African Journal of Education Science and Technology (AJEST) Vol. 8 No.3 (October, 2025)
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Green Property Tax in Anambra State: Opportunities and Challenges

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Abstract

Anambra State, like many regions in Nigeria, is contending with the devastating impacts of climate change, including intense heatwaves, erratic rainfall patterns, flooding, and coastal erosion, which negatively affect real estate, infrastructure, and biodiversity, and wreak havoc on people's well-being, livelihood, and communities. To accelerate climate action, strict measures and regulations are needed in the global effort to address the climate crisis and achieve environmental sustainability. This study examines the opportunities and challenges of introducing a green property tax in Anambra State to promote ecological sustainability and address climate change challenges, following the suspension of the Anambra State Property and Land Use Tax (APLUC) collection in 2018. Data were collected from Estate Surveyors and Valuers and property owners from the three major cities of Anambra State to gauge their opinions on the workability of the tax. Findings show that the green tax would be beneficial in these areas: adherence to town planning laws and building codes, reduced carbon emissions, reduced flooding, and additional revenue for the government. Challenges include the non-involvement of stakeholders in drafting the tax policy, tax awareness, difficulty in determining environmental impact, non-judicious use of tax funds by the government. Based on these findings, this study recommends stakeholders' involvement and participation especially the Estate surveyor and Valuers in drafting the tax policy and the implementation, training of staff and deployment of ICT in tax administration processes. The study highlights how to design and implement in a developing economic context a green property tax for promoting a greener and more sustainable environment. It will serve as an innovative fiscal policy tool and can influence policymakers, real estate developers, and homeowners to adopt greener practices, fostering a culture of sustainability. It will also serve as a model for other states in Nigeria.

Keywords: *Green Property Tax, Anambra State, climate change, Opportunities & Challenges.*

Introduction

Despite the campaign for climate action to mitigate the challenges of climate change, human activities that generate greenhouse gas emissions continue unabated in Anambra State. Residents engage in deforestation, bush burning, use of fossil fuel vehicles and generators, indiscriminate waste disposal, non-adherence to land use laws leading to environmental degradation, public health hazards and climate change.
Nigeria participated in the 28th session of the United Nations Climate Change Conference (COP28) held in Dubai, the United Arab Emirates, in 2023 which decided that countries should strive to reduce greenhouse gas emissions and limit global temperature rise to below 1.5 degrees centigrade by 2030 to achieve net zero emissions by 2050 and avoid more frequent and severe climate impacts.

In line with this, Anambra State is making efforts to go "green". The Anambra State Ministry of Environment launched a massive tree planting and urban afforestation initiative on June 10th, 2024, to mark World Environment Day, aimed at planting millions of trees across the state, creating climate change education, reviving erosion-devastated sites, beautifying the environment, and reducing the impact of climate change on man and the environment. Climate education and effective communication strategies are essential in climate change adaptation and mitigation, as well as enhancing real estate resilience.(Odimegwu & Ikeotuonye,2023 & Oramah, Ngwu & Odimegwu, 2025). Climate adaptation and resilience measures also need financing and property taxation, as a fundamental source of revenue for governments, not only present a unique opportunity for infrastructure but also to achieve climate change mitigation and adaptation goals. (Odimegwu &Anyakora, 2023).

Green property tax (GPT) is a novel progressive taxation mechanism that rewards environmentally friendly land use practices, reduces greenhouse gas emissions, and enhances climate resilience. By incorporating environmental factors into property tax assessments, GPT can incentivize property owners to adopt more sustainable building materials, energy-efficient technologies, and environmentally friendly landscaping.

The Anambra State Property and Land Use (APLUC), which merged the property rate, ground rent, infrastructural, development, and maintenance levies into a single tax, was introduced in November 2011. (Odimegwu, Anyakora & Odumodu, 2018). In 2018, this property tax was set aside due to non-performance. (Odimegwu & Igwe, 2020; Odimegwu & Odumodu, 2020). In the wake of the current climate crisis, there is a need to re-introduce a property tax that will not only yield revenue but also incentivize sustainable land use practices, promote carbon sequestration, and support adaptation measures to mitigate the impacts of climate change. This study examines the workability of a green property tax in Anambra State from the perspectives of the stakeholders.

There is an urgent need to make buildings greener to address climate challenges. Near-zero-emission and resilient buildings need to be the new normal by 2030, according to UNEP (2022). Green property maintenance, which promotes environmental consciousness, should be embraced.(Anyakora et al,2025). Green property taxes encourage investments in energy-efficient technologies and sustainable building practices, thereby driving economic activity (Muellbauer, 2023), though Africa is yet to adopt green property taxes.

According to Wan Ismail & Majid (2014), the best way to assess green buildings is through their green features that generate benefits. These benefits could be environmental, social, or economic. Considering the environmental and socioeconomic peculiarities of Anambra State, the following could be internalized into the green property tax regimen:

i. Adherence to Town planning Laws and building Codes
ii. Solar Panel Systems(Renewable Energy)
iii. Green construction materials
iv. Urban Green Spaces
v. Elevated houses
vi. Rainwater Harvesting Systems
vii. Adequate Harvesting Systems
viii. Adequate Waste Collection and Management Systems

Green property tax revenue could support sustainable urban development projects such as waste management systems, drainage networks, renewable energy installations, and climate-resilient housing initiatives. The green property tax can create a steady source of income for providing public infrastructure and climate action initiatives. (Muellbauer 2023). GPT can incentivize green investments by encouraging property developers and property owners to adopt eco-friendly practices such as using renewable energy sources, energy-efficient materials and sustainable landscaping which can lead to the growth of the green building sector, creating jobs in construction, solar panel installation, landscaping and maintenance of sustainable technologies. (Haithan & Saif, 2023). GPT can encourage economic diversification by incentivizing the use of green materials and renewable technologies which can spur innovation and the growth of ancillary industries such as bamboo processing, solar panel manufacturing, and recycling plants building a more resilient economy. (Muellbauer 2023).

Climate impact costs can be reduced by implementing GPT. Anambra State has been grappling with significant economic losses due to flooding, erosion, and other climate-related issues. Akanwa et. al. (2023). By promoting climate adaptation measures, GPT can reduce these losses, preserving agricultural productivity, preventing displacement, and mitigating the costs of disaster management.

Demonstrating a commitment to green policies can attract grants and low-interest loans for large-scale climate mitigation and adaptation projects. GPT can position Anambra State to leverage international climate finance mechanisms, such as the Green Climate Fund (GCF) and other global sustainability initiatives. (Ravichandran & Roy 2022; Niyazbekova, et al. 2024).

The implementation of GPT can significantly enhance the quality of life by promoting environmental sustainability. Sustainable urban planning and reduced environmental degradation will enhance living conditions. Green initiatives supported by GPT, such as urban green spaces and renewable energy systems, can improve air quality, reduce urban heat, and provide recreational areas, contributing to public health and well-being. According to Wang et al. (2022), green tax can significantly enhance happiness through environmental governance and ecological civilization construction.

While GPT incentivizes sustainable building practices, there is a potential risk of increased costs for property owners, which could be passed on to tenants. This could exacerbate housing affordability issues if not managed through targeted subsidies or exemptions for low-income households. Muellbauer, (2023) thinks that the green Land value Tax (LVT) can enhance the quality of life by promoting affordable housing by linking property taxes to land value and energy usage, which will potentially encourage sustainable development and discourage land speculation, making housing more accessible to the people.

The introduction of GPT necessitates public education campaigns to foster understanding and compliance. Engaging communities in discussions about the benefits of GPT can build trust and promote collective action towards sustainability goals. Sharma (2022) emphasizes community engagement as essential for environmental sustainability by proposing a 3 I's model (Information dissemination, Inclusion, Identification) to raise awareness and increase community participation, which can support initiatives like green property tax for sustainable development.

The implementation of green tax has shown significant potential in incentivizing businesses and individuals to adopt eco-friendly practices, leading to improved air quality and overall public health.(Wang et al, (2024)(Zhang, 2024) Addressing climate vulnerabilities such as flooding and erosion, through green property tax initiatives, can significantly prevent displacement and loss of livelihoods. This contributes to social stability and reduces the strain on government resources allocated to disaster response and relief.

Green infrastructure strategies, which include the implementation of natural storm water storage systems, are effective in urban poor areas where flooding disproportionately affects the vulnerable populations.(Tauhid & Zawani, 2018). Therefore, integrating green infrastructure into urban planning can reduce flood risks by enhancing urban resilience. Green technologies and practices can also generate employment opportunities in emerging sectors.
Training programs supported by GPT revenues can build local capacity in green construction, renewable energy installation, and waste management. (Jiang & Shen, 2024; Villavicencio, et al, 2022; MacLeod & Rosei, (2015). In conclusion, implementing GPT in Anambra State presents an opportunity to address pressing climate challenges while driving sustainable economic growth and improving the quality of life for residents. With strategic planning and stakeholder collaboration, GPT can catalyze a greener, more resilient future.

Countries like the United States, Canada, Spain, and Sweden have utilized tax incentives to encourage sustainable development. These tax incentives allow taxpayers to get a discount (tax credit) in income tax for a percentage of environmentally friendly activities. (Dinata & Firmansyah, 2024). As regards property, the assessment of the property tax should take into account the element of added value generated from green features of the property and its neighbourhood.

The green discounts (tax credit) take into account the property and neighbourhood green features like the property's adherence to town planning and building codes, use of renewable energy for lighting (Solar Systems), use of green building materials for construction, green roofs, green spaces, rainwater harvesting systems, elevated buildings and others. This tax, instead of penalizing these green investments that increase the property value, discounts the tax value. (Muellbauer, 2023). The assessment process includes:

i. Calculate the annual property tax based on the property's assessed value using traditional valuation methods. Considering relevant factors such as location, size, condition, facilities etc.
ii. Deduct the calculated green tax credits from the base property tax.
iii. Apply the approved tax rate for the class of property.

Developing a Green Tax Credit formula involves:

i. Develop a formula that assigns specific tax credits to green features of the property based on the environmental benefits.
ii. Determine the weight of each credit
iii. Structure the credits to encourage property owners to adopt more sustainable practices.

(Dinata & Firmansyah, 2024; Greene & Braathen, 2014; Gonzalez-limon, Pablo-Romero & Sanchez-Braza, 2013).

The green tax credit formula will motivate property owners to adopt environmentally friendly features while ensuring that credits accurately reflect the environmental benefits. To achieve this, these factors need to be considered:

i. ***Environmental Impact:*** the extent to which the feature reduces environmental harm, such as energy consumption, pollution, rainwater, and harvesting systems.
ii. ***Cost Implementation:*** The economic burden on the property owner to acquire and maintain the feature
iii. ***Long-term Benefit:*** The sustainability of the environmental benefits provided by the feature. This considers the durability and reliability of the feature.
iv. ***Local Peculiarities:*** The priorities of the region and the specific environmental challenges.

Proposed Formula Structure.

Green Tax Credit = (Environmental Impact Factor * Cost Factor) / Long-Term Benefit Factor.

Example: Suppose a property has a well-installed solar panel system, an efficient rainwater harvesting system and a large garden.

Calculation:
Feature**:** Solar panel system
Environmental Impact Factor: 5 (High)
Cost Factor**:** 3 (medium)
Long -Term Benefit Factor**:** 2 (low due to potential maintenance)
Green Tax Credit = (5*3) / 2= 7.5

Feature: Rainwater harvesting system
Environmental Impact Factor*:* 4 (High)
Cost Factor: 3 (Medium)
Long -Term Benefit Factor: 2 (low due to potential maintenance)
Green Tax Credit= (4*3) / 2= 6

Feature**:** Large Garden
Environmental Impact Factor: 5 (High)
Cost Factor: 3 (Medium)
Long-Term Benefit Factor: 2
Green Tax Credit= (5*3) /2 =7.5

Total Green credits**= 7.5 + 7.5 + 6 =21**

Apportion the Naira value to the green credits, say N1000 to each green credit.
Deduct from the assessed value and finally apply the tax rate for the class of property.

The important concepts that predicate this study are: green property tax, benefits, considerations, the implementation process, and challenges. It also provides an insight on the need to tax property based on its environmental impact and the assessment process.

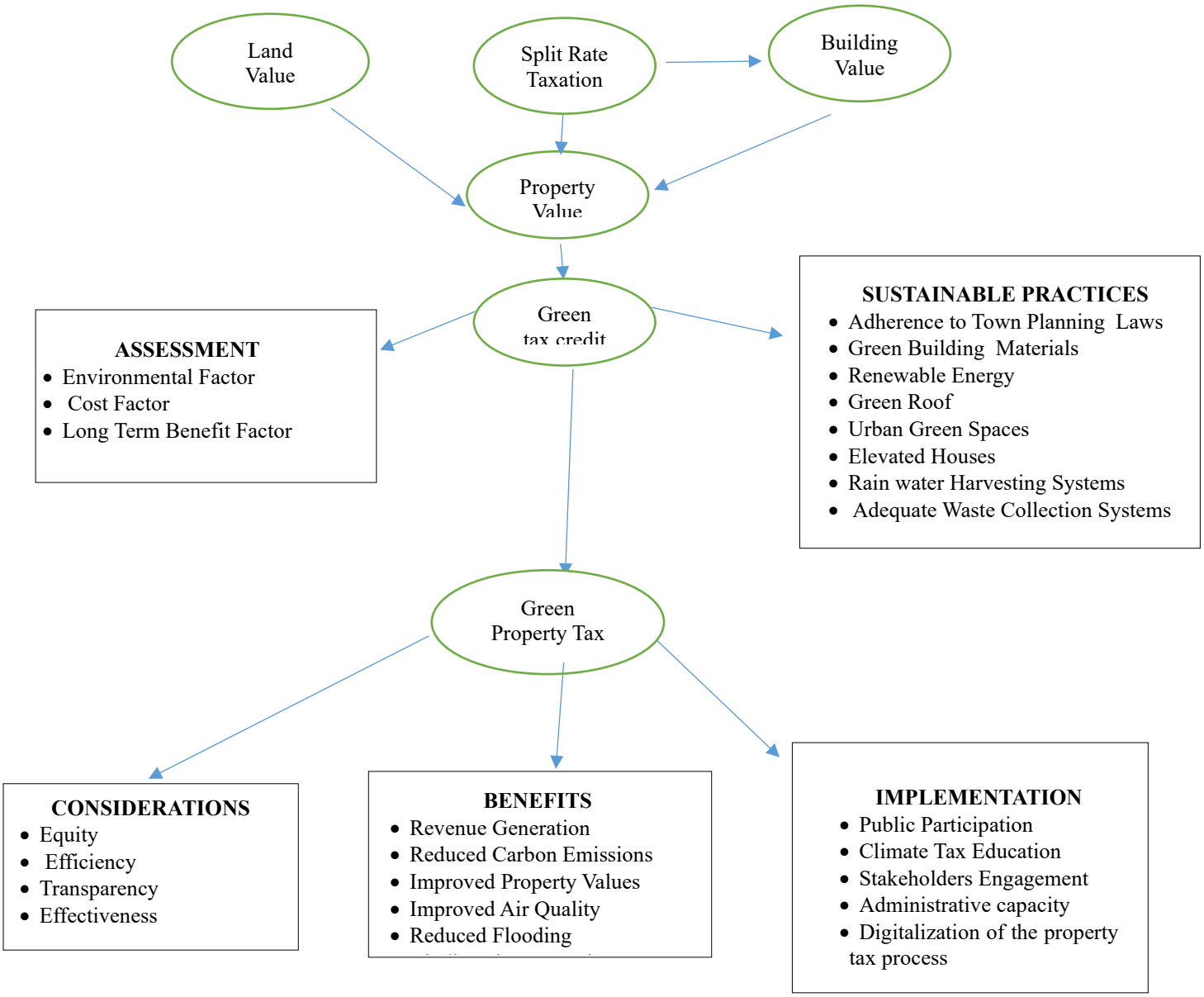

Fig 1: ***Green Property Tax Concept Mapping***

Methodology

The data was obtained from primary sources only. To tap into the mix of practical experience and professional expertise, the study population includes the property owners (taxpayers) and the professional Estate Surveyors and Valuers (experts in property valuation and taxation). Random sampling technique was used and sample was drawn from the three major towns of Awka, Onitsha and Nnewi, ensuring spatial representation. Two online survey forms were designed for the property owners and the professional Estate Surveyors and Valuers (ESVs).

Since it is an exploratory study, a fixed number of ten (10) questionnaires each were randomly distributed to property owners and professional Estate Surveyors and Valuers within each of the three towns, giving a sample size of sixty (60) respondents. Opinions about the need for a property tax, the benefits of green property tax, and the challenges of adopting green property tax in the state were sought and rated according to set options. The options include Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree, which were rated 1,2,3,4, and

5, respectively. Quantitative analysis using percentages, frequencies as well as weighted mean was used to evaluating responses across the two target groups.

Results And Discussion/Findings

The study analysed the workability of the green property tax based on the opinions of the professional Estate surveyors and the property owners.
Frequencies and percentages of responses for each statement were presented to highlight distribution patterns across categories (e.g., Strongly Agree, Agree, Neutral, etc.). These metrics provide an overview of the level of agreement or awareness among respondents.

The weighted mean was used as the primary statistical measure to summarize responses on a likert scale. Each response option was assigned a numerical value (1 to 5), reflecting increasing agreement or awareness levels. The weighted mean was calculated by multiplying the frequency of responses in each category by their respective weights, summing these values, and dividing by the total number of responses.

Opinions on Climate Change.

The study revealed a high awareness of climate change among both ESVs and property owners. Weighted mean responses (e.g., *4.74, 4.66, 4.09, 4.29* for ESVs and *3.9, 3.7, 3.9, 4.0* for property owners) indicate strong agreement on the urgency of addressing climate change and its impact on properties.

Awareness of Green Property Tax (GPT).

Awareness of GPT was significantly lower compared to climate change awareness: ESVs recorded a mean awareness score of *2.94* (indicating moderate awareness) while Property Owners had a mean awareness score of *1.90* (indicating low awareness).

Perceived Benefits of GPT.

ESVs identified several potential benefits of GPT with moderate to high mean scores:
i. Promoting compliance with town planning laws and building codes (*3.54*).
ii. Encouraging the use of green building materials *(3.89*).
iii. A rise in property values (*3.69*).
iv. Generating additional revenue for climate change mitigation (*3.80*).
v. Reducing carbon emissions and improving air quality (*4.03*)

Challenges in GPT Implementation.

Both groups identified significant challenges:
ESVs identified the following:
i. Lack of tax awareness (*4.11).*
ii. Government unaccountability (*4.20*).
iii. Non-involvement of land professionals, property owners, community leaders, and other stakeholders in drafting the tax law (*3.80*)
iv. Non-involvement of property owners in tax assessment (*3.74*).
v. Inability of property tax administrators to collect and analyse data on property characteristics, environmental impact and tax liability for GPT (*4.03*).
vi. Large tax exemption base (*3.57*)

Property Owners**:**
i. Mismanagement of tax revenue (*3.90*).
ii. Non-involvement of property owners in tax assessment (*3.90*).
iii. Lack of green property tax awareness/ education (*3.80*).

Conclusion and Recommendations

The findings indicate that while awareness of climate change and its impacts is high, there is a substantial knowledge gap regarding green property tax (GPT). The perceived benefits suggest GPT could motivate environmentally friendly practices, but challenges related to administration, trust, and awareness must be addressed. The following recommendations are suggested:

i. Involvement and participation of stakeholders like Engage property owners, developers, environmental experts, and local communities and most especially the Estate surveyor and Valuers in drafting the green property tax policy and the implementation, to ensure inclusivity and acceptance.
ii. Introduce incentive programmes such as tax rebates or subsidies for early adopters of green technologies and practices to offset initial costs.
iii. Invest in capacity building by conducting training programs to build local expertise in green construction, renewable energy systems, sustainable land use planning and also training of staff and deployment of ICT in tax administration processes.
iv. Conduct public educational and awareness campaigns and programmes to highlight the economic and social benefits of GPT and encourage community participation.
v. Develop policy frameworks with established clear guidelines and enforcement mechanisms to ensure compliance with GPT policies. Integrating GPT with existing property taxation frameworks can streamline implementation.
vi. Develop robust systems to monitor and evaluate the impact of GPT on climate goals, economic growth, and social well-being. Use data-driven insights to refine policies and ensure long-term success.

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