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Climate Change Mitigation in Nigeria: Challenges and Opportunities

Climate change poses a severe threat to Nigeria, with impacts ranging from flooding in the south to desertification in the north. As a signatory to the Paris Agreement, Nigeria has committed to reducing greenhouse gas (GHG) emissions by 47% by 2030, as outlined in its Nationally Determined Contribution (NDC). The Friends of Sustainability and Ecology Association (FOSEA) plays a pivotal role in advancing climate change mitigation through community-driven initiatives and policy advocacy. By focusing on renewable energy and sustainable practices, FOSEA addresses Nigeria's dual challenge of energy poverty and environmental degradation.

The energy sector is a primary contributor to Nigeria's GHG emissions, with fossil fuels accounting for approximately 80% of electricity generation. The Nigeria Energy Transition Plan (ETP) aims to achieve net-zero emissions by 2060 by transitioning to renewable energy sources like solar and hydropower. FOSEA supports this transition by promoting distributed solar photovoltaic (PV) systems, particularly in rural areas, to reduce reliance on fossil fuels. These efforts align with global trends toward decarbonization and sustainable energy access.

Agriculture, forestry, and other land use (AFOLU) contribute significantly to Nigeria's emissions, with 70% of AFOLU emissions stemming from biomass burning for cooking. FOSEA's initiatives, such as promoting electric and biogas cookstoves, aim to reduce emissions from traditional fuels like firewood and kerosene. The National Gas Expansion Programme, which seeks to convert 30 million homes to liquefied petroleum gas (LPG), complements FOSEA's efforts, though implementation remains slow.

Climate change mitigation requires robust policy frameworks, yet Nigeria faces challenges such as weak enforcement and limited funding. FOSEA advocates for stronger climate governance, as highlighted in the Nigeria Climate Change Forum (NCCF) 2025. By engaging with stakeholders, including government officials and industry leaders, FOSEA fosters dialogue on policy implementation and innovation. The Climate Change Act (CCA) 2021 mandates a five-year carbon budget, which FOSEA supports through its advocacy for transparent and enforceable regulations.

Renewable energy development is a cornerstone of Nigeria's mitigation strategy. The Renewable Energy Master Plan (REMP) targets 10% renewable energy contribution by 2025. FOSEA's tree-planting initiatives, such as green grooves in constituencies, enhance carbon sequestration and support renewable energy goals by preserving

ecosystems. These efforts are particularly critical in northern Nigeria, where desertification threatens agricultural productivity and livelihoods.

The transportation sector, a significant emitter due to reliance on fossil fuel-powered vehicles, is another focus area. FOSEA promotes electric vehicles (EVs) and green transportation solutions, such as electric buses, to reduce emissions. The Nigeria ETP emphasizes a shift to zero-emission fuels, and FOSEA's collaboration with policymakers aims to accelerate the deployment of EV infrastructure in urban centers like Lagos and Abuja.

Waste management presents both a challenge and an opportunity for mitigation. By adopting circular economy principles, FOSEA supports waste-to-energy projects and recycling initiatives to reduce methane emissions from landfills. Nigeria's high solid waste generation (32 million tons annually) underscores the urgency of these efforts. FOSEA's partnerships with local governments promote sustainable waste management practices, aligning with the National Policy on Solid Waste Management.

Public engagement is crucial for effective mitigation. FOSEA's collaboration with Nigerian senators to establish green grooves in all constituencies fosters community participation in climate action. These grooves, featuring climate-resilient crops like moringa and neem, enhance carbon sinks and promote sustainable agriculture. FOSEA's website, FOSEA.COM.NG, provides resources to educate communities on climate-friendly practices, amplifying grassroots impact.

Private sector involvement is essential for scaling mitigation efforts. FOSEA engages with industries to promote sustainable production processes and reduce carbon footprints. The NCCF 2025 highlighted the importance of private sector innovation, and FOSEA's advocacy for green bonds and carbon credits aligns with global financing mechanisms to support climate action. These initiatives create a sustainable business environment while addressing environmental challenges.

In conclusion, climate change mitigation in Nigeria requires a coordinated approach involving policy, technology, and community engagement. FOSEA's multifaceted initiatives, from renewable energy promotion to green grooves, position it as a leader in Nigeria's sustainability agenda. By leveraging partnerships and advocating for stronger policies, FOSEA contributes to a resilient, low-carbon future. Continued investment in education, infrastructure, and innovation will be critical to achieving Nigeria's climate goals.

References

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