

WIDER Working Paper 2021/111

# Effectiveness of strategic environmental assessment in promoting sustainable development in Tanzania

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July 2021

In partnership with



This publication results from [Sustainable development solutions for Tanzania—strengthening research to achieve SDGs](#), a collaborative project between the [UONGOZI Institute](#) in Dar es Salaam, Tanzania, and [UNU-WIDER](#) in Helsinki, Finland, with a main research objective of informing the development and implementation of policies aiming for economic transformation and sustainable development in Tanzania and the East African region. With financial support provided by the Ministry for Foreign Affairs of Finland, the joint project was launched in 2018 with key research questions giving the partners a framework for collaboration and the research work to be undertaken. The project focuses on macroeconomic perspectives, domestic resource mobilization, extractives, industrialization, sustainable livelihoods, and gender as a cross-cutting issue. The project provides local stakeholders a platform for research and policy discussions on Tanzania and bridges these discussions to the regional and international development debate.

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**Abstract:** This paper examines the extent to which strategic environmental assessment (SEA) is implemented in Tanzania and whether its implementation is in line with generally practised procedures/criteria. Out of 17 completed SEA, eight cases were purposively selected and assessed by applying an analytical framework that incorporates commonly accepted SEA criteria, which require SEA to be integrated, sustainability-led, stakeholder-driven, inclusive, as well as accountable and transparent. The study finds that the SEAs are not completely consistent or inconsistent with any of the five ideal criteria. Instead, there is a mix of consistency among the sub-criteria. Some of the sub-criteria such as institutional integration mechanisms, dissemination of SEA results, as well as enforcement mechanisms for compliance are yet to be considered in Tanzanian SEA practice. In addition, the findings indicate that there are limited linkages between the policies, plans, and programmes (PPPs) formulation and SEA processes. The SEA tends to enter the planning process late, thus limiting their ability to influence sustainability outcome of the proposed PPPs. It is critical also to find that bills, regulations, and strategies are not yet subjected to SEA processes. The study recommends key interventions to improve Tanzania's SEA practice. These include the establishment of enforcement mechanisms for conducting SEA through performance audit; introduction of registered SEA experts with practicing SEA certificates; responsible authorities to allocate funds for undertaking SEA; as well as conducting awareness and education programmes to the responsible authorities and experts to review, monitor, and conduct SEA effectively. SEA is still evolving in Tanzania, but if these issues are addressed then the country will have a unique opportunity to advance SEA practice as well as to promote environmental management and sustainable development in the region.

**Key words:** strategic environmental assessment; policies, plans, and programmes; sustainable development; Tanzania

**JEL classification:** Q01, Q50, Q51

**Acknowledgements:** The authors are grateful to Joseph Semboja, Hussein Sosovele, Tony Addison, and Maureen Were for their insightful and valuable comments.

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This study has been prepared within the project [Sustainable development solutions for Tanzania—strengthening research to achieve SDGs](#) funded by the Ministry for Foreign Affairs of Finland.

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ISSN 1798-7237 ISBN 978-92-9267-051-1

<https://doi.org/10.35188/UNU-WIDER/2021/051-1>

Typescript prepared by Ayesha Chari.

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## 1 Background

Strategic environmental assessment (SEA) emerged to complement project-based environmental impact assessment (EIA) procedures (Abaza et al. 2004). Confined to project levels, EIAs were ineffective for capturing the implications of policies, plans, and programmes (PPP). Therefore, EIAs missed significant environmental implications of stakeholder decisions. The emergency of SEA was prompted by the fact that most of the environmental challenges the world is facing stem from the policies we choose. Therefore, unless we address how we make our PPPs, we will not be able to address the ever-increasing environmental problems. It was thus important to move the assessment to a higher level where choices and options are being considered.

There is no single internationally agreed definition of SEA. However, this paper uses the interpretation offered by Sadler and Verheem (1996), which defines SEA as ‘a systematic process for evaluating the environmental consequences of policies, plans or programmes in order to ensure that they are adequately considered at the earliest stage of decision-making process’. In this way, SEA encourages the integration of sustainable development aspects into the higher levels of decision-making.

SEA has significant economic, social, political, and ecological benefits if applied appropriately. Firstly, the assessment promotes linkages between poverty alleviation, economic growth, and sustainable development. As such, inclusive and shared growth is promoted through it (Duvail et al. 2006; Betey and Godfred 2013). Secondly, SEA promotes social equity and cultural sustainability. This is likely to safeguard natural capital (ecosystem services) and build social capital for the present and future generations. Thirdly, the assessment process upholds the principles of good governance as it promotes participation, transparency, compliance, and enforcement (Sachiko and Durwood 2007). Fourthly, it promotes developmental aspects that exploit the natural resources without endangering ecological integrity or excessive use beyond the rate of replacement (Duvail et al. 2006).

Tanzania, like many other developing countries, does not have a long history with SEA. A regulatory requirement committing the government and leading agencies to conduct SEA came in 2004 through the Environmental Management Act (EMA, No. 20, 2004) and SEA Regulations (2008). To ensure that socio-economic and environmental concerns are taken into consideration, the EMA requires SEA to be undertaken when promulgating bills, regulations, policies, strategies, programmes, and plans. In doing so, SEA provides space to the public to raise their views and concerns on the intended interventions (URT 2004, 2008).

The EMA mandated the Environment Division under the Vice President’s Office to coordinate SEA processes. The division, through the Director of Environment (DoE), is responsible for promoting the integration of environmental considerations into development PPPs through the use of SEA (URT 2004). To facilitate SEA processes, the DoE adopted specific guidelines in 2017 to provide procedures of undertaking SEA in the country (URT 2017).

Despite the institutionalization of SEA in Tanzania, there is inadequate information regarding its implementation. Consequently, questions on whether SEAs are conducted as per the established principles and procedures arise. This study explores these concerns and proposes some policy interventions to effectively improve SEA application in the country. The objective was to explore the extent to which SEA has been implemented in the country as well as whether its implementation is in line with commonly practised procedures.

Following the introduction, policy and institutional framework has been explored to provide an overview of the SEA in Tanzania. The review of literature on SEA practices has been conducted to guide the development of this study. The paper also presents the study methodology as well as the analytical framework adopted to assess the selected SEA cases. Lastly, the study findings are discussed followed by concluding remarks and policy recommendation to improve Tanzanian SEA practice.

## **2.1 Overview of the SEA in Tanzania**

### **2.1 Policy and legal framework**

Tanzania has a clear policy and a legal framework to guide the SEA process. The framework is deep-rooted in the Constitution of the United Republic of Tanzania of 1977. The constitution has provisions that safeguard the right to a clean and safe environment as well as management of natural resources. For instance, Article 27 of the constitution provides for the importance of sustainable use of natural resources for the benefit of the current and future citizens of Tanzania (URT 1977). The National Environmental Policy and EMA have been promulgated in line with the principles set out in the mother law of the country.

#### *National Environmental Policy of 1997*

National Environmental Policy was formulated to promote sustainable use of natural resources to achieve socio-economic growth and environmental sustainability. The policy emphasizes the application of SEA to mainstream environmental considerations into policies. It stressed that environmental degradation many times arises out of the promulgation and implementation of bad sectoral and macro policies. To mitigate the effects of existing and future policies on the environment, a strategic EIA should be applied to those policies that impact the environment (URT 1997). To implement these policy statements, the EMA was promulgated in 2004, SEA Regulations in 2008, and SEA Guidelines in 2017.

#### *EMA of 2004*

The EMA was enacted to promote the enhancement, protection, conservation, and management of the environment. It provides a legal and institutional framework for the management of the environment and sustainability in Tanzania. Any developmental initiative that has adverse effects on the environment has to be prevented or minimized through the application of impact assessment, such as SEA (Section 7(3) of the EMA). The SEA requirement is covered under Section 104. It states that SEA shall be conducted when promulgating bills, regulations, policies, strategies, programmes, and plans. It stipulates that when preparing a bill, public policies, programmes, and development plans, these shall include a SEA statement on the likely effects such documents may have on the environment (Section 104(2)). The EMA also stipulates that SEA should be conducted for mineral, petroleum, hydroelectric power, and major water project plans (Section 105; URT 2004).

#### *SEA Regulations of 2008*

The SEA Regulations promulgated to ensure that environmental concerns are taken into consideration in draft bills, policies, plans, and programmes. The regulations impose a mandatory obligation on sector ministries, government agencies, departments, as well as local government authorities (LGAs) to conduct SEA (Regulation 8(1) of SEA Regulations). It also highlights how

the public may contribute to the consideration of environmental concerns into PPPs, as well as establishing clear, transparent, and effective procedures for conducting SEA.

The SEA Regulations oblige a sector ministry, government agency, or department, at the commencement of the preparation of a policy, strategy, programme, or plan, to form a team to carry out SEA. The team must consist of experts in SEA or environmental and natural resources management from a sector ministry, government agency, department, public higher learning, and research institutions or registered environmental experts (Regulation 8(2); URT 2008).

During the process of conducting SEA, a sector ministry in consultation with the DoE may seek the views of any person or the general public. The word ‘may’ implies that it is not a mandatory requirement for the sector ministries to consult stakeholders or the general public in the SEA process (Regulation 9(2); URT 2008). This regulation needs to align with EMA provisions that include a mandatory requirement for stakeholder consultation and public participation in SEA processes.

The SEA Regulations further provide room to undertake a strategic environmental audit of the plans, strategies, and programmes formulated before the commencement of the regulations. It states that if a sector ministry, government agency, or department promulgated a plan, strategy, or programme that requires SEA, the concerned authority may consult the DoE and carry out a strategic environmental appraisal or audit. Despite exempting policies in this process, the review of programmes, strategies, and plans to be subjected to SEA is not a mandatory process (Regulation 27; URT 2008).

#### *SEA Guidelines of 2017*

The SEA Guidelines were prepared to provide guidance on stages and steps to be followed in conducting SEA. They are intended to enable users to comply with the EMA of 2004 and SEA Regulations of 2008, to assist role players in contributing to and reviewing SEA reports. The guidelines apply to all policies, bills, regulations, strategies, plans, programmes, and projects that are within the scope of EMA and SEA Regulations. The guidelines ensure that environmental considerations inform and are integrated into strategic decision-making in support of environmentally and socially sound sustainable development.

The guidelines provide the following four steps for conducting SEA:

- screening to ascertain whether or not the proposed initiative is likely to have significant environmental effects at the beginning of the SEA process;
- scoping and terms of reference to determine the level of details of the information to be included in the SEA report;
- preparation of a draft SEA report with sufficient information that includes the assessment of cumulative effects and proposed mitigation/enhancement measures; and
- consultation and stakeholder participation; as well as revision of draft SEA report, and finalization and submission of the final report for decision-making.

The guidelines emphasize that SEA needs to be adapted to the scale and nature of the policies, strategies, plans, or programmes in question. It is important to treat SEA as a flexible process, tailored to the needs of different types of PPPs, while ensuring that the requirements of the regulations are met.

## **2.2 Institutional framework**

The Minister for Environment in Tanzania has the overall responsibility for all matters relating to the environment. At the commencement of the PPP process, the sector ministry, government agency or department is required to inform the minister to determine whether SEA is required. They are required to submit a detailed statement explaining the nature of the PPPs and their impact on the environment or sustainable management of natural resources and cultural heritage (URT 2008).

The Environment Division is responsible for promoting the integration of environmental considerations into PPPs through the use of SEA (Section 15(a) of EMA, 2004, and Regulation 9(3) of SEA Regulations). The directorate coordinates all SEA consultation processes. They are also obliged to ensure the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of the quality of human life in Tanzania (URT 2004).

Sector environmental coordinators from the ministries, agencies, or departments are mandated to ensure that SEA is carried out in their sector. Through SEA, they are obliged to ensure that environmental concerns are integrated into the ministry's developmental PPPs (Regulation 9(4) of SEA Regulations). They are also required to promote public awareness of environmental issues through educational programmes and the dissemination of information (URT 2004).

## **3 Review of literature on SEA practice**

SEA has been widely accepted and recognized at national and international levels as a tool that can be used to mainstream environmental considerations into PPPs. At the international level, Agenda 21, adopted during the 1992 United Nations Conference on Environment and Development, recognized the application of SEA as a proactive approach to integrate environmental considerations into the higher levels of decision-making (UNECA 2005). Equally, SEA is provided in the protocol to the Espoo Convention on Environmental Impact Assessment in a Transboundary Context as well as the European Union SEA directives (Ahmed et al. 2005). There are also a number of papers and reports that review the SEA system internationally (Dalal-Clayton and Sadler 2005; Chaker et al. 2006; Therivel 2010; OECD 2012; Sadler et al. 2011), in policy-making and for particular sectors (Fischer 2002, 2003, 2007; Jones et al. 2005; World Bank 2011) and in specific countries or regions (Retief et al. 2008; Mutui et al. 2013; Hipondoka et al. 2016).

Despite its significance, the SEA literature has given little attention to low- and middle-income countries (Tshibangu 2018; Fischer and Onyango 2012). In Africa, South Africa has excelled in SEA practices. The country uses SEA extensively although it does not have SEA legislations (Retief et al. 2008). Most of the African countries have introduced SEA legislations but overall SEA application remains voluntary, promoted mostly by development partners. Most of the legislations adopted by African countries are based on international practices and so become highly ambitious. The institutional analysis was not thoroughly conducted to internalize SEA procedures into a country-specific context. Without being fully aware of these constraints, it is easy to have unrealistic expectations of the adopted SEA procedures and there is the risk of committing scarce resources to support implementation. These challenges have been observed in most of the countries where SEA seems to be ineffective (Tshibangu 2018).

Countries such as Kenya, Mozambique, and Ethiopia have internalized SEA processes in their main EIA legislations. This approach has simplified the implementation process to some extent. However, the procedures, roles, and responsibilities, as well as content relating to SEA, are not

extensively elaborated (Walker et al. 2016; Tshibangu 2018). Most of the EIA procedures are applied in the SEA process. These include screening, scoping, stakeholder consultation, identification of positive and negative impacts, determination of enhancement and mitigation measures, as well as preparation of environmental management and monitoring plans (Weaver 2003; Therivel 2010; Walker et al. 2016).

Literature revealed that the current SEA practice is based on the technical–scientific guidance model, which assumes the existence of two dimensions in the decision-making process: technical dimension (environmental) and decision dimension (political) (Bina 2007; Stoglehner et al. 2009; Lobos and Partidário 2010). In this model, the consultants have the responsibility to evaluate environmental impacts of PPPs for politicians to respond through decision-making. Thus, SEA is regarded as a technical analysis that reports possible environmental impacts as well as establishes mitigation measures and monitoring plans for implementation. This is why the current practice of SEA is not far from being a project-level EIA tool (Lobos and Partidário 2010).

SEA as a conceptual and technical extension of the EIA tool limits the added value that it can bring to decision-making, leaving out its facilitating nature and reducing its influence in achieving sustainable development (Morrison-Saunders and Fischer 2006; Bina 2007). It is a big challenge for SEA to overcome the technical paradigm that has dominated environmental assessment in recent decades, whereby any impact assessment is about feeding environmental information into the decision-making process (Abaza et al. 2004; Lobos and Partidário 2010).

The current SEA practice has also inherited some of the challenges facing impact assessment (EIA) in most of the countries. These include lack of stakeholder involvement in the early stages (Noble 2009; Sinclair et al. 2015), expert-driven processes that lack broad public involvement (Rega and Bonifazi 2014), little evidence on how public input is used or addressed (Fischer 2010), as well as rare opportunities for open discussion on options and alternatives (Lamorgese and Geneletti 2013). Other barriers include weak consideration of integration aspects in the assessment process, inadequate human and material resources (skills and budget constraints) to undertake SEA, lack of political will to effectively implement the tool, weak cumulative effects assessment within SEA, and ineffective use of sustainability principles in the assessment process (Noble 2009; Weiland 2010; Gibson et al. 2016; Tshibangu 2018).

Lobos and Partidário (2010) suggest that for SEA to contribute to sustainable development, a paradigm shift in SEA is required. SEA practice should move beyond gathering/reporting environmental information and be regarded as a tool capable of integrating sustainable development goals into the higher level of decision-making. This will require SEA to be a catalytic tool capable of strengthening institutional capacity (closing the skills gap) and the capability (addressing the resources gap) for effective implementation. Through a comprehensive analysis, the administrative and institutional dimension responsible for SEA should significantly influence the purpose, method, and effectiveness of every SEA (Bina 2008). In the end, SEA should be an instrument fostering the policy learning process by generating positive long-term cultural effects and vision within the institutions where it evolved (Lobos and Partidário 2010).

In doing so, SEA should be integrated with local surroundings, traditions, customs, and values of the particular context of a nation, region, municipality, or village (Alshuwaikhat 2004). This perspective conveys the need to come up with appropriate methodologies and procedures to carry out effective SEA for PPPs (Lobos and Partidário 2010).

The International Association for Impact Assessment (IAIA) proposed a SEA performance criteria/framework that is significant in undertaking good-quality SEA (IAIA 2002). The criteria require SEA to be integrated, sustainability-led, stakeholder-driven, iterative, flexible and adaptive,



as well as accountable and transparent. Fischer and Gazzola (2006) reviewed the SEA performance criteria from 45 international documents and found that they can significantly influence SEA effectiveness (Walker et al. 2016). These criteria inform planners, decision-makers, and the affected public on the sustainability of the intended intervention. The framework facilitates the search for the best alternatives, assesses cumulative impacts, integrates sustainability goals in the assessment process, and ensures democratic decisions are taken timely and in a cost-effective manner (IAIA 2002). This study adopted these criteria to assess the effectiveness of SEA in Tanzania.

#### **4 Methodology**

The study was conducted in Tanzania involving consultations and discussions with key stakeholders responsible for the implementation and monitoring of SEA in the country. The qualitative methodology was used in this study and involved the following activities.

- A review of documents and literature was undertaken to guide the development of this study. The documentary review involved the selection of eight SEA cases/reports that formed a unit of analysis. Eight SEA reports were purposively selected based on whether SEA has been completed, is accessible, and was conducted after the enactment of the SEA Regulation in 2008. Table 1 provides a brief description of the selected SEA cases.
- Interviews were carried out to complement the information gathered from the documents/reports. Eighteen interviews were conducted with SEA experts and individuals representing the institutions responsible for the preparation and implementation of the selected PPPs. The experts and institutions were purposively selected from those responsible to prepare, implement, and monitor SEA processes in the country. The interview questions focused on filling gaps in the analysis criteria that could not be ascertained through document reviews. Some of the questions asked were as follows: Why is SEA not fully implemented in Tanzania? Which institutions have been involved in undertaking SEA in Tanzania and why? How does the SEA implementation process take place in Tanzania? What procedures are there to undertake the SEA process in Tanzania? How does the SEA process address climate change impacts concerning the proposed PPPs? What reforms (institutional or process) are needed to improve SEA effectiveness in Tanzania?
- Qualitative content analysis was adopted to analyse the data. With the assistance of MVivo software, an analytical framework was developed to analyse SEA reports and information was gathered from interviews. The analysis started by devising the coding framework matrix based on the SEA's established standard criteria (components) as nodes. Cording was done by matching textual data from the report with relevant nodes. The textual segments in the form of direct quotations, paragraphs, and passages were then sorted and processed by re-reading and paraphrasing each paragraph to come up with an abstract that could easily facilitate the identification of underlying patterns, structures, and themes. The researchers further refined the themes broadly enough to encapsulate a set of ideas into star text segments that explain the degree of consistency with sub-criterion as shown in Table 3.

Table 1: Brief description of selected SEA cases for analysis

No.	SEA	PPP level	Lead agency	Sector	Year
1	Dodoma City Master Plan (DCMP)	Plan	Dodoma City Council	Urbanization	2020
2	Southern Agriculture Growth Corridor for Tanzania (SAGCOT)	Programme	Prime Minister's Office and SAGCOT	Agriculture	2013
3	Dar es Salaam Transport Master Plan (DARTMP)	Plan	Transport	Transport	2018
4	Integrated Water Resource Management and Development (IWRMD) Plan for Rufiji Basin	Plan	Ministry of Water	Water Resources	2017
5	Bagamoyo Special Economic Zone Master Plan (BSEZMP)	Plan	Export Processing Zones Authority	Industry and trade	2015
6	National Irrigation Master Plan (NIMP)	Plan	Irrigation Commission	Water and agriculture	2018
7	Review of the National Land Policy (NLP)	Policy	Ministry of Lands, Housing and Human Settlement Development	Land resources	2017
8	NIMP and National Irrigation Policy (NIP)	Policy and plan	Prime Minister's Office, Regional administration and local government	Water and agriculture	2011

Note: SEA, strategic environmental assessment; PPPs, policies, plans, and programmes.

Source: authors' compilation based on study data.

#### 4.1 Analytical framework

The analytical framework for this study was adopted from IAIA (2002) as modified by Fischer and Gazzola (2006) and Walker et al. (2016). The criteria require SEA to be integrated, sustainability-led, stakeholder-driven, inclusive, accountable, and transparent. The analysis of SEA effectiveness in Tanzania derives from these commonly accepted criteria and specifies sub-criteria developed for each (Table 2). These sub-criteria were used to analyse each SEA case. Some of the sub-criteria such as those articulating issues of climate change and institutional integration mechanisms were developed during the assessment of SEA cases. The significance of each criterion in influencing the effectiveness of SEA within the Tanzanian context have been discussed in the rest of this section.

Table 2: Analysis framework for SEA effectiveness in Tanzania

SEA criteria	Analysis sub-criteria
1. Inclusive	(a) SEA contains sufficient information for cognizant decision-making (b) SEA systematically assesses cumulative impacts (c) Standard SEA components facilitate an effective assessment process
2. Integrated	(a) Early integration helps to inform the planning process (b) SEA is integrated in the planning process (c) It integrates biophysical, social, political, and economic aspects (d) SEA addresses institutional integration mechanisms
3. Participative	(a) Wide stakeholder consultations and participation is encouraged throughout the process (b) Methods are established for stakeholder and public participation as well as active discussions (c) Participation of marginalized population in the SEA process is encouraged (d) SEA results are disseminated to all participants (e) Stakeholder inputs and comments are explicitly addressed in the SEA report
4. Sustainability-led	(a) SEA measures enhance positive impacts and mitigate negative impacts (b) SEA identifies preferred options/alternatives that will drive sustainability (c) SEA addresses climate change impacts concerning the proposed PPPs

5. Transparent, accountable, and improved governance	(d) Sustainability is an integral concept in the SEA process (a) Enforcement mechanisms for compliance exist (b) Comprehensive monitoring and evaluation plans encourage iterative learning (c) Learning evidence improves decision-making in institutions (d) SEA recommendations are used to amend or inform the PPPs
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Source: modified from IAIA (2002), Fischer and Gazzola (2006), and Walker et al. (2016).

### *Inclusive*

Inclusive SEA requires the assessment process to both comply with commonly accepted SEA components and procedures, gathering sufficient information for decision-making, as well as systematically assess cumulative impacts (Fischer 2007; Walker et al. 2016). As mentioned before, SEA Regulations and Guidelines have provided for SEA steps and procedures to be followed in the assessment process.

This study examined whether SEA cases in Tanzania are cognizant and inclusive in articulating these components and procedures. However, it is worth noting that SEA Guidelines recognize other guidelines that are specific for certain types of PPPs and advise using the steps set out in those guidelines. For instance, the ‘Guidelines on the Preparation of Cabinet Papers’ of 2010 provide specific procedures for policy formulation, and therefore should be adhered to when conducting SEA for policies. In practice, SEA needs to be adapted to the scale and nature of the PPP in question. It is important to treat SEA as a flexible process, tailored to the needs of different types of PPPs to which the SEA Regulations apply. The assessment of SEA cases has considered this significant exception provided in the SEA Guidelines.

### *Integrated*

Integration in SEA requires the goals of economic and social development to be defined in terms of sustainability, that is, integration of biophysical, economic, and social objectives. It significantly requires linking SEA at critical points in the decision-making process, most notably at the beginning of the PPP preparation before final decisions (IAIA 2002; Walker et al. 2016). SEA Regulations and Guidelines have incorporated some of these aspects of integration. The guidelines emphasize the early integration of environmental concerns and socio-economic aspects into PPPs to promote sustainable development (URT 2017). The integration process needs to be considered during the preparation of PPPs so that social issues, economic aspects, and environmental matters are taken into account. However, evidence shows that SEAs tend to enter the decision-making process late (mostly after the completion of the planning process), thus risking their ability to adequately influence sustainability outcomes. Consideration of institutional integration mechanisms, which is a significant aspect of sustainable development, is a challenging aspect of SEA. The assessment of SEA cases investigates the degree of integration in Tanzanian SEA practice keeping in mind these concerns.

### *Participative*

Stakeholder or public participation involves the identification of people and institutions with an interest in the outcome of the PPP, whether positive or negative, and who participate in the decisions, planning, and management of the proposed development. Stakeholders share information and knowledge and may contribute to PPP activities and influence decision processes (Hughes 1998; Alfred, 2015). The EMA of 2004 provides a mandatory requirement for public participation and stakeholder involvement in the SEA process. Stakeholders and the public have the right to participate in decisions concerning the design of PPPs that may affect their environment and livelihood (URT 2004).

The SEA Guidelines emphasize that stakeholder and public participation is mandatory when undertaking SEA. At a minimum, the responsible authority must meet with the main stakeholders to inform them about the proposed initiative and to solicit their views. Understanding the power relations between different stakeholders, and how they interact with each other and the environment, is essential for good analysis and process management. The guidelines noted that one of the challenges is to ensure that public engagement is meaningful and effective in influencing the outcome of the PPP and not just a case of providing detailed, rigorous, and comprehensive information. The public consultations process has to identify the best methods to ensure that stakeholders participate effectively and that their viewpoints are given proper consideration (URT 2017). It is critical to note that not all stakeholders share similar kinds of platforms or the ability to express themselves; therefore, SEA teams will need to be creative in ensuring that all key stakeholders are involved.

The analysis of SEA cases investigates the degree of stakeholder and public participation including the participation of often marginalized groups such as female households, unemployed youth, the disabled, elderly, and minority groups in SEA processes. The study also investigates whether stakeholder inputs and comments were explicitly addressed in the SEA report and whether SEA results are disseminated to all participants.

#### *Sustainability-led*

Sustainability is an integral part of the SEA process and adequate consideration is given to alternative PPPs to enhance sustainability objectives (IAIA 2002). SEA Guidelines have incorporated these principles and SEA is required to analyse potential impacts and risks of the proposed PPPs, to propose mitigation and enhancement measures, as well as to suggest alternatives against a framework of sustainability objectives, principles, and criteria (URT 2017). However, one of the critical challenges facing SEA in Tanzania, and may be in many other countries is the absence of criteria that define sustainability and how it can be achieved. As a country, and in many policy documents, the phrase ‘sustainable development’ is used to express what the country wants to be but there are insufficient criteria that define what sustainability is and how it should be achieved. In this case, it often remains the job of the SEA teams to define the criteria based on what they see fit for the situation. This study investigated these claims and identified the extent to which SEA practice is sustainability-led. The study also assessed climate change impacts concerning the proposed PPPs in SEA in Tanzania, making it among the first such study of its practice in the region.

#### *Transparent, accountable, and improved governance*

Effective SEA requires adherence to the principles of good governance (IAIA 2002). Good governance entails participation, transparency, compliance, enforcement, and accountability. Under good governance, there are clear policy-making procedures at the level of public authorities, civil society, and stakeholder participation in decision-making processes, and the ability to enforce rights and obligations through legal mechanisms (Sachiko and Durwood 2007; Huger 2010). Walker et al. (2016) revealed that these aspects are intangible, hard to measure, and often elusive. Nevertheless, it should be understood that these principles are critical for an integrated SEA process, meaningful outcomes, and influential links to decision-making. They are also important conditions for learning best practices and improving SEA processes. SEA Regulations and Guidelines have articulated some of these aspects. For instance, monitoring and evaluation plans need to indicate the linkages between impacts identified in the SEA study, the indicators to be measured, methods to be used, sampling locations, as well as the frequency of measurements (URT 2017: 18). The plans also need to indicate the responsibilities of each institution for monitoring, coordination, and institutional strengthening, implementation schedule, cost estimates, and

reporting procedures. This study investigated these aspects together with whether there is learning for improved governance; it also looks at evidence of SEA recommendations used to amend or inform the PPPs.

## 5 Result and discussion

The analysis of the selected SEA cases, supplemented with interview data, shows that the SEAs are not completely consistent or inconsistent with any of the five ideal criteria. Instead, there is a mix of consistency among the sub-criteria (Table 3). Some of the criteria have not been reported or are yet to be considered in Tanzanian SEA practice. These include institutional integration mechanisms, dissemination of SEA results to stakeholders, as well as the existence of enforcement mechanisms for compliance. The findings also indicate that there are limited linkages between PPP formulation and SEA processes. SEAs tend to enter the planning process late, hence limiting their ability to influence the sustainability outcomes. The study further finds that to date only few PPPs have been subjected to SEA (24 SEAs out of which 17 have been approved). Bills, regulations, and strategies are yet to be subjected to SEA processes. Other findings are critical challenges facing Tanzanian SEA practice that include inadequate funds allocation, limited expertise, and a low level of awareness of SEA processes. The findings on how SEA cases have complied with each sub-criterion are discussed in the following.

### *Sufficient information for cognizant decision-making*

All the analysed SEA cases contain sufficient information except the SEA for the review of the National Land Policy (NLP) and the National Irrigation Policy (NIP). SEA process for the reviewed NLP was conducted after the completion of the draft policy. When submitted for approval, the Inter-Ministerial Technical Committee observed that according to EMA the policy needs to be subjected to SEA. The responsible authority formed a task force of officials from the government to undertake the SEA process. The task force reviewed the proposed policy statements to determine whether environmental issues have been incorporated. They produced a report indicating how some of the policy statements were modified to incorporate environmental aspects. This report was also termed as a SEA report.<sup>1</sup> Nevertheless, it should be noted that policy formulation in Tanzania follows different procedures, unlike the plans and programmes. The policy formulation process follows the guidelines issued by the Cabinet Secretariat, which provides guidance on how to prepare cabinet papers including draft policy documents. The guidelines require the process of policy formulation to be inclusive and participatory, which altogether are a significant element in the SEA process. Therefore, most of the assessed criteria have not been reported in the revised NLP report as shown in Table 3. Similarly, SEA for the National Irrigation Master Plan (NIMP) and NIP were combined in the assessment process. Therefore, it was difficult to ascertain how the assessment process for the policy was conducted. This is critical and needs to be addressed in Tanzanian SEA practice.

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<sup>1</sup> Interview with the Ministry of Lands, Housing and Human Settlements Development, Government of Tanzania, Dar es Salam, Tanzania (2020).

Table 3: Results of analysis framework applied to the selected SEA cases

SEA report	1: Inclusive			2: Integrated				3: Participative					4: Sustainability-led				5: Governance, accountability, and transparency			
	a	b	c	a	b	c	d	a	b	c	d	e	a	b	c	d	a	b	c	d
DCMP	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆		☆☆☆	☆☆☆				☆☆☆	☆☆☆	☆☆☆	☆☆☆		☆☆☆		
SAGCOT	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆		☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆
DARTMP	☆☆☆	☆☆☆	☆☆☆	☆☆	☆☆☆	☆☆☆		☆☆☆	☆☆☆		☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆
IWRMD plan	☆☆☆	☆☆☆	☆☆☆	☆	☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆			☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆
BSEZMP	☆☆☆	☆☆☆	☆☆☆	☆		☆☆☆		☆☆☆	☆☆☆			☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆
NIMP	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆		☆☆☆	☆☆☆	☆☆☆		☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆
Review of the NLP				☆	☆☆			☆☆☆	☆☆☆		☆☆☆				☆☆☆		☆☆☆			☆☆☆
NIMP and NIP	☆☆☆	☆☆☆	☆☆☆	☆		☆☆☆		☆☆☆	☆☆☆			☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆	☆☆☆

Note: ☆☆☆ consistent; ☆☆ somehow consistent; ☆ inconsistent; no star, unknown/unreported. See Table 1 for acronym explanations and number and letter codes.

Source: authors' compilation based on study data.

### *Criteria for screening and assessment of cumulative impacts*

Out of eight reviewed SEA cases, seven have mentioned cumulative impacts. Most of the reports indicate that cumulative effects will occur due to the interactions of the plan components and the environment. For instance, the SEA for Dodoma City Master Plan (DCMP) indicates poor water quality as a classic example of a cumulative impact, arising from the interactions of water sources with developmental activities such as land use, highways runoff, industrial plants, as well as flooding that carries contaminated water or sediments over significant distances. SEA for the Bagamoyo Special Economic Zone Master Plan (BSEZMP) indicates climate change as an example of a cumulative impact, arising from the consumption of fossil fuels and other carbon-based fuels across a wide range of activities (e.g., transportation, production of energy, production of material goods, production of food, space cooling, changes in land use and land management). The SEA for the Integrated Water Resource Management and Development (IWRMD) Plan for Rufiji Basin went further and systematically assessed various potential impacts based on individual and cumulative effects of the activities on each of the plan components. These reports provided recommendations on how to minimize negative cumulative impacts for each component. Nevertheless, the reports did not indicate the criteria used for screening and assessment of cumulative effects. A similar study (Walker et al. 2016) suggested that the criteria for screening and assessment of cumulative effects are very hard to predict and hence need to be provided in the SEA Guidelines.

### *SEA components and expertise needed to facilitate the assessment process*

Although there is variability in approaches taken during the assessment process, seven SEA cases addressed each of the components provided in the SEA Regulations and Guidelines. However, during the interview sessions, it was noted that following the established SEA components is not enough to facilitate the effective assessment of PPPs. It was argued that SEA Regulations and Guidelines need to clearly define the kind of expertise and discipline needed in undertaking SEA. Minimum qualification for experts/consultants involved in the SEA process is required for undertaking an effective SEA.<sup>2</sup> However, experience shows that legislating such aspects would make SEA rigid and difficult whereas, flexibility is what drives best SEAs. Since there is an element of preparing terms of reference for undertaking SEAs, institutions undertaking SEA should be able to indicate the required skills in each SEA situation.

### *Not early enough to inform the planning process*

Most of the assessed SEA cases entered the decision-making process late, thus limiting the ability to adequately influence sustainability outcomes. SEA for DCMP, the Southern Agriculture Growth Corridor for Tanzania (SAGCOT) programme, and NIMP were conducted early enough to inform the decision-making process. Other SEA cases such as the IWRMD Plan, BSEZMP, review of the NLP, NIMP, and NIP, and DARTMP were conducted after the completion of the policy/plan. For instance, SEA for the IWRMD plan did not change the plan, but SEA recommendations will be incorporated in the annual plans<sup>3</sup>. Lack of funding was mentioned as one of the reasons for delay in conducting an SEA in Tanzania. The SEA process seems to be expensive and so is conducted subject to the availability of funds. For this reason, most of the completed SEAs have been funded by development partners such as World Bank (SAGCOT Programme), Japan International Co-operation Agency (NIMP), World Wide Fund for Nature

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<sup>2</sup> Interview with the Ministry of Industry and Trade, Government of Tanzania, Dar es Salam, Tanzania, 2020.

<sup>3</sup> Interview with the Ministry of Water, Government of Tanzania, Dar es Salam, Tanzania, 2020.

(strategic development plans for Mtwara and Ruvuma corridors), and the Department for International Development in the United Kingdom (IWRMD plan). Most of these SEAs were conducted by international consultants who are also expensive. Thus, it was suggested that SEAs need to be conducted by registered national experts in order to reduce cost. Capacity building for the national experts is vital to ensure that SEA practitioners including government officials are equipped with the necessary skills required to undertake SEA.<sup>4</sup> However, experience shows that lack of funding is not a sufficient reason for the late start of the SEA process because even when funding is given as a grant, the early start of SEA has always been difficult. The main challenge is an inadequate understanding of the role SEA can play in informing the choice of PPPs; this is for several reasons, including accountability and broader governance issues.

#### *Insufficient integration of SEA in the planning process*

The expected integration of SEA outcomes into the PPP has been a major weakness of the SEA process not just in Tanzania but in many other countries. The integration referred here is about the use of the SEA outcome to inform and influence the choice of PPP that will drive sustainability issues. Four out of the eight assessed SEA cases were found to be integrated into the planning process (Table 3). SEA for DCMP, SAGCOT programme, NIMP, and DARTMP were integrated in different dimensions. For instance, SEA for DCMP was prepared together with the plan to assist planners to design investment policies, programmes, and projects that are sustainable over a long timeframe. SEA for the SAGCOT programme was prepared to complement the Environmental and Social Management Framework and Resettlement Policy Framework, both of which are vital for programme sustainability. SEA for DARTMP noted that satellite cities and sub-centres came into being as a result of integrating SEA in the planning process. The iterative principle was also incorporated to ensure assessment results influence planning and decision. On the other hand, SEA for the IWRMD plan was undertaken after the completion of the plan, but the recommendations were later integrated into the annual plans. The review of the NLP also identified environmental issues that were integrated into the draft NLP. The rest of the SEA cases did not indicate the level of integration in the planning process.

#### *Integration of biophysical, social, political, and economic aspects*

SEA Guidelines emphasize the integration of environmental considerations as well as economic and social aspects to inform decision-making processes. Except for the revised NLP, the rest of the SEA cases addressed socio-economic as well as environmental concerns and identified potential impacts and mitigation and enhancement measures. For example, SEA for BSEZMP integrates key components such as socio-economic, ecological, and built environment factors into the assessment process. Taking an example of the built environment, the effects on the quality and character of the area in the maintenance and restoration of existing structures and the construction of new developments were explored. SEA for NIMP assessed physical, biological, socio-economic, and environmental impacts under the proposed strategic components that include regulatory framework and institutional strengthening. SEA for DCMP ascertains the interactions between environmental, social, economic, and institutional factors linked to the implementation of the master plan. It also provides how these components will be monitored, measured, and evaluated during implementation. This sub-criterion was not observed in the reviewed NLP due to the factors mentioned earlier.

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<sup>4</sup> Interview with the Ministry of Water, Government of Tanzania, Dar es Salam, Tanzania, 2020.



### *Insufficient institutional integration mechanisms*

Out of eight reviewed SEA cases, only one incorporates the institutional integration mechanisms. SEA for the IWRMD plan provides for inter-sectoral coordination by establishing thematic groups to be facilitated by a basin forum. Institutional leaders for the groups will identify relevant stakeholders to become members of the thematic group (including their roles and interests), prepare a draft thematic plan, convene meetings to review the plan before its presentation in the basin forum, and coordinate efforts in mobilizing resources for the implementation of the plans. Intra-governmental coordination between different levels of government from national to the LGA levels was also emphasized. Mechanisms for integration were discussed during the meetings with basin stakeholders who emphasized that stronger ties with line ministries, including President's Office, Regional Administration and Local Government (PO-RALG) Tanzania, are necessary to ensure integration of the IWRMD concept in the LGA plans. This arrangement will facilitate the implementation of the IWRMD plan at all levels. Despite its significance, the integration mechanisms were not observed in the rest of the SEA cases investigated.

### *Stakeholder consultations and participation throughout the process*

All the reviewed SEA cases have indicated that stakeholders were involved in the planning or the assessment process. For instance, SEA for review of the NLP noted that the process for policy review was conducted through a participatory approach by involving all eight land zones across the country. In those zones, key stakeholder meetings were conducted including public hearings. The draft policy was also shared by stakeholders to review and provide further comments before submission for approval. One of the challenges observed in stakeholder participation is the availability of the intended stakeholders on time. It was also observed that some of the consultation workshops (SEAs for the SAGCOT programme and the IWRMD plan) were conducted in Dar es Salaam and not in the site-specific areas where the plan or programme will be implemented. On the other hand, SEA Guidelines emphasize the inclusion of the education component in the assessment process. Stakeholders should be made aware of the SEA processes before consultation. Thus, the responsible authority undertaking SEA should ensure careful stakeholder analysis is carried out to identify stakeholders and prepare a communication plan to be used throughout the SEA. If the public is not used to being engaged, particularly at the strategic level, and if there are no precedents, it is critical to include an awareness component in the public engagement process. None of the assessed SEA cases included an awareness component in the stakeholder engagement process. This shortfall was also noted during the interview that most of the stakeholders consulted in SEA studies are not aware of SEA processes. This signifies the need to operationalize an awareness component in Tanzanian SEA practice.

### *Methods for stakeholder and public participation*

SEA Guidelines insist that public participation and institutional consultation should be open and transparent and should also be conducted at the early stage of the preparation of SEA. It obliges the responsible authority to establish a list of interested and affected parties as well as developing methods of notifying them about the intended PPP development. All the studied SEA cases indicate various methods employed for engaging stakeholders. Among the methods used were consultation meetings, workshops, and public hearing through issuing a public notice of attendance. However, key aspects such as adequate notice, accessibility of documents, and providing feedback were not adequately observed in the assessment process.

### *Criteria for selecting marginalized populations in the SEA process*

Three out of eight SEA cases indicate the involvement of marginalized populations in the assessment process. SEA for NIMP emphasized that women and vulnerable groups have equal access to water, land, and productive resources. However, the report did not indicate how marginalized groups were involved in the assessment process as well as how their views and concerns were addressed. SEA for the IWRMD plan emphasized that the plan should ensure women and vulnerable groups are represented in all institutions related to the plan and project development and implementation, particularly with regard to land use and tenure. SEA for the SAGCOT programme involved 120 ethnic groups within the southern corridor where Barbaig and Hadzabe are recognized as marginalized populations. Moreover, unemployed youth, youth with unreliable income, and female youth were consulted as vulnerable groups. However, there were no criteria used to identify these groups as marginalized and vulnerable. The identification of a marginalized population is a challenging issue if one does not have criteria to dissect who is marginalized and in which ways. This is, however, a very important aspect of the SEA process because it seeks to answer the question of who benefits from the PPPs and who bears the cost. The formulation of any PPP must not result in burdening one segment of the society at the expense of another because the approach will endanger its sustainability. Apart from establishing criteria for selecting the marginalized groups, there is also a need for establishing baseline indicators to monitor the extent to which the proposed undertaking is affecting the marginalized groups. The baseline indicators can be quantitative (income measures, etc.) but also qualitative (essential when it comes to access of common property resources like forests and grazing land that might be affected by the proposed PPPs).

### *Insufficient dissemination of SEA results to participants*

Five of the eight SEA cases did not meet this criterion. There is no indication of whether the reports were disseminated to stakeholders and their inputs addressed. SEA for the SAGCOT programme shows that there was concern about collecting feedback/comments on the report from departments and agencies before production of the final report. There was early sharing of the draft report with the participants as well. Stakeholder feedback workshops/meetings for the DARTMP was organized at the level of the municipal councils in Dar es Salaam and at the PO-RALG level in Dodoma City and involved several stakeholders including DoE who chaired the Dodoma meeting. Views from all the meetings were used to further inform the development of the DARTMP. Moreover, during the interview sessions with the Ministry of Lands, Housing and Human Settlements Development it was observed that the first phase of the draft land policy was to consolidate stakeholder views gathered through public hearings and meetings. The second phase was to disseminate the draft policy to stakeholders to review and provide feedback. Feedback inputs were incorporated in the draft land policy before submission for approval.

### *Stakeholder inputs and comments addressed in the SEA report*

Five SEA cases indicate how stakeholder inputs were addressed. Most of the positive and negative impacts are evaluated and proposed mitigation/enhancement measures are derived from stakeholder inputs. For instance, SEA for BSEZMP indicates that inputs from all major stakeholders helped to prioritize the environmental concerns that were considered to be of moderate to high significance. Table 46 of the SEA report shows comments and concerns raised by villagers and other stakeholders and how they have been handled within the report. SEA for NIMP indicates that inputs from stakeholders informed the analysis of issues, identification of alternatives and weighting criteria, and the development of a strategic management plan. Despite consulting the stakeholders, other SEA cases did not indicate how their inputs were addressed in the final SEA reports.

### *Enhancement of positive impacts as well as mitigation of negative impacts*

Seven out of eight assessed SEA cases have comprehensively assessed environmental impacts and proposed mitigation and enhancement measures. For instance, SEA for DCMP applied an assessment framework to categorize the likely significant impacts arising from each major component of the plan and proposes possible mitigation measures. These measures include policy and regulatory changes, institutional capacity requirements, and enhancement programmes. The framework highlights potential trade-offs associated with proposed actions and describes management objectives that balance socio-economic and environmental aspects. SEA for the SAGCOT programme used scenarios to determine probable impacts on a range of environmental and social values and indicators. These values include physical aspects such as land and water availability; ecological values such as habitat connectivity, pressure on forests, and impacts on endangered species; social values such as demographic change and resource-use conflicts; and economic aspects including employment. For each scenario, the study team has assessed what specific measures could be undertaken to avoid, minimize, or mitigate identified significant negative impacts and enhance positive effects. The measures include changes to policies as well as enhanced planning procedures, and the need for institutional changes as well as capacity development.

### *SEAs identify preferred options/alternatives that will drive sustainability*

Seven out of the eight assessed SEA cases adopted different approaches to identify alternatives to the proposed PPPs. The BSEZMP adopted the guiding questions to identify alternatives and their socio-economic implications. The DARTMP alternatives were assessed by identifying the likely changes to the baseline conditions as a result of implementing the proposed plan alternatives. These changes are described in terms of their geographic scale, the timescale over which they could occur, and whether they are temporary or permanent as well as positive or negative. The SAGCOT programme developed the alternatives through a set of scenarios. These include a scenario of what could happen without the SAGCOT programme, a scenario of what could happen with the SAGCOT programme but without any specific environmental measures, and a scenario of accelerated agribusiness investments with comprehensive environmental caretaking. All the alternatives in the SEA cases were assessed and their implication in decision-making provided.

### *Climate change impacts addressed in the proposed PPP*

Mainstreaming climate change into PPP formulation through SEA is critical. This is a global issue and any PPP development has to examine how its implementation will intensify climate change impacts and suggest ways to avoid or adapt its impacts. Six SEA cases have addressed the impact of climate change in the proposed PPPs. DCMP, for instance, identified climate change threats that are predicted to cause major complications for the resources and well-being of the community. These include unpredictable precipitation and water availability (seasonality and intensity) as well as decreased agricultural productivity due to unreliable rainfall, floods, drought, pests, and diseases. The report identified key activities that may contribute to climate change effects. These include greenhouse gas emissions associated with changes in the total volume and composition of traffic, greenhouse gas emissions associated with operation activities, as well as greenhouse gas emissions associated with maintenance activities. The report identified possible ways of reducing risk and potential damage from impacts of climate change by carrying out risk and vulnerability assessments and implementation of appropriate adaptation measures. SEA for NIMP suggests that climate change is expected to enhance the vulnerability of poor farmers in rain-fed agriculture. Increased occurrence of floods and droughts will escalate the uncertainty in agricultural production and make the variations in yield more severe. As such, the development of irrigated agriculture seems logical to substantially increase farmer income and national food security. Equally, SEA for the IWRMD

plan recommends the development of climate-smart agriculture that would have major positive impacts on agricultural productivity and food security as well as on reducing inequalities by helping the most vulnerable households to adapt to climate variability.

#### *Criteria that define sustainability and how it should be achieved*

Literature suggests that a paradigm shift in SEA is required: from being impact-based to more proactively integrating sustainability thinking into the planning process (Gibson et al. 2016). An impact-based approach focuses on identifying and minimizing the negative impacts of the proposed PPP. On the other hand, objective-led SEA assesses the ability of the PPP, or alternatives to the PPP, to achieve sustainability objectives. Most of the assessed SEA cases just mentioned sustainability, with no clear criteria on how it has been defined and integrated into the PPP formulation. For instance, SEA for DCMP assesses the impacts of the proposed plan and its alternatives as well as proposes possible mitigation measures. It also suggests policy and regulatory needs as well as institutional capacity requirements that are linked to the implementation of the plan. This is another example of impact-based SEA and not objective-led SEA. SEA for NIMP and NIP combined the assessment of policy and plan, hence limiting its ability to proactively integrate sustainability thinking into the planning process. Despite policy formulation being different from plans and programmes, SEA Guidelines needs to establish a set of criteria that define what is sustainability and how it should be achieved.

#### *Insufficient enforcement mechanisms for compliance*

Enforcement mechanisms for compliance are essential for quality governance and adherence to the rule of law. In this respect, two enforcement mechanisms have been examined here: (i) mechanisms to ensure that the authorities required to undertake SEA adhere to the provisions of EMA and SEA regulations; and (ii) mechanisms to ensure that SEA recommendations and proposed environmental management plans are effectively implemented. SEA regulations and guidelines have not clearly articulated these mechanisms for enforcement. Nevertheless, two of the assessed SEA cases have tried to suggest mechanisms to ensure SEA recommendations and proposed environmental management plans are implemented. For instance, SEA for DARTMP assessed the institutional capacity to monitor and implement SEA recommendations. The report states clearly that the principal institution relevant for the implementation of this SEA and its recommendations is the PO-RALG. At the local level, the Sector Environmental Coordination Unit within PO-RALG and the Environmental Unit of Dar es Salaam City Council shall be responsible for SEA monitoring and evaluation. The report recognizes that the environmental units established at the regional and local level do not have strong capacity in the environment and SEA-related issues, therefore capacity development programmes were proposed. The programmes are informed by needs assessment so that gaps in skills, knowledge, and institutional arrangement can be addressed on time. With support from the National Environmental Management Council (NEMC) and relevant district councils, SEA for the SAGCOT programme recommended the SAGCOT Centre to monitor the implementation of the proposed investment projects in the corridor.

The key issue that is missing in the assessment is the establishment of enforcement mechanisms for conducting SEA. This was also noted during the interview with SEA experts and agencies involved in the SEA process. For example, the interview with SEA experts who also participated in the preparation of SEA for DCMP revealed that SEA should be coordinated by an independent institution such as NEMC to effectively enforce the compliance. It was emphasized that an institution like NEMC, which is a regulator, has the capacity to sue and be sued as well as impose penalties for non-compliance. The interview with the Vice President's Office (VPO) also noted the same challenges and states that:

because SEA is undertaken by government entities, it is difficult to compel such entity to undertake SEA because we are all government. We just use diplomatic ways to make sure that SEA is conducted by those entities and report the status of implementation to VPO.<sup>5</sup>

On the other hand, to address enforcement challenges, officials from Meru District Council recommended the government issue a circular that provides a mandatory requirement for responsible institutions to undertake SEA. In doing so, SEA can be part of an auditing requirement to be monitored annually by the Office of the Controller and Auditor General when conducting a performance audit.<sup>6</sup>

#### *Comprehensive monitoring and evaluation plans*

The assessed SEA cases showed some variation in terms of the level of detail and information included in the monitoring plans. Except for the SEA for review of the NLP, the rest of the cases contain a comprehensive framework for monitoring and evaluation with the potential to encourage iterative learning and influence future decisions. For instance, SEA for DCMP has a framework that provides details of the environmental protection objectives, associated targets and indicators, responsible institution for monitoring, as well as monitoring results anticipated. SEA for the SAGCOT programme will be implemented together with the Environmental and Social Management Framework and Resettlement Policy Framework to monitor the investment projects within the corridor.

#### *Learning evidence to improve institutions for decision-making*

Out of eight assessed SEA cases, four have used different approaches to indicate the aspect of learning that will improve institutional capacity to implement SEA recommendations and proposed environmental management plans. For instance, SEA for NIMP insists on the collaboration between LGAs and the National Irrigation Commission. It recommends that the parent ministry should strengthen the role of the LGAs and the National Irrigation Commission in coordinating implementation as well as mobilizing resources for long-term sustainability of the irrigation sector. SEA for the IWRMD plan recommends the establishment of the basin forum and a technical coordination team to improve coordination and stakeholder management in the implementation process. SEA for DARTMP emphasizes capacity needs assessment for PO-RALG and Dar es Salaam City Council staff to ensure gaps in skills, knowledge, and institutional arrangement are addressed on time.

#### *SEA recommendations used to amend or inform the PPPs*

Out of eight assessed SEA cases, only three were conducted during the preparation of the plans or programme. The rest were prepared after the completion of the plans, hence limiting their ability to influence sustainability outcomes of the proposed PPPs. SEA for DCMP was carried out in line with the planning process. SEA and the planning process inform each other, and the SEA report is one of the annexes attached with the plan. DARTMP was prepared in 2017 to harmonize the transport system and urban structures. The SEA report was prepared in 2018. However, there is evidence that the decision-making process was powered by the assessment results. One of the objectives of SEA is to present relevant environmental baseline information, including a review of

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<sup>5</sup> Interview with Division of Environment, Vice President's Office, Government of Tanzania, Dar es Salaam, Tanzania, 2020.

<sup>6</sup> Interview with Meru District Council, Arusha region, Tanzania, 2020.

the proposed plan. NIMP was updated in 2018. The main purpose was to subject NIMP to SEA, which fully examined the potential environmental and social issues that could be associated with their implementation.

On the other hand, an interview with the Ministry of Water indicated clearly that the purpose of conducting SEA for the IWRMD plan was not to amend the plan. The recommendations of SEA will be implemented in the annual plans. This is a critical issue in Tanzanian SEA practice because the intention of conducting SEA was unclear, especially if it was not intended to improve the plan. It is also difficult to assess how sustainability issues were mainstreamed into annual plans and still remained effective. Other SEA cases do not indicate how SEA results amend or inform the developed PPP. A paradigm shift in Tanzanian SEA practice is required to ensure that PPP formulation embraces sustainability principles.

## **6 Conclusion and recommendations**

The practice of SEA in Tanzania is still in its infancy stage as SEA Regulations came out in 2008 and the SEA Guidelines in 2017, hence few SEAs have been completed and approved. Nevertheless, the promulgation of the guidelines increased the recognition of the value and importance of applying SEA in Tanzania. The guidelines provide direction on how SEA practice in Tanzania should be conducted following internationally practised principles and procedures. They have simplified the procedures and processes that are designed to enhance the potential for PPPs to achieve effective and sustainable development by integrating environmental and socio-economic aspects in decision-making. SEA for DARTMP, NIMP, and DCMP are good examples to describe the applicability of the guidelines in practice.

Despite the noted improvements brought by the guidelines, most of the interviewees observed that there is still a lot of work to do to improve SEA practice in Tanzania. The SEA Guidelines will need modification and improvement as experience increases and capacity improves. For instance, during the interviews it was reported that the capacity needed for conducting and reviewing SEA needs to be addressed in the SEA Regulations and Guidelines. The guidelines need to clearly define the kind of expertise and discipline needed in conducting SEA. The EMA provides the establishment of environmental experts in the ministries, departments, and agencies and LGAs to oversee environmental issues including coordinating SEA processes. These experts may be trained to become 'master trainers' who can act as in-country resource persons for further training of SEA practitioners. There are various SEA trainings offered to individuals even in Sub-Saharan Africa at different times of the year. Environmental experts, the Vice President's Office, and other sector ministries and agencies may benefit from such training.

Also, the findings indicate that there are limited linkages between PPP formulation and SEA processes. Most of the draft PPPs are not publicly accessible and, therefore, understanding how the SEA process influenced or amended the PPPs is quite difficult until development is in progress, which is too late for decision-making. Equally, SEAs tend to enter the planning process late, hence limiting their ability to influence the sustainability outcome of the proposed PPPs. It is observed that only SEA for DARTMP, NIMP, and DCMP have been prepared together with the respective plans. In this regard, PPP formulation in Tanzania should be harmonized with the SEA process. Yet, it is important to understand the wider political climate on how PPPs are formulated in an environment that may not be conducive to an effective SEA process. This does not mean that PPPs should not be subjected to the SEA process, but it means that there is a need for a flexible and proactive process in every situation. As such, SEA Regulations and Guidelines may provide timelines for the SEA preparation process and the implications it has on the final PPPs. Literature

suggests that greater transparency and accountability in demonstrating the linkages between SEA and planning processes enhance the overall perception of SEA value to decision-makers, planners, and the general public.

Other key aspects such as institutional integration mechanisms, participation of the marginalized population in the assessment process, dissemination of SEA results to participants, addressing stakeholder inputs and concerns, the existence of enforcement mechanisms for compliance, as well as evidence of learning to improve institutions for decision-making need to be articulated in Tanzanian SEA practice. Therefore, to improve SEA practice in Tanzania the following are recommended to be embedded in SEA Regulations and Guidelines:

- A registry for SEA experts with clear minimum qualification and discipline required to conduct SEA should be established. In this regard, SEA practicing certificates need to be introduced, including a mandatory continuing SEA education for experts to be fulfilled before renewing the certificates.
- An enforcement mechanism for conducting SEA should be established. The mechanism should ensure SEA is effectively applied as per law and that SEA recommendations and proposed environmental monitoring plans are effectively implemented and monitored. A regulatory authority may be established to enforce the proposed mechanisms.
- A set of criteria for screening and assessing the cumulative effects and climate change impacts in the assessment process should be established.
- A set of criteria should be established to define what is sustainability and how it should be achieved.
- Timelines for SEA preparation and the implications it has on the final PPPs are required. This will enable early integration of SEA in the planning process, hence increasing its ability to influence the sustainability outcome of the proposed PPPs.
- The government needs to allocate funds to ministries, departments, and agencies and LGAs to implement SEA. The funds may be integrated into the annual budget submitted for parliamentary approval.
- The government needs to issue a circular to emphasize and remind the responsible authorities about the importance and requirement of law to undertake SEA. The circular should recommend that SEA will be monitored annually by the Office of the Controller and Auditor General when undertaking performance audit.
- Capacity building for registered national SEA experts including government officials is required to ensure that they are equipped with the necessary skills required to prepare, review, and monitor SEA implementation.
- An awareness programme that includes an education component is required. The programme should focus on creating awareness and inform SEA practitioners and government authorities on the benefits of applying SEA effectively. The education component should also address the importance of involving stakeholders including marginalized groups in all stages of SEA processes.

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