



**PLANNING MALAYSIA:**

*Journal of the Malaysian Institute of Planners*

**VOLUME 20 ISSUE 3 (2022), Page 196 – 204**

## **EVALUATION OF SOCIAL IMPACT ASSESSMENT (SIA) PRACTICES USING SWOT ANALYSIS: A CASE STUDY IN INDIA**

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### **Abstract**

Social Impact Assessment (SIA) has been incorporated into part of EIA legislative structures in most nations following the adoption of the National Environmental Policy Act (NEPA) in the USA. The assessment acts as a policy instrument for evaluating a project's socio-cultural consequences and for advising socio-political stakeholders on its social viability. The instrument also provides operational advice for tackling any negative social effects the policy could have, with a focus on improving its positive effects. However, the traditional SIA has been deemed insufficient for measuring social consequences and has received little emphasis in the appraisal process compared to economic and environmental impacts. Two case studies and a SWOT analysis were conducted to analyse and compare the Social Impact Assessment (SIA) by using a matrix analysis. The findings indicate that both case studies have similar indicators to each term that integrates with one another. The focus on the term is weaknesses, particularly during the redevelopment of a report, which is still lacking in many ways.

**Keywords:** Social impact assessment, environmental impact assessment, SWOT analysis, matrix analysis

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## **INTRODUCTION**

Social Impact Assessment (SIA) has been incorporated into the EIA legislative structures in most nations following the adoption of the National Environmental Policy Act (NEPA) in the USA (Aucamp, 2015; Esteves et al., 2012; Finsterbusch, 1995; Kruger & Sandham, 2018). According to the International Association for Impact Assessment (IAIA) (1999), EIA has been defined 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.”

The SIA is a type of blueprint instrument that is used to assess a project’s socio-cultural consequences, the purpose being to advise socio-political stakeholders about its social viability. The assessment also provides operational advice for offsetting any negative social effects the policy could have, with a focus on improving its positive effects (Esteves et al., 2012). Martinez & Komendantova (2020) note the SIA to be a significant instrument that can educate planners and decision-makers about the possible social and/or economic consequences of a planned project. Knowing about these potential consequences ahead of time might aid decision-makers in determining whether a project should proceed, proceed with some modifications, or be revoked altogether.

An SIA’s most useful outcome is the development of plans for abatement to minimise a project’s potential harm to people and communities. This objective is in line with the International Principles for Social Impact Assessment’s definition of SIA as follows: “the process of analysing, monitoring, and managing the intended and unintended social consequences, both positive and negative, of planned interventions and any social change process invoked by those interventions” (Vanclay, 2003). Since their inception in the 1970s in the United States (IADB), SIAs have been adopted widely by the Global South and international entities, such as the World Bank (WB) and the Inter-American Development Bank (IADB). The SIA is a hybrid of science and political process (Freudenburg, 1986) and contributes to advising the designation of mitigation and enhancement measures (Mahmoudi et al., 2013). A previous study has shown that both the SIA and EIA have the same authoritative purpose, but the former focuses more on the social aspect or dimension of the environment (Kruger & Sandham, 2018).

SIA is proven to be a suitable approach based on an integrated assessment that acknowledges and evaluates both the biophysical and social aspects of projects, programmes, and policy initiatives. However, the assessment lacks a suitable scientific foundation due to limited scientific publications on the theoretical foundation, opportunities, and limitations of such an assessment method to date (Dendena & Corsi, 2015). According to Kruger & Sandham (2018), one study has examined the effectiveness of SIAs from various viewpoints, including legislative and institutional design, assessment preparation

and quality, SIA influence on decision-making processes, and public involvement in them. The relationship between project technical and social parameters and SIA performance, on the other hand, is largely unexplored.

As previously stated, the socio-technical composition of projects and sectors has a significant impact on their local consequences and interactions with communities. Consequently, a deeper understanding of these designs is important for SIAs to address and manage social-economic effects (Miller et al., 2015; Martinez, 2020). One study by Mahmoudi et al. (2013) found some major issues that SIA encounters, particularly with regard to its theoretical foundations and methodological challenges. Hence, enhancing SIA by integrating it with a parallel and dynamic risk assessment is beneficial for addressing the issues that are prevalent in SIA. The methodology, techniques, and strategy still require enhancement despite significant advancements in SIA since the 1970s. This study seeks to assess the SWOT analysis from several case studies and determine the functionality of the SIA.

## **LITERATURE REVIEW**

Despite being insufficient for measuring social consequences, the traditional SIA has remained unchanged (Pimentel da Silva et al., 2021). A deeper clarity into the social aspects of development can be gained by merging the assessment of social impacts with social concerns (Mahmoudi et al., 2013). SIA grew in popularity in the late 1970s and early 1980s because of EIA's perceived intense focus on biophysical components, which often reduced social dynamics as influenced in the infrastructure projects to a supporting role in the review process (Dendena & Corsi, 2015). There is a compelling character of environmental consequences (Othman et al., 2021) in addition to the factors already described as limiting the SIA from being implemented as a process in and of itself, or in conjunction with the EIA. SIA is also an indicator of a shift in identifying social issues as drivers of business risk as part of a management approach for effectively responding to consequences.

Nonetheless, according to Dendena & Corsi (2015), when it comes to identifying and structuring alternatives for actions to be taken, social practitioners typically have little influence. As a result, the limited resources devoted to social assessment, in conjunction with regulators' limited capacity to provide quality assurance of proposed actions, have a significant impact on the standard of SIAs, with developers being inclined to draw up assessments that meet the bare minimum of policymakers' expectations. Moreover, a study by Lucas et al. (2022) found that social implications are often given less weight in the appraisal process compared to economic and environmental impacts.

The lack of political significance placed on social assessments has led to a reluctance to commit significant resources to them during a project's implementation. One study found that the lack of the rules and regulations of SIA

is the most inconvenient and not effective due to methodological inadequacy (Khan, 2020; Martinez & Komendantova, 2020). Similar to the risk assessment, due to a lack of information and awareness, the SIA is not extensively used as part of the assessment (Muthuveeran et al., 2022).

Pimentel da Silva et al.'s (2021) study highlights that to improve the SIA, it is necessary to (i) include other cultural, livelihood, and well-being parameters in addition to socioeconomics and (ii) introduce the concept of development limits, which would seek to ensure socially acceptable, economically feasible, and environmentally friendly development. However minor consideration of social issues in project evaluation, particularly in the context of public works, has frequently resulted in social objections by environmental organisations. Another flaw is that many social assessments solely engage professional stakeholders in the area (Lucas et al., 2022).

## **METHODOLOGY**

This paper is a brief narrative literature review of several studies related to the factors that contribute to the effectiveness, perception, or acceptance of SIA as a planning tool at the project level. Literature on social assessment was adopted as an example and output in this study. A descriptive SWOT analysis, which consists of Strength, Weaknesses, Opportunities, and Threat analysis, was formulated in the findings to explore the credibility of SIA as a planning tool.

Houben et al. (1999) denote a SWOT analysis as a type of analysis used in small and medium-sized businesses' strategic planning procedures. By maximising strengths, minimising weaknesses, utilising opportunities that are there, and avoiding threats, the SWOT analysis seeks to enable decision-makers to create a qualitative structure of a process or system (Fertel et al., 2013). Strengths and weaknesses impose pressure on a system as a whole, while the external environment controls opportunities and threats (Phadermrod et al., 2019). SWOT frequently emphasises strengths on which to build a strategy or weaknesses to eradicate, the purpose being to accomplish predetermined goals while simultaneously highlighting chances to seize or risks to be mitigated (Goffetti et al., 2018).

## **ANALYSIS AND DISCUSSION**

### ***Strength, Weakness, Opportunities, and Threat Analysis***

The SWOT analysis, shown in Table 1, followed the process adopted by Rathi (2017) in evaluating the environmental impact assessment at the project level in India.

**Table 1:** SWOT Analysis of Environmental Impact Assessment (EIA) at Project-Level

<b>Internal</b>		<b>External</b>	
<b>Strength</b>		<b>Opportunities</b>	
<ul style="list-style-type: none"> <li>• Well-defined</li> <li>• Well-developed regulatory mechanism</li> <li>• Incorporating international protocols</li> <li>• Strong judiciary</li> <li>• Citizen rights</li> </ul>		<ul style="list-style-type: none"> <li>• Educate project proponents</li> <li>• Developing a system of assigning EIA studies to the consultants by an independent body</li> <li>• Involving the public at the scoping stage</li> <li>• Public participation after the drafting stage</li> <li>• Evolving a mechanism for third-party monitoring</li> <li>• Follow-up projects based on environmental approvals</li> <li>• Peer review of EIA reports</li> </ul>	
<b>Weaknesses</b>		<b>Threats</b>	
<ul style="list-style-type: none"> <li>• Scoping</li> <li>• Establish realistic environmental baseline conditions</li> <li>• Impact assessment</li> <li>• Evaluation of impact significance</li> <li>• Environmental management programme</li> <li>• Consideration of alternatives</li> <li>• EIA review</li> <li>• Monitoring</li> <li>• Follow-up</li> </ul>		<ul style="list-style-type: none"> <li>• Short-term view on natural resources</li> <li>• Overlooking limitations of project-level EIA</li> <li>• Lack of efforts in improving the quality of EIA reports</li> <li>• Non-ethical practices</li> </ul>	

All the elements in the SWOT analysis (Table 1) have their merits and drawbacks, along with opportunities and threats of EIA implementation in India. Among those listed as structural failures are weak administrative structures, inadequate screening and scoping, subpar EIA reports, insufficient review, poor public involvement, and insufficient mitigation measures and monitoring implementation. It can be shown that rules on EIA are founded on a rationalist approach and often follow an information processing model in deciding whether to grant environmental approvals to a proposed project.

Expert appraisal committees at the central and state levels determine the terms of reference (TOR) for conducting EIA for a proposed project. However, after thorough site-specific studies are completed, the TOR provided at the beginning of the application process for environmental approval is not

revisited. Such a shortcoming then leads to an evaluation of impact significance. The impacts are listed without thorough analysis by relevant functional expertise. Effect significance, which is essentially a function of impact features and impact importance, is not well understood. There is no shortlisting of activities that could significantly alter the relevant environmental features with a focus on severe and critical consequences for effective mitigating strategies. Since effect quantification is typically not done, determining the importance of impacts becomes challenging. The guidelines provided for the determination of significance from UNEP (2002) are not fully utilised. Many of the impacts are considered trivial without any explanation, leading to little understanding of the impact evaluation and analysis procedures. The outcome, therefore, is a shaky EIA process.

Nonetheless, the political realities of decision-making differ in developing nations, where the establishment of manufacturing, energy, and infrastructure projects, as well as the creation of widespread employment opportunities, are prioritised over long-term natural resource management. The issue becomes interesting when the media reveals a violation of environmental approval requirements and public interest litigations get filed in courts.

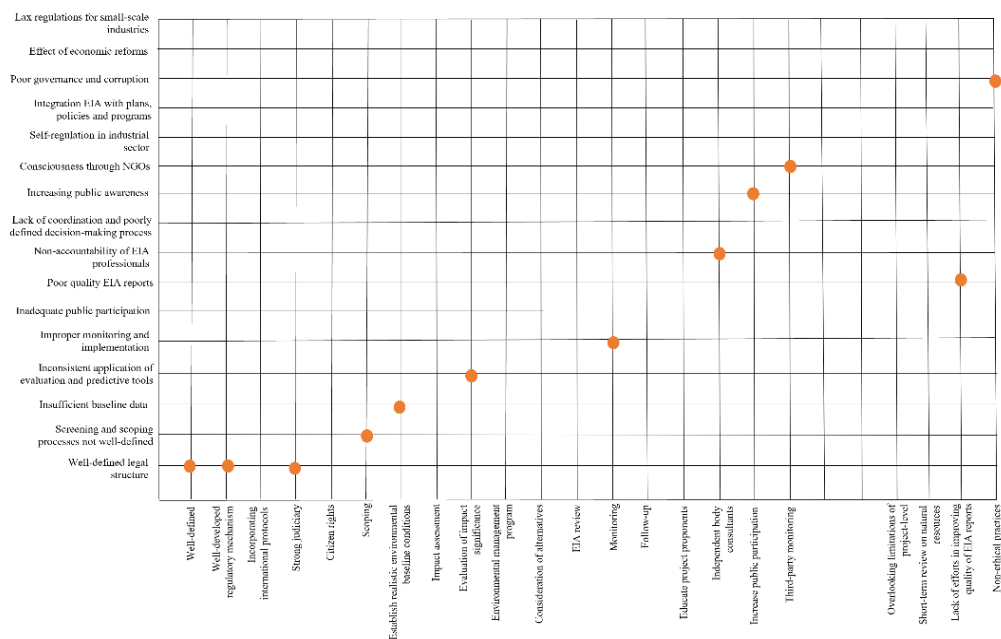
Another case study (Paliwal, 2006) demonstrated the integration of a SWOT analysis that may have similar indicators in each term. The meaning of the SWOT term in this context is Strength (S), Weaknesses (W), Opportunities (O) and Threats (T). Both case studies used SWOT analysis to evaluate the environmental impact assessment conducted in their respective country. Table 2 summarises the SWOT analysis based on the findings extracted from the case studies.

**Table 2: SWOT Analysis of Environmental Impact Assessment (EIA)**

<b>Internal</b>	<b>External</b>
<b><i>Strength</i></b>	<b><i>Opportunities</i></b>
<ul style="list-style-type: none"> <li>• Well-defined legal structure</li> <li>• Presence of a well-knitted regulatory structure</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing public awareness</li> <li>• Growing consciousness through Non-Governmental Organisations (NGOs)</li> <li>• Self-regulation in the industrial sector</li> <li>• Integration of EIA with plans, policies and programs</li> </ul>
<b><i>Weaknesses</i></b>	<b><i>Threats</i></b>

- Screening and scoping processes are not well-defined
- Insufficient baseline data
- Inconsistent application of evaluation and predictive tools
- Improper monitoring and implementation
- Inadequate public participation
- Poor quality EIA reports and non-accountability of EIA professionals
- Lack of coordination and poorly defined decision-making process
- Poor governance and corruption
- Effect of economic reforms
- Lax regulations for small-scale industries (SSI)

Based on the SWOT analysis above, several indicators are significantly similar to those in the previous study. A matrix analysis (figure below) shows the integration of both analyses in terms of their indicators for each term.



The matrix analysis shows several indicators that can be integrated from both studies. For example, strengths term stated that well-defined in terms of regulatory or legal mechanisms, as well as a strong judiciary. However, for the

weaknesses, it shows that the process during the assessment is not precise as the scoping, insufficient or inconsistent baseline data, evaluation and monitoring activities. For opportunities, both studies mentioned that public participation and involvement of third parties are essential in exposing more people to the SIA. Finally, the threats that can be harmful to SIA are poor quality of the reports and non-ethical practices, such as poor governance and corruption that happened in a country.

## CONCLUSION

Social Impact Assessment (SIA) is still in its early stages and is incorporated into EIA in one document. Therefore, SIA requires further improvement in terms of environmental aspects. The social aspects should not be politicised, and public participation is compulsory prior to the development of a particular area. A SWOT analysis is one method for ensuring the effectiveness of SIA as a planning tool at the project level. The analysis in this study highlights the elements that need to be catered to for the future enhancement of the tool. Most weaknesses come from the procedures for developing an environmental impact assessment, which is also part of SIA.

## ACKNOWLEDGMENTS

We would like to thank all who participated in this study for giving perception, ideas, and acceptance of social impact assessment at the project level.

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Received: 30<sup>th</sup> June 2022. Accepted: 12<sup>th</sup> September 2022