



Developing a Sustainable Environmental and Climate Action Plan in Nigeria. A Review.

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Abstract:

Sustainable environment is centred on the preservation of Earth's resources and ecosystems for present and future generations. It focuses on key elements of sustainability, including conservation, renewable energy, effective waste management, pollution control, sustainable agriculture, biodiversity, responsible consumption, and education. The holistic approach required for achieving a sustainable environment involves collaboration among governments, industries, academia, communities, and individuals. Shifting focus, the paper presents the top-ranking countries in the 2022 Climate Change Performance Index, evaluating their greenhouse gas emissions, renewable energy usage, energy efficiency, and climate policies. The leading nations—Luxembourg, Denmark, Morocco, Netherlands, Lithuania, Portugal, France, Finland, Sweden, and China—are highlighted for their commitment to climate change policies and execution. This paper has further offered guidance on developing a Sustainable Environmental and Climate Action Plan, stressing actionable steps to include assessment, goal-setting, stakeholder engagement, research, strategy development, adaptation, and resilience-building. This comprehensive approach underscores the importance of local and global efforts to address environmental challenges and promote sustainability.

1. Introduction to Sustainable Environment:

Sustainability involves balancing economic, social, and environmental factors for long-term well-being. Specific SDGs, such as "Good Health and Well-being," "Climate Action," and "Conservation of Ecosystems," directly impact our health. The interconnected nature of the SDGs emphasizes an inclusive approach to sustainability. (Aparicio-Martínez *et al* 2022)

While a sustainable environment refers to a state in which the natural resources and ecosystems of the Earth are preserved and protected for present and future generations. It involves the responsible and balanced use of resources to ensure their long-term availability and the maintenance of ecological balance. (Voronkova *et al* 2019)

A sustainable environment is the foundation of sustainable development harmonizing economic and social aspects. While preserving our environment. It's not just a goal; it's a fundamental cornerstone for a brighter, more equitable future. This relationship encompasses crucial elements such as insisting on safeguarding the environment which prevents harm to ecosystems, wildlife, and natural resources during economic and societal progress, promoting responsible use of water, land, forests, and minerals to

ensure their availability for future generations through resource management, recognizing the intrinsic value and role of biodiversity conservation in maintaining ecological balance, addressing climate change by reducing emissions, adopting renewables, and mitigating human impact on the climate, resilience to withstand and recover from environmental challenges, seeking to rectify disparities in environmental impacts on marginalized communities and a forward-looking perspective prioritizing future generations' well-being through vigilant environmental conservation. (Berke & Manta 1999)

1.1. Key elements of a sustainable environment:

There is urgent need for sustainable development due to the increasing climate change, Prompting us to move away from using resources in a way that harms the environment (linear economy) and instead use them more efficiently through recycling (circular economy). Proper resource management is crucial for the well-being of future generations. To achieve this, integrating energy, water, and environmental systems is important to prevent overuse. (Mikulčić *et al* 2022) There are various elements of a green and sustainable environment which includes:

1. Conservation and Preservation: The sustainable environment aims to conserve and preserve natural resources, such as forests, water bodies, biodiversity, and soil, to maintain their functionality and integrity. (Boarin 2016)
2. Renewable Energy: Promoting the use of renewable energy sources, such as solar, wind, hydro, and geothermal energy, reduces reliance on non-renewable resources like fossil fuels, minimizing environmental impact and climate change. (Dincer 2001)
3. Waste Management: Effective waste management practices, including recycling, composting, and responsible disposal, help reduce pollution, prevent resource depletion, and minimize the production of harmful substances. (Seadon 2010)
4. Pollution Control: Sustainable environmental practices focus on minimizing pollution, whether it's air, water, or soil pollution. This involves implementing regulations, adopting cleaner technologies, and encouraging sustainable practices in industries and households. (Elleuch *et al* 2018)
5. Sustainable Agriculture: Promoting organic farming methods, reducing chemical inputs, and adopting agroecological practices contribute to sustainable agriculture. It ensures the long-term productivity of the land, preserves biodiversity, and protects human health. (Brodt *et al* 2011)
6. Conservation of Biodiversity: Preserving and protecting diverse ecosystems, including forests, wetlands, coral reefs, and wildlife habitats, is crucial for maintaining ecological balance and sustaining the planet's biodiversity. (Lindenmayer *et al* 2000)
7. Responsible Consumption and Production: Encouraging sustainable consumption patterns, such as reducing waste, opting for eco-friendly products, and promoting circular economy principles, helps minimize resource depletion and environmental degradation. (Arora & Mishra 2023)
8. Education and Awareness: Creating awareness and providing education about sustainable practices is vital for fostering a sense of environmental responsibility and encouraging

individuals, communities, and organizations to take actions that promote a sustainable environment. (Hopkins & Mckeown 2002)

Achieving a sustainable environment requires a holistic approach that considers social, economic, and environmental factors. It involves the collaboration of governments, businesses, communities, and individuals to make conscious choices and implement strategies that support the long-term well-being of the planet and its inhabitants. (Ianos *et al* 2009)

2. Countries leading the Climate Action Plan:

While climate change can pose challenges to achieving these goals, combating climate change can also support their achievement, albeit with potential trade-offs. A more comprehensive understanding requires collaboration across disciplines, and it's important to align governance structures to ensure effective action in both areas.

The governance structures related to climate change and sustainable development should be closely linked to maximize the impact of actions in both realms, by doing so, a more holistic and effective approach can be formulated. (Fuso Nerini *et al* 2019)

The 2022 Climate Change Performance Index, released following last November's COP26 climate summit, analyzes the work 60 countries and the EU have done so far. The annual report – which was jointly developed by Germanwatch, New Climate Institute and the Climate Action Network – highlights the nations leading in the categories of greenhouse gas emissions, renewable energy, energy efficiency and climate policy. (Puertas & Marti 2021)

Each country's performance was judged and scored on the basis of its energy consumption, national emission targets, and creation and attainment of policy goals.

Here are the 10 countries that rank the highest in the climate change policy category, according to the Climate Change Performance Index:

No. 1: Luxembourg

Climate Policy Score: 18.11

Luxembourg's COVID-19 recovery and resilience plan – its most recent major piece of climate change legislation – apportions 30.5 million euros toward increasing the amount of charging stations in the country to support and ease the transition to electric vehicles. (Ratti 2022)

No. 2: Denmark

Climate Policy Score: 17.87

In 2019, Denmark announced a 10-year plan to reduce its carbon emissions to 70% below 1990 levels – one of the more ambitious programs in Europe. By 2050, the country aims to be carbon neutral, meaning that its emissions and absorption of carbon dioxide would be zero. (Prag & Henriksson 2020)

No. 3: Morocco**Climate Policy Score: 17.23**

Morocco, a coastal country, is particularly threatened by rising sea levels and other climate-related changes. They have begun to shift from standard energy sources to renewables in the last few years, targeting 52% renewable energy use countrywide by 2030. (Aghahosseini *et al* 2016)

No. 4: Netherlands**Climate Policy Score: 16.53**

Beyond reducing carbon dioxide emissions in line with EU standards, the Netherlands has worked to become an overwhelmingly bike and pedestrian-friendly nation (Pojani & Stead 2015). As sea levels rise, the country has also devised climate-adaptive schemes, such as intentional flooding, to save its cities. (Dai *et al* 2018)

No. 5: Lithuania**Climate Policy Score: 16.48**

Much like its fellow European Union member states, Lithuania has implemented a 10-year National Energy and Climate Plan, which launched last year. The plan emphasizes transportation electrification – for personal vehicle use as well as the railway – and reducing fuel consumption by 24%. (Bobinaite *et al* 2022)

No. 6: Portugal**Climate Policy Score: 16.27**

Due to its geography, Portugal is particularly vulnerable to droughts and floods. In an effort to combat climate change and the extreme weather associated with it, the country has made strides on renewables – such as solar and wind plants – which now account for 54% of energy generated. (Frade *et al* 2019)

No. 7: France**Climate Policy Score: 16.06**

In the last year alone, France passed a climate change bill meant to take a broad approach to environmentally unfriendly practices in the country. The proposed legislation included eliminating short domestic flights and limiting use of plastic packaging. (Van der Nest 2021)

No. 8: Finland**Climate Policy Score: 15.98**

As the first country to put a carbon tax in place, Finland has historically been a leader in climate change policy. Leaders recently strengthened the country's commitment to green living by shifting to wood-based materials for its construction and even textile needs. (Leskinen *et al* 2018)

No. 9: Sweden**Climate Policy Score: 15.72**

Sweden has led the charge for serious climate change policy on an

international scale over the last few years. The country is a major source of funding for the Green Climate Fund, the world's largest climate fund and an integral component of the Paris Climate Accords. (Schalatek *et al* 2012)

No. 10: China**Climate Policy Score: 15.68**

Despite a lower overall performance rating, China has put forth detailed plans to combat climate change and other environmental issues, such as air quality, that have plagued its cities (Puertas & Marti 2021). President Xi Jinping has pledged to significantly increase the use of solar and wind energy by 2030 (Yang *et al* 2016)

3. How to develop a Sustainable Environmental and Climate Action Plan:

Creating a Sustainable Environmental and Climate Action Plan involves a thorough examination of several elements, including enhancing energy efficiency, lowering greenhouse gas emissions in areas like transportation, energy generation, and waste management. It also entails urban adaptation to climate change and addressing the financial aspects of climate action. This comprehensive approach aims to equip local authorities with the necessary knowledge, strategies, and financial resources for successful development and execution (Bertoldi 2018).

To mitigate ongoing climate change, not only is global consensus required but also an interdisciplinary approach centered on environmental management, this means collaboration among various fields of study and expertise to find innovative and effective solutions to mitigate climate change and adapt to its consequences. (Mikulčić *et al* 2022)

As young Nigerians and Africans, there are various process you can adopt which include the following step-by-step guide:

- I. **Assess the current state:** Start by conducting a thorough assessment of your local community or organizational environmental impact. Identify the key areas where sustainable action is needed, such as energy consumption, waste management, transportation, and resource usage. (West *et al* 2009)
- II. **Set SMART goals and targets:** Define clear and measurable goals that align with your desired outcomes. These goals should be specific, time-bound, and ambitious but also realistic and achievable. Consider setting targets related to reducing greenhouse gas emissions, promoting renewable energy, conserving resources, and adopting sustainable practices. (Maxwell *et al* 2015)
- III. **Stakeholder engagement:** Engage with stakeholders, including community members, employees, experts, and local authorities. Seek their input and involve them in the planning process. Encourage participation, gather ideas, and address concerns. Collaboration and inclusivity are crucial for success. (Sprenkel & Bosch 2011)
- IV. **Research and gather information:** Conduct research to understand best practices, policies, and technologies related to sustainable environmental and climate action. Stay

informed about local, national, and international regulations and initiatives. Explore successful case studies and learn from others' experiences. (Lorenzoni *et al* 2005)

- V. **Develop strategies and action plans:** Based on your assessment, goals, and research, develop specific strategies and action plans for each focus area. For example, if energy consumption is a concern, consider strategies like energy efficiency improvements, renewable energy adoption, and behavior change campaigns. Create a detailed roadmap with timelines, responsibilities, and indicators of success. (Clinton 1993)
- VI. **Prioritize adaptation and resilience:** Incorporate measures to adapt to and mitigate the impacts of climate change. Assess vulnerabilities and identify actions to build resilience in areas such as infrastructure, agriculture, water management, and disaster preparedness. Consider the long-term consequences and plan for the future. (Sovacool 2011)
- VII. **Implementation and monitoring:** Begin implementing the action plans, ensuring clear communication and coordination among stakeholders. Assign responsibilities, allocate resources, and track progress regularly. Establish monitoring systems to evaluate the effectiveness of measures and make adjustments as needed. (Sanchez *et al* 2018)
- VIII. **Education and awareness:** Promote environmental education and awareness campaigns to engage the wider community. Encourage sustainable practices among individuals, businesses, and organizations. Foster a culture of environmental responsibility and inspire behavioral change. (Monroe *et al* 2019)
- IX. **Collaboration and partnerships:** Seek partnerships with other organizations, governments, NGOs, and academic institutions. Collaboration can lead to shared knowledge, resources, and innovative solutions. Leverage the collective effort to achieve greater impact. (Leck & Simon 2013)
- X. **Review and update:** Regularly review and evaluate the effectiveness of your Sustainable Environmental and Climate Action Plan. Measure outcomes against set targets, identify areas for improvement, and adapt strategies accordingly. Keep up with new developments, scientific findings, and emerging technologies to refine and update your plan over time. (Weber 2006)

4.Key Stakeholders involved to developing Sustainable Environmental and Climate Action Plan:

Developing a Sustainable Environmental and Climate Action Plan involves engaging with a wide range of stakeholders. The specific stakeholders can vary depending on the context, such as whether it's a local government, an organization, or a community initiative. Here are some key stakeholders to consider: (Malley *et al* 2021)

There is a pressing need for genuine political commitment to take action. This includes creating an enabling environment in each country where stakeholders can engage in meaningful discussions and actions related to sustainable development. It involves forging strong partnerships between government, the private sector, and civil society. Moreover, it entails defining clear roles and responsibilities for sustainable development, setting up effective coordination mechanisms, and working collaboratively on agreed-

upon priorities. (Dalal-Clayton & Bass 2002)

- I. **Government entities:** Engage with local, regional, and national government agencies responsible for environmental and climate policies. This may include environmental departments, climate change departments, and urban planning authorities. Collaboration with these entities is crucial to align your action plan with existing policies and regulations. (Fudge & Peters 2009)
- II. **Community members:** Involve community members who will be directly impacted by the action plan. This can include residents, businesses, schools, and community organizations. Encourage their participation through public consultations, workshops, surveys, and community meetings. Gather their insights, concerns, and ideas to ensure the plan reflects their needs and aspirations. (Picketts *et al* 2012)
- III. **Non-governmental organizations (NGOs):** Collaborate with environmental and climate-focused NGOs that have expertise and experience in sustainability initiatives. NGOs can provide valuable input, resources, and technical knowledge. They can also act as advocates, raising awareness and mobilizing support for your action plan. (Gough & Schackley 2001)
- IV. **Businesses and industries:** Engage with local businesses and industries, especially those with significant environmental footprints. Encourage their participation and seek their input on sustainable practices and technologies. Explore partnerships and incentivize businesses to adopt environmentally friendly practices and reduce their carbon emissions. (Bocken *et al* 2014)
- V. **Academic and research institutions:** Collaborate with universities, research institutions, and think tanks specializing in environmental and climate studies. They can provide valuable research, data analysis, and scientific expertise. Engaging academic institutions also fosters innovation and the development of new technologies and solutions. (Alshuwaikhat & Abubakar 2008)
- VI. **Indigenous and marginalized communities:** Recognize and involve indigenous communities and marginalized groups who often bear the brunt of environmental degradation and climate impacts. Ensure their representation and respect their traditional knowledge and rights. Engage in meaningful consultations to understand their perspectives and incorporate their needs into the action plan. (Sibiya *et al* 2022)
- VII. **Professional associations and industry groups:** Engage with professional associations and industry groups relevant to the focus areas of your action plan. These organizations often have specialized knowledge and can provide guidance on sustainable practices specific to their sectors. Collaborate with them to develop sector-specific strategies and initiatives. (Bailey & Rupp 2006)
- VIII. **Media and communication channels:** Involve media outlets and communication channels to raise awareness about your action plan and engage a wider audience. Leverage traditional media, social media platforms, and community newsletters to share updates, progress, and success stories. Effective communication helps build

support and encourages participation. (Tompkins & Adger 2004)

As Youths, always remember that stakeholder engagement should be inclusive and transparent. Tailor your engagement strategies to suit the specific needs and characteristics of each stakeholder group. Aim for a collaborative approach that fosters partnerships and collective action towards sustainability. (Dalal-Clayton & Bass 2002)

5. Ways to Live More Sustainably:

Given the increasing influence of private sector on individuals, there is urgency of establishing inclusive avenues that encourage collaborative efforts between companies and customers to develop sustainable lifestyles. An environment that supports identity adaptation can enhance citizens' commitments to sustainable living. (elf *et al* 2019)

1. Think twice before shopping:

“Reduce, Reuse, Recycle” may feel retro, but it’s just as important today as when the phrase was first coined. Every product we purchase has an environmental footprint, from the materials used to create it to the pollution emitted during manufacturing to the packaging that ends up in landfills. So before you buy, ask yourself if you really need it. If you do, consider buying gently used instead of new, and look for minimal packaging and shipping. (Young *et al* 2010)

2. Drive less, Drive green:

Changing your driving habits can dramatically reduce your carbon footprint. Walk, bike, carpool or use public transportation whenever possible. Combine errands to make fewer trips. Participate in, or start, car-free days in your community. It’s also important to keep your car in shape with regular tune-ups and tire inflations. (Muslim *et al* 2018)

3. Go #PlasticFree:

Every year thousands of seabirds, sea turtles, seals and other marine mammals are killed after ingesting plastic or getting tangled up in it. You can start cutting down on your plastic waste in a few simple steps: use reusable bags when you shop, ditch single-use water bottles, bags, and straws and avoid products made from or packaged in plastic whenever possible (e.g., select unwrapped produce at the grocery store, shop local, cut down on online shopping). (Reese & Junge 2017)

4. Green your home:

Just as keeping your car in shape improves your fuel efficiency, keeping your home in shape improves your energy efficiency. Make sure your home has adequate insulation and energy-saving windows, and use a programmable thermostat for more efficient heating and cooling — and, of course, energy-saving lightbulbs for more efficient lighting. (Lorenzen 2012)

5. Pay attention to labels:

Choose Fair Trade certified goods, when possible, to support companies dedicated to sustainable production and paying laborers a fair wage. Buy organic food whenever possible; it may cost a little more, but it keeps harmful pesticides out of our land and water, protecting farm workers, wildlife and your family. From coffee to fruit to clothing, the number of options out there can get overwhelming — but there are some clear leaders when it comes to minimizing your impact on wildlife and the planet. (Thøgersen 2000)

6. Be water wise:

The extraction of water and production of all those plastic bottles is notoriously harmful to communities and wildlife. Water conservation is also critical, especially as our growing population puts increased demand on the nation’s water sources and we face unprecedented droughts. You can conserve water by taking shorter showers, fixing leaky toilets, and choosing low-flow and low-water appliance options. Also, consider xeriscaping your yard, a landscaping technique that uses native, drought-adapted plants that require less water and maintenance over time, and provide habitat and food for birds and bees. (Dalstein & Naqvi 2022)

7. Choose to have a smaller family:

With more than 7.5 billion people in the world, and more every day, our demands for food, water, land and fossil fuels are pushing other species to extinction. We can achieve an ecologically sustainable population in ways that promote human rights; decrease poverty and overcrowding; raise our standard of living; and allow plants, animals and ecosystems to thrive. It’s time to talk about runaway human population growth, the species extinction crisis, and what kind of future we want for wildlife, the planet and ourselves.

Learn more about human population growth and overconsumption. (Guillebaud 2016)

8. Use your voice and your vote:

One of the best things you can do for wildlife and the planet, today and for the future, is to get politically involved in your community and at the national level. Vote for candidates with strong environmental platforms. Urge your representatives to pass stronger policies to limit greenhouse gases, fight climate change, protect our wildlife and public lands and support access to reproductive health services. Better education and access to family-planning services decreases family size and our overall carbon footprint, helping children and wildlife thrive. Sign and share action alerts, attend events, and talk to your friends about endangered species protection and the need to address human population growth and overconsumption. (Bandura & cherry 2020)

Conclusion:

The concept of a sustainable environment, emphasizes the need to preserve Earth’s resources and ecosystems for present and future generations through key elements of sustainability such as

renewable energy, waste management, biodiversity conservation, and responsible consumption. Developing Sustainable Environmental and Climate Action Plans, involves stakeholder engagement, research, strategy development, and regular review. It also suggests ways for individuals to live more sustainably, including mindful consumption and supporting environmental policies. Collaborative efforts across sectors is necessary for a more sustainable future where our environment is preserved, and the well-being of all living beings prioritized.

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