Current Trends in Sustainability Education and the Future of Sustainability Education in Nigeria

Adenike A. Akinsemolu
Foluke V. Arijeniwa

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Adenike A. Akinsemolu, Senior Research Fellow, Institute for Oil, Gas, Energy, Environment and Sustainable Development, Afe Babalola University, Ado Ekiti

Foluke V. Arijeniwa, Research Associate, The Green Institute, Nigeria

This article examines the current trends in sustainability education and the future of sustainability education in Nigeria. It contends that development and environment are intertwined and thus should be systematically embedded into educational activities to yield environmentally responsible and accountable policies and citizens in the quest for sustainable development. The significant roles of Environmental Education (EE) as a tool for propagating United Nations sustainable development goals (SDGs) have been identified within Nigeria's national guidelines and policy visions. While there is this recognition, implementing and delivering EE programs remains significantly affected by various practical implementation challenges. Despite various studies documenting the value of EE for the achievement of the SDGs, challenges related to governance and laws limiting the roll-out of these programs in Nigeria continue to pose implementation challenges. Thus, this article seeks to look at the various institutional and legal challenges arising with the implementation of these programs within Nigeria and how to practically address them. The main challenges identified in this study are inadequate funding, capacity gaps, insufficient facilities, inadequate infrastructure, and the lack of EE in national strategies and plans. Recommendations for addressing these challenges are provided, along with conclusions on the future outlook.

Keywords: environmental education, Environment, Environmental Education, Sustainable Development, sustainability, current trends, future of sustainability

1. INTRODUCTION

One of the major contradictions in the twenty-first century is the unique technological advancement and economic growth, which have contributed to devastating socio-environmental impacts on humanity despite accruing numerous benefits for people. In the quest for survival, humankind is significantly exposing the planet to severe climate change threats, which poses issues to energy, ecology security, food, and politics which are impediments to sustainable development.[1]The African continent is also experiencing various and complex environmental challenges, including the threat of significant extinction of species due to the adoption of a global capitalist system that creates a production treadmill due to its increasing urge for enormous profits.[2]The rising demand for products has led to the proliferation of this system in Africa due to its ability to avail products at a lower price. Nigeria is part of this environmental conundrum due to anthropogenic activities contributing to ecosystem degradation, biodiversity loss, and reduction in agricultural production.[3]Northern Nigeria is under threat due to the Eastward rapid encroachment that threatens sustainable livelihoods while environmental degradation in the Niger Delta continues making the region prone to conflicts due to quests for resource control and environmental justice.[4]Life-consuming floods and erosions have increasingly become reoccurring issues in environmental challenges that the Southern Eastern Nigeria has been associated with. These challenges raise the need for sustainability education that empowers policymakers and stakeholders in Nigeria to urgently implement environmental

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[1]   DS Olawuyi, The Principles of Nigerian Environmental Law. (Afe Babalola University Press 2015) 1-25.

[2]   Ibid.

[3]   Damilola Olawuyi and Olaitan Olusegun, 'Achieving the United Nations Sustainable Development Goals on Biological Diversity in Nigeria: Current Issues and Future Directions'(2018) 7 (1)Global Journal of Comparative Law 37-60.

[4]   DC Ekwueme, C. O., Ekon, E. E., & Ezenwa-Nebife, 'Education for Sustainability through Academic Freedom. Research' (2016) 15 Global Journal of Education 23.

protection measures.[5] Environmental education can serve as a tool for propagating United Nations sustainable development goals (SDGs) in Nigeria, especially those relating to ecological protection, resource conservation and climate change.[6]

Against this backdrop, this article seeks to comprehensively examine the current trends in sustainability education and the future of sustainability education in Nigeria. This is done in the context that sustainability education can play a critical role in reversing the trend of environmental degradation and set the environment towards the path of recovery. Training and environmental education can also raise awareness of the prolonged effects of unchecked development and environmental degradation.

2. THE IMPORTANCE AND VALUE OF SUSTAINABILITY EDUCATION

Education has been heralded as a critical pillar in the quest for sustainability since it enables people to develop values, skills, and knowledge required for participating in decision-making at a personal, collective, and global level.[7]Sustainability education embraces environmental concerns and issues such as human rights, gender equality, holistic education, the fight against poverty, and cultural diversity. Sustainability education enables all persons to acquire the values, knowledge, attitudes, and skills required to shape a sustainable future. More often, the most acceptable definition of sustainable development or sustainability is that it is a development that caters to the current generation's needs without jeopardizing the capacity of future generations to meet their needs. Sustainability has further been emphasized as a form of development that spurs critical thinking and decision-making collaboratively. Also,

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[5]   A. Babalola&D. Olawuyi, 'Advancing Environmental Education for Sustainable Development in Higher Education in Nigeria: Current Challenges and Future Directions' (2021) 13 Sustainability 10808. https://doi.org/10.3390/su131910808

[6]   Ibid.

[7]   Ibid.

education for sustainability can create opportunities for students to learn and look at how their resources impact the planet. Since it entails learning about the environment, interacting with it to make decisions, and deter harmful environmental activities, sustainability education strengthens and fosters the ability of individuals to make choices and decisions that favour a sustainable lifestyle.

Sustainability education is a strategy that aims to ensure that all learners have relevant knowledge, values, skills, and dispositions for motivating and empowering them to be informed citizens.[8] Contrary to the traditional way of teaching, sustainability education implies embracing a more holistic methodology to education to create a better world for the current and future generations. In Nigeria today, sustainability has been embedded into the school curriculum to foster awareness on poverty reduction, biodiversity, climate change, sustainable consumption, and disaster risk reduction.[9]To foster this awareness in learning environments, it needs learner-centred, participatory, and activity-based teaching methods to empower and motivate learners to reorient their behaviours and attitudes while taking action for sustainability. Knowledge acquired can help students relate what is learnt in the classroom with their real-life activities, thus placing them in a better position to change behaviours and embrace sustainable lifestyles.[10]This implies that if every Nigerian child gains academic freedom to read and write regardless of their age, gender, background, and tribe, there would be remarkable improvement and sustenance of their lives. Whereas numerous countries globally have embraced education to attain sustainability, the lack of awareness and vision has deterred progress in Nigeria. This can be partly linked to the lack of appropriate supervision, planning, and poor implementation of well-designed policies. Tackling these crucial challenges can enable the Nigerian government to minimise or deter delays or derailment of sustainability. To attain this in the country,

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[8]   Ibid.
[9]   Ekwueme, C. O., Ekon, E. E., & Ezenwa-Nebife (n 2).
[10]   Ibid.

relevant focal points for sustainability should be identified and tackled.

2.1 Current Status of Sustainability Education

Goal 4 of the UN SDGs commits by all states to not only ensure equitable and inclusive education and enhance lifelong learning opportunities by 2030.[11]Target 4 of this goal seeks to ensure that all students acquire the skills and knowledge required for promoting sustainable development through sustainable lifestyles and education for sustainable development by 2030.[12]At the same time, the UNESCO Education for Sustainable Development (ESD) 2030 Framework suggests that ESD is a major component of quality education and a critical enabler for attaining all the SDGs. Notably, the ESD 2030 Framework offers holistic tools and guidance for implementing these ambitious commitments and goals.[13]A number of these instruments acknowledge the significance of environmental education initiatives that seek to promote lifelong, holistic, and systematic understanding and awareness of environmental issues affecting the local population. [14]Arguably, environmental education programs include courses that provide skills and knowledge acquisition on environmental themes, including waste management, water management, responsible consumption, climate change, and recycling and composting.[15] Environmental educators globally are seeking new ways of advancing excellence within EE programs and initiatives to contribute to the achievement of all the SDGs at the global and national levels, particularly SDG 4 on education.

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[11] C Shulla, K., Filho, W. L., Lardjane, S., Sommer, J. H., & Borgemeister, 'Sustainable Development Education in the Context of the 2030 Agenda for Sustainable Development.' (2020) 27 International Journal of Sustainable Development & World Ecology 458.

[12] Ibid.

[13] DA Goldstein, M. I., & DellaSala, 'Encyclopedia of the World's Biomes', Encyclopedia of the World's Biomes (Elsevier 2020).

[14] DS Olawuyi, The Principles of Nigerian Environmental Law. (Afe Babalola University Press 2015).

[15] Ibid.

The significance of environmental education is widely depicted in various national policy instruments and strategies in Nigeria. More specifically, Nigeria's 2020 Voluntary National Review and National Report presented to the Rio+20 conference particularly identify the national government's aim to support various implementation mechanisms and imperatives to advance the achievement of all the SDGs.[16][17]Also, the major primary education legal framework, Universal Basic Education (UBE) Act, clearly seeks to enhance qualitative and uniform basic education in the whole country by providing compulsory, free basic education. The 2013 National Policy on Education clarifies the policy standards, management techniques, strategies, objectives, and guidelines for advancing education as a tool for fostering environmental and socio-economic development in the country.[18]Similarly, the 2017-2020 Nigeria Economic Recovery and Growth Plan (ERGP) seeks to transform the country's education into a tool for attaining the SDGs and economic growth.[19]Because of these robust policy emphases on sustainability, various EE initiatives and programs that seek to foster environmental awareness and sustainable lifestyles among Nigerians are emerging. For instance, almost all higher education institutions have embraced at least one form of environmental education program that ranges from optional or core courses as part of their degree programs to stimulate environmental awareness.[20]In spite of the improved awareness of environmental education as a tool for promoting the SDGs, various institutional and legal challenges continue impeding

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[16]   T Ogisi, O. R. D., & Begho, 'Covid 19: Ramifications for Progress towards the Sustainable Development Goals (SDGs) in Nigeria.' (2021) 35 International Review of Applied Economics 256.

[17]   Government of Nigeria, 'Nigeria: Integration of the SDGs into National Development Planning: A Second Voluntary National Review'; <http s://sustainabledevelopment.un.org/content/documents/26309VNR_2020_ Nigeria_Report.pdf>.

[18]   MJ Salihu, 'Agencies Governing the University Education System in Nigeria: An Examination of Their Administrative Powers, Conflicts and Advocacies.' (2020) 7 ATBU Journal of Science, Technology and Education 231.

[19]   Ibid.

[20]   A.Babalola &DS Olawuyi (n.5).

the rapid implementation and development of EE initiatives and programs within formal education institutions. Also, there are still challenges in terms of access to quality education, thus hindering the reach and scope of EE programs at all formal education levels. An example to demonstrate this is the ranking by the World Education Forum, which ranked it position 116 out of 137 states in 2017 in terms of the quality of university and college education and training.[21]Similarly, more than 10 million children in Nigeria still do not access education, and by 2019, they had not been enrolled in school. [22]Poor access to education has generally limited the reach and scope of environmental education programs.[23]

The 1976 UNESCO-UNEP Belgrade Charter stated that EE aims to develop a population that is concerned about and aware of the environment and its related problems and which has the motivation, skills, commitment, attitudes, and knowledge to work collectively and individually towards solving current issues and preventing new ones. Also, the Tbilisi Declaration elaborated that the objectives of environmental education include behaviour and attitude change, dissemination of knowledge, and awareness creation. Awareness seeks to enable individuals and social groups to be aware and sensitive to the total environment and related issues. On the other hand, knowledge is vital for helping individuals and social groups gain various experiences and understand the environment.[24]Skills are critical for identifying and solving environmental issues. For participation, EE seeks to offer individuals and groups a chance to be actively involved in resolving environmental issues. This acts as the foundation for the ESD 2030 Framework in its quest to help nations scale-up ESD action in learning and education. This framework has five main action areas for enhancing ESD, including developing trainers and educators, transforming training and learning

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[21]   World Economic Forum, 'Nigeria The Global Competitiveness Index 2017-2018 Edition.' (2017).

[22]   UNICEF, Education.(2020) <https://www.unicef.org/nigeria/education>.

[23]   Babalola, A., & Olawuyi (n 5).

[24]   Ibid.

environments, and accelerating sustainable solutions at the local levels. To achieve excellence in environmental education programs and initiatives, holistic and comprehensive mechanisms and procedures should be devised when designing, approving, implementing and monitoring EE programs.

A holistic environmental education program should extend beyond stand-alone and voluntary initiatives. Instead, EE programs need to fit into the core policy and legal framework on education to ensure sustained and appropriate resource allocation that can improve long-term sustainability at all levels.[25]To promote broader societal objectives, environmental education programs should also embed multiple perspectives and diverse stakeholder collaboration during all phases of programs. These are stakeholders with shared experiences, motivation, and interests, including institutional leaders, teachers, community groups, policymakers, parents, and curriculum developers.[26]Such wider levels of participation shape the program, its audience, and its focus. Globally, a multi-stakeholder partnership has been embraced by developing a coordinated, integrated, and cross-sectoral approach to offer an efficient platform for a number of stakeholders and actors to unite to address a common issue that would not have been tackled by one stakeholder.[27]This approach can help achieve the dual purpose of ensuring the effectiveness of environmental education programs while addressing knowledge and information sharing gaps observed in the current efforts. For instance, a well-implemented coordination mechanism will ensure peer interactions and effort consolidation, which can substantially enable learners to access the best learning

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[25]   J Leal Filho, W., Tripathi, S. K., Andrade Guerra, J. B. S. O. D., Giné-Garriga, R., Orlovic Lovren, V., & Willats, 'Using the Sustainable Development Goals towards a Better Understanding of Sustainability Challenges.' (2019) 26 International Journal of Sustainable Development & World Ecology 179.

[26]   D Olawuyi, 'Sustainable Development and the Water-Energy-Food Nexus: Legal Challenges and Emerging Solutions.' (2020) 103 Environmental Science & Policy 1.

[27]   N Beisheim, M., & Simon, 'Multi-Stakeholder Partnerships for Implementing the 2030 Agenda: Improving Accountability and Transparency.', Analytical Paper for the 2016 ECOSOC Partnership Forum. (2016).

resources, materials and activities. At the same time, EE actors become more skilled and gain more practical insights during nationwide collaborations.

3.   KEY ISSUES AND CHALLENGES WITH ENVIRONMENTAL EDUCATION

While teaching sustainability is vital, how to embed it into learning remains a daunting task for Nigeria. Integrating sustainability alone into the formal school curriculum as another subject can be viewed as another burden that should be learnt. However, it could be one of the speediest ways for creating awareness of the sustainability idea for upcoming generations.[28] Notwithstanding, it can only become sustainable if taught at all educational levels. Expansion of educational facilities may lead to the risk of conflict in terms of resource use: whether the government should promote primary schooling in neglected areas or whether to emphasis the need to build up upper-level and technical skills within higher education, that is, providing better equality of opportunity to advocate for efficiency to meet the scarce workforce needs. Even within areas that have facilities, some of the children may be unable to leverage primary schooling due to the lack of capacity to pay school fees. Disparities exist in terms of who should pay for education, and this education burden impinges with lesser or more intensity basing on the individual family incomes and eventually on the natural economic resource endowments.

Despite universal basic education being free, the additional burden is the cost of transportation to distant schools, school uniforms, stationery fees, and feeding. It is an additional burden that some families cannot support within a large family setting. Awareness should extend beyond classroom borders to the larger population that has not gone through the formal education system since they are important stakeholders that need to know these issues. Since

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[28]   Beisheim, M., & Simon (n 21).

Nigerians love entertainment and spend significant time watching television, these values can be taught in a number of indigenous languages using public media through enlightenment films, dramas, and programs. Unchecked and uncontrollable population growth is another challenge that has become a concern for the government of Nigeria.

Nevertheless, Nigeria's leadership has increasingly become aware of the importance of initiative decisive measures for controlling the population, which has not been accompanied by an increase in resources for enhancing sustainable development. Undoubtedly, Nigeria will make up a significant proportion of the population growth within Sub-Saharan Africa. Being the most populous nation in the continent and seventh most populous globally, (with a population of more than 212 million by September 28, 2021), it has been projected that Nigeria is poised to surpass the US by doubling its current size by increasing to 401 million by 2050. [29] This will make it the third most populous country globally during this period. For a nation where more than 50% of citizens live below the poverty line, the anticipated population growth could spell doom as it may be unable to meet the demands of the burgeoning population.

3.2 Specific Challenges impeding Implementation of Environmental Education Programs in Nigeria

3.2.1 Inadequate funding

Education and EE programs are not adequately funded. According to Nigeria's 2020 Voluntary National Review, inadequate funding is a major impediment to the achievement of SDG on quality and inclusive education in the country.[30]Over time, UNESCO has recommended that

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[29] B Akinsiku, 'A Disaster Waiting to Happen? Nigeria's Unchecked Population Growth.', The Republic. (2019) https://republic.com.ng/october.

[30] Government of Nigeria. Nigeria: Integration of the SDGs into National De-velopment Planning: A Second Voluntary National Review; The Presidency: Abuja, Nigeria, 2020. Available online: https://sustainabledevelopment.un .org/content/documents/26309VNR_2020_Nigeria_Report.pdf (accessed

donors and governments spend at least 15-20% of their annual budgets to finance education.[31]However, annual budgetary allocations in Nigeria have remained below this threshold, with some like the 2017 and 2021 budgets (6 and 5.6%, respectively) being less than 10%.[32]The perennial failure by the government to devote substantial resources to the education sector has led to underfunding of many institutions in the country.[33]As many universities grapple with meeting their overhead costs, the allocation of resources for ESD and EE programs have been adversely affected.[34] Implementing holistic programs and courses will necessitate the government to commit budgetary resources to recruit staff, develop programs, and acquire books and teaching infrastructure. The failure by the government to offer sustained funding to institutions has deterred the development and the roll-out of EE programs and courses, which could continue into the foreseeable future. In this regard, it will be pertinent for the government to commit to allocating more resources into the sector. Also, because of the urgency of environmental issues afflicting Nigeria, including gas and oil pollution, loss of biodiversity, and climate change, it is increasingly urgent to allocate resources that aim to promote EE and environmental awareness at all educational levels in Nigeria.

3.2.2 Capacity Gaps

on 20 October 2021), see also EI Ejere, 'An Examination of Critical Problems Associated with the Implementation of the Universal Basic Education (UBE) Programme in Nigeria' (2011) 4 International Education Studies 221.

[31] UNESCO, 'Education for All Global Monitoring Report. 2012' (2012) <http://www.unesco.org/new/en/media-services/in-focus-articles/funding-gap-for-education-growing-according-to-new-figures-released-by-unesco-study-also-proposes-ways-to-close-it/>.

[32] A Olufemi, 'Buhari's 2021 Budget Share for Education Is Nigeria's Lowest in 10 Years.' <https://www.premiumtimesng.com/news/headlines/422829-buharis-2021-budget-share-for-education-is-nigerias-lowest-in-10-years.html.>.

[33] C Nwoko, 'Financing Education in Nigeria Opportunities for Action: Country Case Study for the Oslo Summit on Education for Development.', (Education for Development Summit, Oslo 2015).

[34] AA Babalola, 'The Elusive Search for Nation Nigeria.' (Afe Babalola University 2019) pp. 1-25.

The dearth in the number of skilled academics with skills in environmental disciplines stifles the development and roll-out of EE programs.[35]For instance, the teaching of environmental law courses and programs would need to expand staff capacity or recruit experts who have research degrees in this law area. At the same time, raising the number of programs and courses in the science, mathematics, technology, and engineering disciplines will need the recruitment of researchers and academics that can roll out innovative pedagogical methodologies. It will also be essential to raise the number of programs and scholarships available for EE disciplines to encourage more students to enrol for doctoral programs, thus ensuring a consistent number of highly skilled academics in environmental education fields. Tackling capacity gaps is an expensive commitment that needs sustained and dedicated funding for environmental education programs. Unfortunately, the low funding level to the education sector has negatively affected resource availability for funding the needed capacity development initiatives and programs that can enhance the capacity available for sustainable education programs. Apart from the government's role in offering dedicated and sustained funding for environmental education programs, it will be critical for higher education institutions to remain innovative in using the existing resources and capacity.[36]Interdisciplinary approaches that enhance the sharing of education and expertise resources across various disciplines should also be embraced, while a multi-stakeholder approach to environmental education can attain the dual role of enhancing the effectiveness and coherence of programs while minimising the lack of information and resource sharing that has been observed within current efforts.

3.2.3 Insufficient Facilities and Inappropriate Infrastructure

Many of the infrastructures currently in place within some higher education systems date back to the pre-independence

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35   Ejere (n 30); also Babalola & Olawuyi, n.5.
36   Ejere (n 24).

period due to successive governments' failure to prioritise education investments. The deterioration of infrastructure has stifled academic scholarship, innovation, and research.[37]Apart from dilapidated laboratory infrastructure and classrooms in many higher education institutions in the country, numerous structures have exceeded their carrying capacity because of the demand brought about by overpopulation. At the same time, as demonstrated by the COVID-19 pandemic, implementing EE programs will compel modern education technologies to improve the teaching and learning of environmental law.[38]Disruptive education needs technology deployment in both online and face-to-face courses to achieve learning outcomes. Technology-driven exercises and online discussion forums can enable students to learn major environmental topics while exchanging ideas outside the classroom. At the same time, EdTech can enhance collaboration and exchange of ideas between faculty members and students within various world parts. It is particularly crucial for higher learning institutions within Nigeria since institutions with low capacity can accrue benefits from practitioners, educators, guest lectures, and scholars in different places who can present unique, specialist topics.[39]For instance, consolidating EE efforts and peer interactions can substantially enable learners to access better quality learning resources, materials, and activities. At the same time, during such collaborations, students attain more skills and knowledge through environmental law while gaining further practical insights from collaboration with other stakeholders. Despite this, funding deficits have led to the unavailability of tech facilities in almost all the higher learning institutions, thus constraining the implementation of environmental education programs. There will be a need for substantial renewal and upgrade of technology to advance these programs for

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[37]   Babalola (n 34).

[38]   World Bank, 'The COVID-19 Crisis Response: Supporting Tertiary Education for Continuity, Adaptation, and Innovation.'

[39]   S Magana, 'Disruptive Classroom Technologies: A Framework for Innovation in Education (Corwin: A Sage Company: Thousand Oaks, 2017).'

facilitating inquiry-based and technology-driven learning approaches.

3.2.4 Absence of EE in National Strategies and Legal Frameworks

Despite the NESREA Act recognising EE, the major education legislations do not clearly identify the significance of ESD or EE. One of the core reasons that successive regimes have failed to be committed to university funding is that the 1999 Constitution does not provide a solid and effective acknowledgement of education as a right in the country. The education pillar is found in Chapter II on the Fundamental Objectives and Directive Principles of State Policy, which states that the government will seek to eliminate illiteracy by providing universal, accessible, and compulsory primary education, free adult literacy programs, and free secondary and university education. Despite these being strong provisions, the judiciary lacks the power to decide whether citizens can enforce the right to quality education. In other words, the Constitution provides aspirations regarding education financing, but at the same time, makes it difficult to be enforced. Despite recent studies and case laws insinuating that it is possible to enforce and justify socio-economic rights in courts in Nigeria, the absence of clear acknowledgement of an important right to education within the Constitution, education policies, and legislation has failed to offer a solid and coherent governance framework which can accelerate and prioritise the roll-out of education programs in the country.[40]It is critical to tackle this gap by expressly recognising education as an enforceable and crucial fundamental human right. Through this, stakeholders and students will have a strong legal basis to ensure the demand for their rights to education within all government programs instead of resolving to strike actions, protests, and protracted litigations.

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[40] R. Ako,N. Stewart, E. Ekhator, 'Overcoming the (non) justiciable Conundrum: The Doctrine of Harmonious Construction and the Interpretation of the Right to a Healthy Environment in Nigeria'. In Justiciability of Human Rights Law in Domestic Jurisdictions (Springer: Cham, Switzerland, 2016) pp. 123–141.

The absence of a robust constitutional obligation on the government of Nigeria for financing education at all levels constrains the scope of probable EE interventions. It is crucial to recognise EE in major education policies and legislation within Nigeria to place EE squarely at the forefront of decision making and planning. For instance, the National Universities Commission Act lacks explicit provisions on the importance of higher education institutions to enhance environmental awareness. Moreover, the Tertiary Education Trust Fund Act fails to prioritise the funding of EE. Insights from nations that are making progress in terms of advancing EE programs suggest that effective starting points should clearly acknowledge the education stakeholders' obligation to develop and roll out EE programs.

An example is Qatar, whose Environmental Protection Law's Article 7 mandates that all authorities in charge of education must embed environmental awareness subjects at all stages of the education. The other example is the United Arab Emirates developed the National Environmental Education and Awareness Strategy 2015-2021, which seeks to embed EE across all levels of education.[41]Thus, the lack of clear national regulations, policies, or strategies that clearly emphasise the importance of stakeholders within the education sector within Nigeria to embed EE into the implementation and design of education programs is a major oversight that continues limiting coherent implementation.

Environment Education (EE) should be embedded into all policies and legislations of education in order to foster the development and roll-out of EE programs. It will make the government prioritise EE and enhance the financing level and budgetary allocations for EE programs and initiatives across the country. It is vital to have a detailed and clear national environmental education strategy to provide guidance in formulating, designing, financing, and implementing effective

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[41]   United Arab Emirates. National Environmental Education and Awareness Strategy. 2021. Available online: https://www.moccae.gov.ae/assets/b4a14e05/national-environmental-education-and-awareness-strategy-2015-2021-en.aspx (accessed on 15 September 2021).

EE programs at the domestic level.[42]Such a policy or strategy can clearly identify and highlight the EE priority areas, objectives, requirements, and the opportunities for participation of stakeholders within identified areas. Ideally, such a policy could play a crucial role in identifying opportunities for implementing programs and financing them.

Furthermore, mainstreaming EE into major policies will offer resources and clear guidance that can enable higher education institutions to develop tailored EE programs that can help advance Nigeria's sustainable development visions and objectives in major priority areas.[43]For instance, higher learning institutions could develop tailored programs and courses on detecting and managing oil pollution to enable more residents and citizens to access employment within the oil and gas industry. This can play a critical role in the advancement of the national objectives for content development. Linkage of policies to sustainable development using EE can also foster the development of local pollution control strategies and technologies required for addressing various environmental challenges in major sectors.[44]In the same way, considering the advancement of SDG 7 on energy, some of the fundamental voluntary efforts that EE programs can promote include reduction of energy waste in homes, local communities and organisations, development and support of SME ventures that advance the access to clean energy, as well as the increase in the proportion of renewable energy products and services.[45]Educating citizens to ensure they are active in promoting SDGs in many activities, EE can offer essential tools for citizens to advance sustainable development.

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[42]   Ako, Stewart and Ekhator (n 34).

[43]   Babalola, A., & Olawuyi (n 5).

[44]   PD Jadhav, A. S., Jadhav, V. V., & Raut, 'Role of Higher Education Institutions in Environmental Conservation and Sustainable Development: A Case Study of Shivaji University, Maharashtra, India.' (2014) 4 Journal of Environment and Earth Science 30.

[45]   DS Olawuyi, 'From Energy Consumers to Energy Citizens: Legal Dimensions of Energy Citizenship'. In Sustainable Energy Democracy and the Law; Hunta, K., Fleming, R., Reins, L., Eds.; Brill: Leiden, The Netherlands, 2021; pp. 101–123.

4. MINDING THE GAPS: SOME RECOMMENDATIONS

This section discusses urgent steps that could be taken to advance environmental education in Nigeria.

4.1 Development of National Strategies and Plans

The national government should develop clear national environmental education guidelines and strategies that outline objectives, opportunities and priority areas for the participation of the private sector within identified areas. This can be accomplished through conceptual development and transdisciplinary analysis of the several EE stakeholders, economic sectors, and disciplines to determine how EE programs may be rolled out, monitored and supervised across various domains to promote sustainability outcomes.[46] In addition, a national EE strategy can be instrumental for detecting and addressing overlapping courses, accreditation policies, and program requirements across the various disciplines for identifying opportunities for synergies. It can also facilitate the development of coherent and consistent programs for eliminating inconsistencies and overlap. Also worth noting is that such operational frameworks can enable regulators like NESREA and NUC to evaluate the tangible efficiency of EE programs and monitor or measure progress based on predetermined timelines. The other benefit of a national strategy is that it will offer more coordination and cooperation between the relevant stakeholders on the environment, education, and sustainable development, including NESREA, NUC and the Ministry of Environment.

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[46]　Babalola, A., & Olawuyi (n 5).

4.2 Establishment of Institutions for EE

To promote the wide-scale development and implementation of transdisciplinary, multiscale, multisector, and integrated EE programs and projects across a higher education institution, it is important to designate a focal EE committee or administrative unit that will coordinate the design, approval, and implementation of such projects across all units of the institution.[47]For example, the Directorate of Academic Planning mandates and functions can be expanded and enhanced to integrate and monitor the implementation of EE courses and programs by all units. Higher learning institutions can also establish a unique Directorate on Sustainable Development to monitor the embedment of SDG awareness courses and programs. It will help in monitoring and streamlining not only the design but also the delivery of courses. Empowerment and establishment of a focal institution for all colleges, departments, and faculties can ensure that such an entity obtains relevant information and gains knowledge on the methodology and process for the sustenance of EE programs. Such an institution should develop partnerships with the relevant institutions to widen access to higher institutions of learning that could guide the implementation and the design of EE programs.

4.3 Sustained Funding

A national emergency fund should be established, and a substantial percentage of these funds allocated for the EE programs to hasten the EE program development. For instance, allocating at least 25% of the budget annually to education can reduce infrastructure deficits while meeting education technology demands. Due to the significance of education to the country's 2030 Agenda, the government should urgently commit more budgetary resources to the education programs.[48]Institutions should engage global

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[47]   Babalola, A., & Olawuyi (n 5).
[48]   PS Ebi, B. O., & Ubi, 'Education Expenditure and Access to Education: Case Study of United Nations Educational, Scientific and Cultural Orga-

development partners, including the UNEP, USAID, World Bank, Melinda and Gates Foundation and African Development Bank, to explore the available global funding opportunities for environmental education programs. These institutions further need to strengthen their internal capacity to take advantage of EE programs as tools for enhancing their internally generated revenue. The rising demand for EE programs and courses in major sectors like engineering, management, mining, finance, aviation, and petroleum implies that institutions of higher learning can explore innovative partnerships to meet their EE certification and training needs.[49]Through this, higher institutions of learning can market the tailed courses that can lead to strong environmental outcomes in major industries while at the same time generating more revenues for the implementation of higher learning institutions. Funding EE programs using revenue generated internally will reduce perennial reliance on budgetary allocation and government funding, and this will be substituted with a more efficient and sustainable approach.

4.4 Making and implementing laws for supporting EE programs

The national government should create a holistic and comprehensive framework for supporting the integration of environmental education into overall national planning and the framework for the implementation of SDGs. Comprehensive laws should mainly be established for supporting EE programs. Apart from developing clear strategies, clear laws must be considered to ensure educators embed EE programs and courses into all educational levels. The 1999 Constitution should be reformed to ensure that the government is obligated to finance education at all the existing levels.[50]State governments should be granted the power to oversight education because the federal government

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nization Declaration in Nigeria' (2017) 7 International Journal of Economics and Financial Issues.290.
[49]   Babalola, A., & Olawuyi (n 5).
[50]   Nwoko (n 33).

cannot effectively finance and supervise the education sector. In addition, comprehensive constitutional reform is needed to tackle the structural gaps stifling innovation within education and limiting the roll-out of EE programs within Nigeria. Extant laws like the Tetfund Act and NUC Act also need to reference the role of authorities charged with the responsibility of education to develop and finance environmental awareness subjects at all levels of education. Such clarity will lead to better impetus for higher learning institutions to hasten the delivery of these programs. Finally, comprehensive laws on PPPs investments need to be established.[51]

5.0 CONCLUSIONS

Environmental education is a critical tool for advancing SDGs, and national policy guidelines and visions have identified them. While EE is acknowledged as necessary, implementing and delivering EE programs continues to be adversely affected by the inadequate funding for programs. It is also not recognised in existing regulatory and legal frameworks on education. Thus, a coordinated and coherent framework must be developed to hasten the wide embedment of EE into education strategies. There is also a need for relentless efforts to tackle the existing environmental issues and push Nigeria into the path of sustainable development. To attain sustainability, national environmental education strategies must be large-scale, comprehensive, and integrated. The national education strategy needs to be re-examined and improved, while the education curriculum should be formulated for optimal environmental knowledge and understanding.

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[51] D Olawuyi, 'Advancing Innovations in Renewable Energy Technologies as Alternatives to Fossil Fuel Use in the Middle East: Trends, Limitations, and Ways Forward'. In Innovation in Energy Law and Technology: Dynamic Solutions for Energy Transitions; Donald, Z., Martha, R., LeRoy, P., Lee, G., Eds.; Oxford University Press: Oxford, UK, 2018; pp. 354–370