effah.
**Resources**: Francis Acheampong Osei, Esther Asantewaa Effah.
**Software:** Esther Asantewaa Effah.
**Supervision:** Not applicable.
**Validation**: Francis Acheampong Osei.
**Visualization**: Francis Acheampong Osei, Esther Asantewaa Effah.
**Writing–original draft:** Francis Acheampong Osei.
**Writing–review & editing:** Francis Acheampong Osei and Esther Asantewaa Effah.

## Competing interests

The authors declare that they have no conflict of interests.

## Ethical issues

The research was conducted without the approval of the Research Ethics Committee of Kwame Nkrumah University of Science and Technology's School of Medical Sciences since human subjects were not involved. The authors declare that all data collected during the study are as presented in this manuscript and no data from the study has been or will be published separately elsewhere.

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