THE ROLE OF IMPACT ASSESSMENT IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS IN AFRICA

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Abstract

Environmental impact assessment (EIA) is considered an important regulatory tool with the potential to assess the ecological, economic, and social sustainability of developmental projects. However, since its adoption into the legislation of most sub-Saharan African countries and with the introduction of the United Nations Sustainable Development Goals (SDGs) agenda 2030, there has not been an adequate assessment of the role that EIA could play in achieving the SDGs. Here we present a review of environmental impact assessment legislation in selected African countries compared to the attainment of the United Nations SDGs. We also examine the challenges of achieving the SDGs in sub–Saharan Africa, and the role that EIA can play in achieving the SDGs in sub-Saharan Africa.

We showed that there is a good positive correlation between development of EIA legislation and SDGs attainment in sub-Saharan African countries. In addition, we provided practical actions and consideration for environmental practitioners towards ensuring the alignment of SDGs to the EIA process. It is observed that the EIA process is a very effective tool in evaluating the sustainability of development proposals. Significant improvements on achieving the SDGs can be advanced by good EIAs and strict adherence to regulations. This requires a close collaboration and cooperation between environmental practitioners and the decision-makers to ensure that the consideration of the SDGs is an integral part of every EIA; this will maximise opportunities for sustainability. Sustainability should be explicitly incorporated into EIA legislation, guidelines, and institutional arrangements in sub-Saharan Africa. There is also the need for coherent policies at different government levels on the environment and strategic impact assessment, ensuring implementation and establishing a review process to ensure compliance in sub-Saharan Africa.

KEY WORDS: EIA, SDGs, SUSTAINABILITY, LEGISLATION, SUB-SAHARAN AFRICA

INTRODUCTION

Environmental impact assessment (EIA) is considered an important regulatory tool with the potential to assess the ecological, economic and social sustainability of developmental projects. However, since its adoption into the legislation of most sub-Saharan African countries and with the introduction of the United Nations Sustainable Development Goals (SDGs) agenda 2030, there has not been an adequate assessment of the role that EIA could play in achieving the SDGs especially considering that it is the key tool, if not the only sustainable development-oriented tool, in most sub-Saharan Africa countries (Weaver et al. 2008). Although not the aim of this paper, it is helpful to highlight the attributes of sustainability that are usually not highlighted in other literature, resulting in conflicting definitions of sustainability.

Sustainability is a universal state at which the rate of development of our planet by humankind is within a limit that guarantees the balance of social, economic, and environmental aspects for both current and future generations. In recognition of the universal nature of sustainability, the United Nations adopted the slogan "leave no one behind" because unsustainable development in one region or country will affect the best efforts of sustainable development in other parts of the world, giving rise to an overall unsustainable planet. In addition to the universal nature of sustainability, sustainability level is location dependent, directional and evolutionary. In a bid to a achieve sustainable state, we try to move from our current state on the sustainability continuum to the possible perfect sustainable state, but different countries are at different stages of the sustainability continuum (see Figure 1 below). Despite the universal nature of sustainability, the fact that developed economies focus on different aspects of the sustainable development goals compared to developing economies, reflects the location-dependent nature of sustainability. For example, a developing economy such as Nigeria may consider her main focus to be the provision of food, basic infrastructure and poverty eradication, while developed economies such as the United Kingdom and Germany may consider their major sustainable development goal focus to be reducing greenhouse emissions in a bid to arrest climate change. Similarly, the distance from the current level of sustainability to the 'perfect' sustainability state is evolutionary. The recent Covid-19 pandemic has highlighted the dynamic nature of sustainability. For example, the associated economic shutdown and the drive towards economic catch up might be at the cost of the environment.

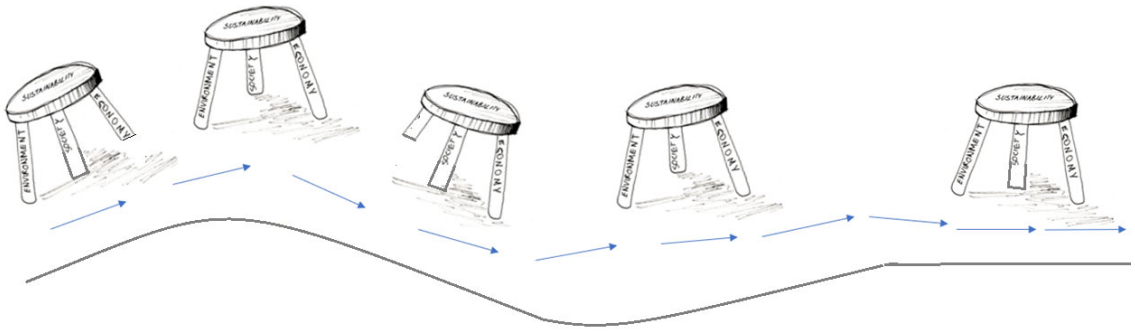

Figure 1: The universal, dynamic, location dependent and evolutionary nature of sustainability

The United Nations in 2012 provided an international framework for achieving sustainable development namely the Sustainable Development Goals (SDGs). There are 17 SDGs (see Figure 2 below), and compared to other continents, sub-Saharan Africa (SSA) is lagging in all except Goal 13- Climate Action. See Table 1 below.

Figure 2: The 17 sustainable development goals (Adapted from United Nations SDG Knowledge Platform, 2020 website)

The SDGs are a shared holistic blueprint for peace and prosperity for people and the planet, now and into the future which stimulates action for transformation to sustainable development. Prior to the development of the SDGs, tools such as Environmental impact assessment (EIA) have contributed towards sustainable development of plans, policy, program, and projects. EIA is usually initiated by a decision to undertake a proposed action. It includes making information available about the environmental consequences of proposed actions and taking account of environmental consequences of the proposed action. Although the concept of EIA was introduced with the passing of the National Environmental protection Act in the United States in 1970, the EIA process has evolved over the decades to address global issues of sustainability and emerging trends, such as cumulative impact assessment, strategic impact assessment of programs and policies, broader coverage of the range of impacts (e.g., social, health, gender, cultural heritage, climate change) and improved public participation in the impact assessment process. In most countries especially in developing economies EIA at the project scale and SEA at national planning scale, are the keys or only available tools for assessment and enhancing sustainable development (Weaver et al. 2008).

EIA has been recognised as a forward-looking instrument that is able to proactively advise decision-makers on what might happen if a proposed action is implemented. Impacts are changes that are judged to have environmental, political, economic or social significance to society. Impacts may be positive or negative and may affect the biophysical environment, communities, human health and well-being, desired sustainability objectives, or a combination of these. When used correctly, ESIA can help us design and implement better projects that will face up to important challenges such as climate change, biodiversity loss, a growing population, urban sprawl, conflicts over increasingly scarce resources, inequities, and new technological opportunities. By critically examining development actions while they are still being conceptualised, ESIA can contribute to fostering a balanced and sustainable future, and to shaping, and making better, the society that future generations will be living in (www.iaia.org).

Since the emergence of strategic environmental assessment (SEA) as a key tool in promoting sustainable development in the 2000s, SEA has been adopted by many countries around the world as a means of achieving the UN's Sustainable Development Goals (SDGs). Indeed, the Johannesburg Plan of Implementation, agreed at the World Summit on Sustainable

Development in 2002 stresses "the importance of strategic frameworks and balanced decision-making as fundamental requirements for advancing the sustainable development agenda."

The shift from project-level EIA to addressing cumulative development issues at a programmatic level through SEA arose from the realisation that strategic-level interventions are needed to ensure that environmental, social, and economic aspects are taken into consideration at all stages and tiers of national decision-making, as well as in development cooperation programmes (OECD, 2006). SEA may be defined as a range of "analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the inter-linkages with economic and social considerations" (OECD, 2006). Thus, SEA plays a very different role to that of project-level EIA, by focussing on international, national and regional policies, plans and programmes. This allows sustainable development issues and cumulative impacts, including climate change, to be addressed at a much higher level than in an ESIA.

This paper presents a review of EIA legislation in sub-Saharan African countries within the context of the United Nations SDGs; an evaluation of the challenges to achieving the SDGs in sub-Saharan Africa and an analysis of the possible contribution that may be derived from the implementation of best practice EIA as a tool for achieving the SDGs in sub-Saharan Africa.

LEVEL OF SDG ATTAINMENT IN SUB-SAHARAN AFRICA

Table 1 below presents a summary of how sub-Saharan Africa is fairing with respect to the 17 SDGs, adopted from the 2019 United Nations SDG report on progress towards the SDGs. Of the 17 goals, sub-Saharan Africa is only on course to meet Goal 13- Climate Action. Despite some improvements, sub-Saharan Africa is behind other regions in most other aspects of the SDGs. Contrary to the United Nations slogan "leave no one behind", sub-Saharan Africa seems to be struggling to meet the SDG targets.

Table 1: The 17 SDGs and level of achievement in sub-Saharan Africa (United Nations Sustainable Development Goals (SDG) Knowledge Platform, 2019)

S/N	GOAL	SDG challenges in sub-Saharan Africa
1	End poverty in all its forms everywhere	Poverty in sub-Saharan Africa remains particularly alarming, with the share of working poor at 38 per cent in 2018. In 2016, 55 per cent – as many as 4 billion people – were not covered by any social protection cash benefits, with as much as 87 per cent in sub-Saharan Africa compared to 14 per cent in Europe and Northern America.
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Africa is the continent with the highest prevalence of undernourishment, affecting one fifth of its population (more than 256 million people). An estimated 821 million people – approximately 1 in 9 people in the world – were undernourished in 2017, up from 784 million in 2015. This represents a worrying rise in world hunger for a third consecutive year after a prolonged decline.
3	Ensure healthy lives and promote well-being for all at all ages	An estimated 303,000 women around the world died due to complications of pregnancy and childbirth in 2015. Almost all of these deaths occurred in low- and middle-income countries, and almost two thirds of those were in sub-Saharan Africa. These deaths are preventable with appropriate management and care. Globally in 2018, 81 per cent of births took place with the assistance of a skilled birth attendant, a significant improvement from 69 per cent in 2012. Coverage of skilled birth attendants in 2018 was only 59 per cent in sub-Saharan Africa.

4	Quality Education	Some 750 million adults – two thirds of them women – remained illiterate in 2016. Half of the global illiterate population lives in South Asia, and a quarter live in sub-Saharan Africa.
5	Achieve gender equality and empower all women and girls	Data from 106 countries show that 18 per cent of ever-partnered women and girls aged 15 to 49 have experienced physical and/or sexual partner violence in the previous 12 months. The prevalence is highest in least developed countries, at 24 per cent.
6	Ensure availability and sustainable management of water and sanitation for all	Between 2000 and 2017, the proportion lacking even a basic sanitation service decreased from 44 to 27 per cent, yet 701 million people still practised open defecation in 2017, especially in sub-Saharan Africa.
7	Ensure access to affordable, reliable, sustainable, and modern energy for all	The global electrification rate rose from 83 per cent in 2010 to 87 per cent in 2015, with the increase accelerating to reach 89 per cent in 2017. However, some 840 million people around the world are still without access to electricity especially in sub-Saharan Africa.
8	Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	Real GDP growth rate for least developed countries was expected to increase from 4.5 per cent in 2017 to 5.7 per cent in 2020, which is less than the 7 per cent envisioned by the 2030 Agenda. Rather than an increase of 4.5 per cent, the Covid-19 pandemic has further caused a reduction in the GDP growth in sub-Saharan Africa by as much as 3.5 percent (world bank).
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	While there has been an increase in the number of researchers per million inhabitants from 804 in 2000 to 1,163 in 2016, that number reached only 91 in sub-Saharan Africa. The proportion of global GDP invested in research and development increased from 1.52 per cent to 1.68 per cent from 2000 to 2016, with Europe and Northern America standing at 2.21 per cent of GDP spent on research and development and most developing regions falling short of the world average in 2016.
10	Reduce inequality within and among countries	While countries in developing regions represent over 70 per cent of the membership of the General Assembly and World Trade Organization, which utilize a one member, one vote system, their voting share in other international organizations remains far below these levels. Governance reforms are being negotiated at the International Monetary Fund, and changes were adopted at the World Bank in October 2018. However, full implementation will leave developing countries with just over 40 per cent of the voting rights, still short of the 75 per cent they represent in World Bank membership in terms of the number of countries.
11	Make cities and human settlements inclusive, safe, resilient and sustainable	While from 2010 to 2018 the proportion of solid waste collected was about 81 per cent globally, in sub-Saharan Africa it was only 52 per cent. The proportion of urban residents who have convenient access to public transport (defined as living within 500 m walking distance of a bus stop and within 1,000 m of a railway and/or ferry terminal) remains low, particularly in developing countries. In sub-Saharan Africa, 200 million people (about 71.8% of urban dwellers) live in urban slums and informal settlements. The region's urban population is projected to more than double to 760 million by 2030 and this may result in over 400 million people living in urban slum and informal settlements by 2030.
12	Ensure sustainable consumption and production patterns	The per capita "material footprint" of developing countries grew from 5 metric tons in 2000 to 9 metric tons of carbon in 2017, representing a significant improvement in the material standard of living. Most of the increase is attributed to a rise in the use of non-metallic minerals, pointing to growth in the areas of infrastructure. However, for all types of materials, developed countries have at least double the per capita footprint of developing countries. In particular, the material footprint for fossil fuels is more than four times higher for developed than developing countries.
13	Take urgent action to combat climate change and its impacts	With rising greenhouse gas emissions, climate change is occurring at rates much faster than anticipated and its effects are clearly felt worldwide. Sub- Saharan Africa is on course to meeting this goal considering her low emissions, however, considering the global nature of climate change consequences sub-Saharan Africa may be hit the hardest because of her weak response to date and the lack of resilience to climate shocks.
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Global trends point to continued deterioration of coastal waters due to pollution, plastic waste and eutrophication. Without concerted efforts, coastal eutrophication is expected to increase in 20 per cent of large marine ecosystems by 2050.
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	From 2000 to 2015, more than one fifth of the Earth's total land area was degraded, largely due to human-induced processes, such as desertification, cropland expansion and urbanization. During the same period, there were significant productivity declines in land cover, with grasslands incurring some of the greatest losses. The most fundamental and irreversible human impact on nature is species extinction. The Red List Index – which measures the risk of extinction, in which a value of 1 indicates no

		threat to any species, and a value of 0 indicates that all species are extinct – has deteriorated from 0.82 in 1993 to 0.73 globally in 2019.
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels	Birth registration plays a primary role in ensuring individual rights and access to justice and social services. Even if many regions have reached universal or near universal birth registration, globally the average is just 73 per cent. Fewer than half (46 per cent) of all children under the age of 5 in sub-Saharan Africa have had their births registered. The number of intentional homicides per 100,000 people increased from 6.0 in 2015 to 6.1 in 2017. This slight uptick was largely the result of an increase in the homicide rates in Latin America and the Caribbean and in some countries in sub-Saharan Africa. Various forms of violence against children persist. In 83 countries (mostly from developing regions), recent data show that nearly 8 in 10 children from 1 to 14 years of age were subjected to some form of psychological aggression and/or physical punishment at home.
17	Strengthen the means of implementation and revitalize the global partnership for sustainable development	Over 80 per cent of the population in developed countries were online in 2018, compared with 45 per cent in developing countries and only 20 per cent in least developed countries.

CHALLENGES OF ACHIEVING THE SDGS IN AFRICA

This section describes factors militating against the achievement of SDGs in Sub-Saharan Africa.

Data issues

The availability of data as input to computing key metrics for the assessment of progress made towards the SDGs is a major challenge for sub-Saharan Africa countries. Without quantified targets and monitoring, it is impossible to determine if enough progress is being made (Rotimi 2016). Data issues manifest themselves in three ways: inadequate key performance metrics for the evaluation of SDG progress; unavailable or poor/incomplete data; or thirdly, data are not available in a form that makes them accessible such as on the internet. More challenging is the unavailability of quality data to understand the state of sustainability in sub-Saharan Africa thus making it difficult to strategically plan for intervention or evaluate the progress made towards achieving the SDGs. For example, Ibeh (2020) evaluated the effect of changing groundwater levels in the Odo River sub-Basin in Nigeria and observed that there were poor records or non-existent data on baseline stream flow, groundwater level time series and gully/landslide morphology, despite the significant socio-economic effects of gully erosion and landslides in the area over some decades. Data are unavailable or in poor shape due to either negligence or the unavailability of funding for data acquisition.

Conflict

This is perhaps the most impactful factor as it negatively affects all the 17 SDGs. Conflict in the form of wars or terrorism results in national instability. Development does not take place in conflict ravaged areas let alone sustainable development. Many parts of sub-Saharan Africa are either at war or are experiencing insurgency of some sort. For example, the Boko Haram insurgency in Nigeria, Chad, Cameroon, and Niger; Al Shabaab in Somalia and Kenya; ISIS in northern Mozambique; Ansar Dine in Mali; and until recently, the Lord's Resistance Army in Uganda have caused forced displacement of the citizens. Without curbing these conflicts, the countries will be left behind in terms of meeting the SDG targets. For example, Libya did not submit an SDG progress report in 2019 due to the ongoing conflict (Index SDG, 2019).

Governance issues and weak institutions

Lack of political will and weak environmental institutions stem from poor governance. Almost all countries in sub-Saharan Africa have weak environmental governance structures and some degree of corruption, and this also plays an important role in the continent lagging behind in achieving the SDGs. Over the years, this has resulted in incoherent sustainability policies, weak environmental laws and non-existent monitoring and enforcement. Building effective capacity, skills, and knowledge to adequately address the SDG targets is hampered by weak institutional development. Strong institutional frameworks and well-articulated sustainability policies administered by competent authorities are essential to advance the vectors of sustainability.

Finance

According to Index SDG (2019) and Rotimi (2016), significant financial inputs are required to implement plans towards achieving the SDGs in sub-Saharan Africa. For developing countries to meet the data needs of the SDGs, current donor support for data and statistics will need to increase by nearly $200 million per year (United Nations, 2020). At present, funds used for the execution of SDG projects are provided by international donor agencies and the funding is far below what is required to achieve the SDGs in sub-Saharan Africa. The paucity of national funds in sub-Saharan African countries to implement their own SDG programmes, makes it more worrisome. In addition, there is a lack of prudent financial management and accountability of government funds. If the current rate of funding and poor accountability continues, sub-Saharan Africa is not on course to meet the SDGs by 2030. There is therefore, a need to increase funding from international organisations together with improved governance and financial accountability to ensure that the funds are properly managed.

Climate change

Of the 17 SDGs, most sub-Saharan Africa countries are on course to meet Goal 13 - Climate Action (Index SDG 2019), but this is due to their relatively low use of fossil fuels, limited generation capacity and overall low greenhouse emissions. However, the slow levels of progress in tackling climate change in many of the developed countries of the world is hitting the less developed countries the hardest, especially in sub-Saharan Africa, where the lack of preparedness for extreme events and the lack of economic, social and environmental resilience will exacerbate the negative effects of a changing climate. This is also an area where the environmental legislation in most countries lags behind the urgent need to address climate change, with only a few regulatory systems in sub-Saharan Africa explicitly requiring climate change to be addressed in an EIA (Walmsley and Husselman, 2019).

Demographics and migration

According to a Financial Times report of 17th June 2019, sub-Saharan Africa's population is set to double over the next 30 years. It is expected to add an additional 1 billion people and this puts it on track to overtake central and south Asia as the world's most populous region. Similarly, the World Bank reported that the population of sub-Saharan Africa is projected to grow by 10-fold between 1960 and 2050 (World Bank data catalogue, 2020). At present, available social facilities (schools, hospitals, municipal waste, provision of water and power) are already strained. Growing populations will add pressure on available amenities and compound efforts to curb or reduce migration. For example, according to the United Nations SDG progress report (2020), globally, 2 billion people do not have access to waste collection

services and 3 billion people lack access to controlled waste disposal facilities. With increasing urban populations and the existence of consumer-oriented economies amid rising income levels and rapid urbanization, it is estimated that the total waste generated in the world will double from nearly 2 billion tons in 2016 to about 4 billion tons by 2050.

THE STATE OF EIA PRACTICE IN SUB-SAHARAN AFRICA

Most countries in sub-Saharan Africa have some form of EIA legislation (with the exception of Somalia, South Sudan, Eritrea, Equatorial Guinea and Central African Republic), but the levels of practice within those countries which have EIA legislation differ considerably. Similarly, the levels of EIA governance vary widely throughout the region.

Table 2 below presents the SDG Index in sub-Saharan African countries from highest to lowest, according to the 2019 Africa SDG index and dashboards report, alongside their EIA legislation requirements. The EIA legislation was analysed by considering 9 criteria:

- Availability of legislation;
- Project screening;
- Consideration of alternatives;
- Consideration of biophysical, social and health risk impacts;
- Public participation at certain stages of the EIA;
- Impact predictions and the determination of significance;
- Quality assurance of EIA practitioners and government reviewers (e.g. through formal certification schemes);
- The need for an approved Environmental Management Plan (EMP);
- Follow-up auditing and compliance monitoring.

To evaluate the relationship between EIA and SDG attainment, we assigned values of two for each EIA criterion that has been achieved ('yes'), a value of one for the criteria which have only been partially fulfilled and zero for those criteria which have not been achieved (Table 2). A sum of the criteria values for each country is given as the EIA Score. The Persons correlation coefficient between the EIA score (development of EIA legislation) and SDG index score (SDG attainment) is 0.75 which shows a good positive correlation between development of EIA legislation and SDG attainment. The calculated t value for the correlation between EIA score and SDG index is greater than the critical t value at the 0.05 level, thus we can say that the correlation between EIA and SDG is significant at the 0.05 level. We further fitted a linear regression line to the two variables; this gave an R squared value of 0.521 which shows that more than 52 % of variation in SDG attainment is explained by development of EIA legislation (see figure 3). Countries that do not have EIA legislation are correspondingly low on SDG attainment index and countries which aim for best practice EIA legislation such as Mauritius, Botswana, South Africa, and Ghana have the best SDG attainment index in sub-Saharan Africa.

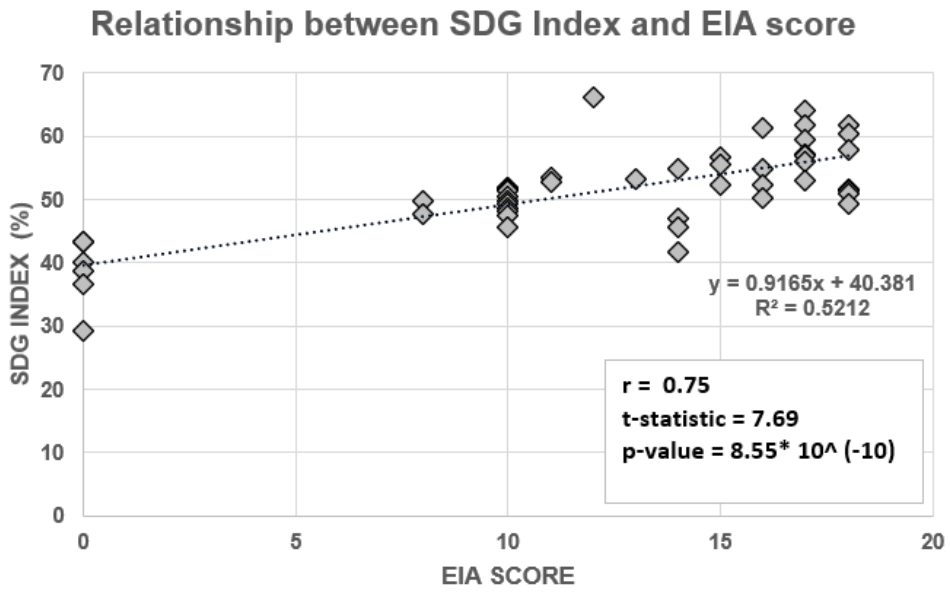

Figure 3: Relationship between EIA score and SDG index (showing the Persons correlation coefficient r = 0.75 and the R squared value of 0.521)

Table 2: EIA legislation requirements and SDG Index in sub-Saharan African countries from highest to lowest, according to the 2019 Africa SDG index and dashboards report.

Key: **1** partial/not clear; **2-** Yes; **0**-No

S/N	Country	Availability of legislation	Early screening	Consider alternatives	Consider biophysical, social and health risk impacts	Public participation at scoping and EIA stages	Impact predictions	QA for EIA practitioners and govt reviewers	EMP required	Authority follow-up monitoring	EIA SCORE	SDG Index (2019)
1	Mauritius	2	2	2	2	0	2	0	0	2	12	66.19
2	Cabo Verde	2	2	2	1	2	2	2	2	2	17	64.08
3	São Tomé and Príncipe	2	2	2	1	2	2	2	2	2	17	61.84
4	Botswana	2	2	2	2	2	2	2	2	2	18	61.64
5	Ghana	2	2	2	2	2	2	0	2	2	16	61.19
6	South Africa	2	2	2	2	2	2	2	2	2	18	60.43
7	Gabon	2	2	2	1	2	2	2	2	2	17	59.38
8	Rwanda	2	2	2	2	2	2	2	2	2	18	57.9
9	Namibia	2	2	2	2	2	2	2	2	1	17	57.09
10	Senegal	2	2	2	1	2	2	2	2	2	17	56.96
11	Kenya	2	2	2	1	2	2	1	2	1	15	56.55
12	Tanzania (mainland)	2	2	2	1	2	2	2	2	2	17	55.95
13	Côte d'Ivoire	2	2	2	1	2	2	2	2	0	15	55.59
14	Uganda	2	1	2	1	2	2	2	2	0	14	54.88
15	Zimbabwe	2	1	1	2	2	2	2	2	2	16	54.81
16	Burkina Faso	2	1	2	1	1	1	1	1	1	11	53.48
17	Ethiopia	2	2	2	1	2	2	0	1	1	13	53.22
18	Zambia	2	2	2	2	2	2	1	2	2	17	53.05
19	Togo	2	1	2	1	1	1	1	1	1	11	52.69
20	Eswatini	2	2	2	2	2	2	2	2	0	16	52.36
21	Malawi	2	1	2	2	2	2	0	2	2	15	52.32
22	The Gambia	2	1	1	1	1	1	1	1	1	10	51.91
23	Mali	2	1	1	1	1	1	1	1	1	10	51.75

S/N	Country	Availability of legislation	Early screening	Consider alternatives	Consider biophysical, social and health risk impacts	Public participation at scoping and EIA stages	Impact predictions	QA for EIA practitioners and govt reviewers	EMP required	Authority follow-up monitoring	EIA SCORE	SDG Index (2019)
24	Cameroon	2	2	2	2	2	2	2	2	2	18	51.57
25	Benin	2	1	1	1	1	1	1	1	1	10	51.52
26	Mozambique	2	2	2	2	2	2	2	2	2	18	51.42
27	Mauritania	2	1	1	1	1	1	1	1	1	10	51.29
28	Lesotho	2	2	2	2	2	2	2	2	2	18	50.91
29	Niger	2	1	1	1	1	1	1	1	1	10	50.33
30	Burundi	2	2	2	2	2	2	0	2	2	16	50.25
31	Sierra Leone	2	1	1	1	1	1	1	1	1	10	49.75
32	Djibouti	2	1	1	1	0	1	1	0	1	8	49.67
33	Guinea	2	1	1	1	1	1	1	1	1	10	49.36
34	Angola	2	2	2	2	2	2	2	2	2	18	49.26
35	Congo, Rep.	2	1	1	1	1	1	1	1	1	10	48.66
36	Liberia	2	1	1	1	1	1	1	1	1	10	48.02
37	Comoros	2	2	0	0	0	2	0	2	0	8	47.57
38	Sudan	2	1	1	1	1	1	1	1	1	10	47.4
39	Nigeria	2	2	0	0	2	2	2	2	2	14	47.07
40	Madagascar	2	2	2	2	0	2	0	2	2	14	45.57
41	Guinea-Bissau	2	1	1	1	1	1	1	1	1	10	45.48
42	Equatorial Guinea	0	0	0	0	0	0	0	0	0	0	43.39
43	Eritrea	0	0	0	0	0	0	0	0	0	0	43.33
44	Congo, Dem. Rep.	2	2	2	2	2	2	0	2	0	14	41.62
45	Somalia	0	0	0	0	0	0	0	0	0	0	40.12
46	Chad	0	0	0	0	0	0	0	0	0	0	38.73
47	Central African Republic	0	0	0	0	0	0	0	0	0	0	36.7
48	South Sudan	0	0	0	0	0	0	0	0	0	0	29.19

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ALIGNMENT OF SDGs TO THE EIA PROCESS

The alignment of SDGs to the EIA process requires that environmental and social practitioners define objectives, establish processes, set timelines, as well as make and implement decisions to meet set targets for proactive development of achievable sustainable outcomes. This includes ensuring that programmes, plans and policies are aligned with the transformational change agenda of the SDGs, thus planned outcomes of EIA are aligned with actions to achieve targets for social and economic goals and environmental improvement and restoration.

The following are practical actions and consideration for environmental practitioners towards ensuring the alignment of SDGs to the EIA process.

Screening (by regulatory authorities)

- Ensure to align screening thresholds to SDGs;
- Check that project contributes to the national objectives based on the following SDGs: 8 (Decent work and economic growth), 9 (Industry, innovation, and infrastructure), 11 (Sustainable cities and communities) and 12 (Responsible consumption and production).

Scoping

- Consultants: Identify which project components/actions will affect the SDGs;
- Authorities/client: In the Terms of references, specify which aspects (of the SDGs) need to be addressed in the EIA.

EIA stage

Consultants working on the following projects should demonstrate compliance with the respective SDGs (in brackets) and how the targets of those SDGs in particular, as well as other relevant goals, will be met. Examples are given in italics:

- Water and sanitation (SDG6);
    - *How will this bulk water supply project improve the access of the population to safe water supplies? (SDG6.1.1)*
- Energy (SDG7);
    - *How will this renewable energy project affect the overall share of renewables in the national energy mix? (SDG7.2.1)*
- Industry, innovation and infrastructure projects (SDG9);
    - *What proportion of the rural population within the target area for this rural road upgrade programme will have improved access (less than 2km) to an all-season road? (SDG9.1.1)*
- Urban development and projects affecting local communities (SDG11);

- *How will this proposed new urban expressway affect the annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in the city in which it is being developed (population weighted)? SDG11.6.2*

- Manufacturing, agriculture, food industry, mining, energy production, tourism, etc. relating to responsible consumption and production (SDG12);
    - *Provide a detailed EMP on how all waste on the proposed project will be managed with particular emphasis on recycling. SDG12.5.1;*

- Any project which requires the use of labour and which will boost economic growth (SDG8);
    - *Provide a breakdown of the employment profile of the workforce by origin of worker, sex, age and disability and demonstrate how this will affect the employment rate in the district in which the project is located. SDG8.5.2.*

The Social Impact Assessment (SIA) (including health) should address the following where relevant (examples are provided in italics):

- SDG1: No poverty;
    - *What is the proportion of the population in the project area which is below the international poverty line and how will this project alter this? (SDG1.1.1a)*

- SDG2: Zero hunger;
    - *If the project is an agricultural project, determine the number of children amongst the project affected people who are moderately or severely stunted and determine how the project will improve the nutrition of the local community)? (SDG2.2.1)*

- SDG3: Good health and wellbeing;
    - *If the project will require the use of migrant labour, what is the current number of new HIV infections in the project area and how will this be affected by the proposed project migrant workforce? (SDG3.3.1)*

- SDG5: Gender equality
    - *What is the proposed proportion of women in senior and middle-management positions on the proposed project and does this meet the target in SDG5? (SDG5.5.2b).*

Other specialist studies and EIA chapters should address the relevant SDGs as follows. Examples are provided in italics:

- Climate study: SDG13 Climate action;
    - *Has the local government in charge of the area in which the project is located adopted and implemented the local disaster risk reduction strategies in line with national disaster risk reduction strategies? SDG13.1.3*

- Water quality and aquatic biodiversity study: SDG14: Life below water;

- *For a port expansion project, conduct baseline sampling to determine the degree of coastal eutrophication and floating plastic debris density prior to project development and continue monitoring during project operations. SDG14.1.1*

- Terrestrial biodiversity: SDG15: Life on land;
    - *What percentage of forest in the catchment area of the proposed project will be lost due to the project? And what measures are proposed to replant trees to offset those lost? SDG15.1.1*

- Legal, policy and institutional framework and stakeholder engagement: SDG16: Peace, justice and strong institutions;
    - *Did the stakeholder engagement process include meaningful consultation with the local affected parties, giving all groups (based on age, sex, disability) an equal opportunity to be heard and included in decision-making? SDG16.7.2*

- Sustainable development: SDG17: Partnerships
    - *Will the proposed telecoms infrastructure project improve the number of people in the country with access to the internet? SDG17.8.1*

CONCLUSION

In this work, we reviewed environmental impact assessment legislation in selected African countries, compared to the attainment of the United Nations SDGs. We evaluated the role of impact assessment in achieving the sustainable development goals in Africa and examined the challenges of achieving the SDGs, and the role that EIA can play in achieving the SDGs in sub-Saharan Africa. We showed that there is a good positive correlation between development of EIA legislation and SDGs attainment: Countries like South Sudan and Central African Republic that do not have EIA legislation are correspondingly low on the SDGs attainment index and countries which aim for best practice EIA legislation such as Mauritius, Botswana, South Africa, and Ghana have the best SDGs attainment index in sub-Saharan Africa.

Significant improvements on achieving the SDGs can be achieved by employing best practice Environmental Impact Assessments (EIA) and strict adherence to regulations through data provision, conflict resolution, innovation, and positive change, improved extreme event resilience and adaptation and using EIA as a template for broader impact assessment. Bespoke alignment of SDGs to the EIA process requires that environmental and social practitioners define objectives, establish processes, set timelines as well as make and implement decisions to meet set targets for proactive development of achievable sustainable outcomes. This includes ensuring that programmes, plans and policies are aligned with the transformational change agenda of the SDGs, thus planned outcomes of EIA are aligned with actions to achieve targets for social and economic goals and environmental improvement and restoration. This work provides practical actions and consideration for environmental practitioners towards ensuring the alignment of SDGs to the EIA process.

EIA is a key tool for greening economies: it promotes the integration of green economy considerations into development projects and work. For example, EIA involves the reduction of health hazards from water, air, soil and chemical pollution and contamination. This is done

by ensuring that during the planning of all potentially polluting economic activities, environmental and health concerns are considered, thus proactively breaking source-pathway-receptor link. Alignment of SDGs to EIA processes will ensure that EIA is better used as a tool for achieving the SDGs and this will involve the effort of all sustainability practitioners at all levels from project through policy.

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