



**CHUKWUEMEKA ODUMEGWU OJUKWU
UNIVERSITY**



2024 - 2029

**5-Year Strategic Plan
for Tree Planting and
Climate Action**

Contents

Background	2
Vision and Mission	3
Guiding Principles.....	4
Call for Action	4
Strategic Goals	4
COOU Climate Action Pillars	5
Target Impact	7
Work Plans	8
Committee Members.....	10

Background

Climate change is real and presents a significant threat to lives and livelihoods. In Anambra State, the disruption to the natural ecosystems has berthed far-reaching consequences on human life, environment and the economy. At the forefront of environmental concerns in the state are gully erosion, deforestation and flooding. These issues are taking a heavy toll on businesses, education, quality of life and the achievement of the Sustainable Development Goals (SDGs). Among the most cited causes of the raging environmental issues is deforestation. This is because deforestation leads to the release of stored carbon dioxide into the atmosphere and consequent global warming as witnessed in rising temperatures and heat waves in recent times. Moreover, declining tree cover leaves land areas bare, unprotected and vulnerable to gullying processes. To put it in the proper perspectives, the far-reaching impacts of climate change include:

- i. Increasing wind extremes: more frequent and intense extreme wind events occur with aggravated losses. Of particular interest, Chukwuemeka Odumegwu Ojukwu University has in recent times been experiencing consistent and sustained damages to its buildings and powerline infrastructure due to strong winds. With each bout of damage comes costly repair works!
- ii. Rising Temperatures: the world is currently grappling with the consequences of increase in average temperatures which is driving heatwaves, leading to health issues and reduction in agricultural productivity with severe implications for food security.
- iii. Erratic Rainfall Patterns: Climate change has disrupted traditional rainfall patterns in Nigeria, resulting in unpredictable and more intense extreme weather events such as dry seasons and heavy rainfall. Specifically, Anambra State has witnessed irregular rainfall, leading to periods of both flooding and drought. These extremes have negatively impacted agricultural activities, water supply and livelihoods as people struggle to adapt to these changes.
- iv. Flooding: Abnormal rainfall and poor drainage systems have led to severe flooding in various parts of Nigeria, displacing communities and destroying infrastructure. Riverine communities of Anambra State suffer significant flooding. The 2012 and 2022 flood disasters are fresh reminders! Heavy rains caused the River Niger and its tributaries to overflow, displacing thousands and destroying homes, farmlands, and infrastructure.
- v. Sea Level Rise: it is very easy to notice that coastal areas of Nigeria are threatened by rising sea levels due to climate change. However, as the sea continues to push landwards, landlocked states like Anambra are beginning to experience saltwater intrusion into what used to be freshwater sources with the implication that known coastal and marine species are increasingly migrating into inland areas.
- vi. Desertification: the spill over effect of desertification in Northern Nigeria is migration and rising conflict over resources. The migration of people from affected northern regions has led to rapid explosions in human population in places like Anambra State with competing pressures on scarce resources and infrastructure. Moreover, dust storms

from these regions can affect air quality and agricultural productivity across the country, including Anambra. Another worrisome dimension in Anambra State is the rising swathes of urban deserts with previous mini woodlands of tropical rainforest steadily thinning down to patches of grasslands.

- vii. **Food Insecurity and Decline in Agricultural Productivity:** Climate change affects agriculture through changes in rainfall patterns, temperature increases and the prevalence of pests and diseases. Agriculture constitutes a significant proportion of the of the local economy in Anambra State. The current reality is that the state suffers from reduced crop yields and increased vulnerability to pests and diseases exacerbated by changing climatic conditions.
- viii. **Health Issues:** Climate change contributes to health problems by increasing the spread of diseases such as malaria, cholera and temperature-driven illnesses. In Anambra State, higher temperatures and flooding increase the risk of waterborne diseases and malaria, posing significant public health challenges.
- ix. **Water Resources:** Climate change affects the availability and quality of water resources, impacting drinking water supply, agriculture and hydroelectric power generation. In Anambra State, the twin issues of erratic rainfall and flooding have disrupted water supply systems, affecting both urban and rural communities. Surface water bodies now have high sediment load while the less fortunate ones have completely silted up. This also impacts the groundwater systems leading to distortions of the water table and degradation of groundwater quality.

Against the backdrop of these few mentioned examples, Anambra State, with its widening environmental challenges needs to adapt and build resilience to a changing climate. Therefore, in order to address these challenges, a comprehensive strategy is required to mitigate the impacts, protect the people and the environment while driving forward the SDGs.

Founded on 1st January, 2000; the present Chukwuemeka Odumegwu Ojukwu University initially opened its doors as a specialised technology university known as Anambra State University of Science and Technology (ASUTECH) and later renamed Anambra State University (ANSU) to reflect its metamorphosis to a conventional university. As a university with a responsibility for environmental stewardship, Chukwuemeka Odumegwu Ojukwu University (COOU) is committed to roll back the adverse effects of climate change by developing and implementing a strategic tree planting and climate action plan. The tree planting and climate action plan aims to enhance the university's green spaces, mitigate climate change, support biodiversity and promote sustainable development by contributing specifically to SDG 13 (Climate Action), SDG 15 (Life on Land) and SDG 4 (Quality Education) among others.

Vision and Mission

Vision: To create a sustainable and climate-resilient campus environment at COOU through strategic tree planting and climate action initiatives.

Mission: To increase tree cover on campus, reduce CO₂ emissions, promote environmental awareness and foster a culture of sustainability within the university community and wider society.

Guiding Principles

The strategic action plan is guided by the following principles of operation:

- i. **Collaboration:** partner with students, staff, vision-sharers and external stakeholders.
- ii. **Cost-effectiveness:** utilise readily available resources and seek funding opportunities.
- iii. **Sustainability:** focus on native, low-maintenance, fast-growing tree species and ensure long-term care.
- iv. **Education:** raise awareness about the importance of trees and climate action.
- v. **Carbon Credits:** abide by global standards and established protocols to earn carbon credits and finance the climate action plan.

Call for Action

The increasing ambient temperatures, unpredictable weather patterns, rising levels of greenhouse gases and aggressive loss of landmass to gully erosion necessitate that urgent actions be taken. As a rising tower of knowledge, innovation and impact; Chukwuemeka Odumegwu Ojukwu University is determined to play a pivotal role in climate actions. This 5-year strategic plan of action is therefore designed to establish green spaces on campus, serve as a living laboratory for environmental education and research, advance the cause of ecotourism, promote green economy and a culture of environmental stewardship among students, staff and the larger society.

Strategic Goals

The following goals shall be achieved within the next five years (2024 – 2029)

- i. **Campus Green Canopy (CGC):** Plant and nurture 10,000 trees across the three (3) campuses of the university. These shall consist of shade, ornamental, economic and cultural / sacred trees.
- ii. **Green Assets Programme (GAP):** this is a smallholder initiative of orchards of 500 rapidly-establishing economic trees per department and faculty. The programme will contribute over 35,000 economic trees to the university's green canopy but will be autonomously planted, nurtured and managed by departments and faculties. The orchards are expected to yield green revenues to the owner departments and faculties.
- iii. **Community Orchards Programme (COP):** this is aimed at the 179 communities in Anambra State. Under the town-and-gown relationship, each community shall be engaged and supported to plant and own a communal orchard of at least 5,000 economic trees to promote wider climate action. This will contribute close to 900,000 trees across the state and yield revenues to the communities.
- iv. **Sustainability Practices:** this entails the implementation of a wide range of sustainable practices in university operations particularly green architecture, waste management, energy use and water conservation.

- v. **Climate Education and Research:** this will involve the integration of climate change, climatepreneurship, ecotourism and environmental sustainability into the curriculum and promote research on environmental issues.
- vi. **Carbon Sequestration:** nurture the planted trees to maturity in order to reduce emitted CO₂ through carbon sequestration by at least 2500 tonnes annually and earn commensurate carbon credits.

COOU Climate Action Pillars

The COOU Climate Action Programme is captured under 14 pillars. These are:

1. Greenhouse Gas (GHG) Emissions Prevention and Removal

- In conformity with international protocols, develop and implement strategies to reduce emissions such as improving energy efficiency, increasing renewable energy usage and promoting low-carbon technologies.
- Create green infrastructure for carbon sequestration.

2. Renewable Energy and Infrastructure Development

- Promote the installation and use of solar systems and other renewable energy sources.

3. Energy Efficiency

- Invest in the retrofitting of existing buildings and infrastructure to improve energy efficiency.
- Educate the public and businesses on energy-saving practices.

4. Sustainable Transportation

- Develop infrastructure and promote a culture of Walking and Cycling.
- Invest in and promote public transportation systems (e.g. staff bus and group commutation services).
- Establish collaborations and partnerships to promote the use of Electric Vehicles (EVs).

5. Sustainable Agriculture and Land Use

- Implement programmes to increase tree cover, stabilise and restore degraded lands.
- Promote agricultural practices that increase productivity while reducing emissions and enhancing resilience.
- Encourage practices that improve soil health and carbon sequestration.

6. Waste Management

- Implement programs to minimise waste generation and promote recycling and composting under the 3R (reduce, reuse, recycle) initiative.
- Promote paperless processes by upscaling digital workstyles.

7. Water Resource Management

- Develop infrastructure and practices to promote efficient water management.

8. Climate Resilience and Adaptation

- Develop infrastructure and strategic partnerships for effective campus-wide and regional monitoring of weather conditions.
- Implement strategies to enhance resilience to climate impacts such as extreme weather events (e.g. heavy winds and heatwaves).

9. Policy and Governance

- Establish a unit to coordinate and implement Climate Action programmes of the university.
- Engage with relevant stakeholders (government agencies, private sector, civil society, communities and individuals) in the development, updating and implementation of climate action plans.

10. Education and Public Awareness

- Promote climate literacy by incorporating climate change education into curricula and public outreach programs.
- Conduct campaigns to raise awareness about the impacts of climate change and the importance of climate action.
- Create a Climate Action portal using the university website

11. Research and Innovation

- Invest in research and development of new technologies and practices to mitigate and adapt to climate change.
- Establish dedicated climate action knowledge centres (e.g. Climate Action and Biodiversity Conservancy).
- Establish a Botanical Garden and Arboretum
- Develop a Campus Tree Map
- Facilitate Ecotourism and the sharing of knowledge and best practices among stakeholders.

12. Monitoring, Reporting and Analytics

- Establish systems to monitor and report on the implementation of climate action plans and progress towards targets.
- Ensure transparency and accountability in the reporting of climate actions and outcomes.

13. Incentives and Financial Mechanisms

- Secure funding from public, private and international sources to finance climate actions.
- Incentivise the adoption of eco-friendly practices.

- Provide periodic (monthly, quarterly and annual) honours and awards for outstanding performance in GAP.

14. Partnerships

- Establish collaborations and partnerships to provide technical and financial support to achieve the target objectives and milestones of the climate action programme.
- Inaugurate Climate Action Ambassadors (CAA) of the university.

Target Impact

The aim of the 5-year strategic plan for Climate Action in COOU is to create a visible, viable and valuable impact on the campus environment and the wider community. The deliverables include:

- i. Provision of shade and improvement of campus aesthetics.
- ii. Investment and measurable success in green economy.
- iii. Promotion of biodiversity and a healthier ecosystem.
- iv. Advancement in environmental stewardship, awareness and responsibility among students, staff and wider community.
- v. Heat reduction and climate change mitigation.

Work Plans

	Activity	Input	Expected Outcome
Year 1	<ol style="list-style-type: none"> 1. Awareness and planning 2. Reconnaissance Survey and tree needs assessment of the university. 3. Establish a Tree Planting and Climate Action Committee (TP & CAC) 4. Develop a 5-year Strategic Plan for Tree Planting and Climate Action. 5. Organise 1st COOU Tree Planting and Climate Action Summit. 6. Site selection and development 7. Selection and planting of native tree species for CGC and GAP. 8. Explore grant opportunities, alumni donations and corporate partnerships to support tree planting and climate action activities. 	<ol style="list-style-type: none"> 1. Funds for awareness, planning and planting activities 2. Human resources for TP & CAC. 3. Students and volunteers for awareness campaign and workshop 4. Resources for reconnaissance survey and tree needs assessment. 5. Land area, trucks and machinery 6. 15000 seedlings of native trees 7. Resources for Tree Planting and 1st COOU Climate Action Summit. 	<ol style="list-style-type: none"> 1. Posters, fliers and online contents for awareness creation. 2. Increased awareness and engagement among COOU community 3. Establishment of a functional TP & CAC 4. Development of a comprehensive 5-year Strategic Plan 5. Tree Needs Assessment Report 6. 1st COOU Climate Action Summit and Tree Planting Ceremony 7. 5000 Trees planted in high-impact areas (e.g. parking lots, road canopy, walkways, garden parks and open spaces) for CGC. 8. 10000 trees planted for GAP 9. Functional partnerships and collaborations.
Year 2	<ol style="list-style-type: none"> 1. Audit and close gaps in Year 1 activities. 2. Plant additional 10000 trees on campus. 3. Administer manure to Year 1 plants 4. Establish a campus tree nursery. 5. Create a Botanical Garden and Arboretum 6. Engage stakeholders for sustainable energy systems on campus (e.g. CNG power plant, solar-powered systems) 7. Engage stakeholders for COP 	<ol style="list-style-type: none"> 1. Funds for tree planting and maintenance 2. Personnel for tree planting and maintenance (including manure, mulching and watering) 3. Tree seedlings 4. Funds and logistics for community engagements 	<ol style="list-style-type: none"> 1. 10000 trees planted and established 2. Improved campus aesthetics and biodiversity 3. Reduced energy consumption and carbon emissions 4. Increased awareness for COP 5. COOU Botanical Garden and Arboretum 6. COOU Tree Nursery 7. COOU Campus Tree Map
Year 3	<ol style="list-style-type: none"> 1. Audit and close gaps in Year 2 activities. 2. Establish COPs and plant 5000 trees per community. 3. Establish a CNG power plant. 4. Install solar panels on campus buildings 	<ol style="list-style-type: none"> 1. Tree seedlings for 179 communities under COP measures 2. Technical staff for energy efficiency implementation 3. Solar panel systems 4. CNG supply infrastructure 	<ol style="list-style-type: none"> 1. COPs planted and established 2. Reduced energy consumption, carbon emissions and diesel spillage on campus. 3. Increased use of green energy sources 4. Improved waste management practices 5. 2nd COOU Climate Action Summit

	<ol style="list-style-type: none"> 5. Explore waste to energy systems (e.g. biogas production from campus solid waste) 6. Develop a sustainable waste management plan 7. Convene a 2nd COOU Climate Action Summit 	<ol style="list-style-type: none"> 5. Resources for 2nd COOU Climate Action Summit 	
Year 4	<ol style="list-style-type: none"> 1. Audit and close gaps in Year 3 activities. 2. Explore circular economy opportunities 3. Implement composting for nurturing campus greenery. 4. Engage with local communities for climate action and education 5. Develop a Climate Action and Biodiversity Conservancy 	<ol style="list-style-type: none"> 1. Resources for recycling and composting. 2. Resources for engagement activities with local communities 3. Personnel for Climate Action and Biodiversity Conservancy 4. Community members for engagement and education 	<ol style="list-style-type: none"> 1. Increased recycling and composting rates 2. Improved community engagement and awareness 3. Establishment of a Climate Action and Biodiversity Conservancy
Year 5	<ol style="list-style-type: none"> 1. Audit and close gaps in Year 4 activities. 2. Launch COOU Organic Fruits Market 3. Expand renewable energy sources (e.g. solar power) 4. Audit CGC and GAP for carbon sequestration 5. Evaluate progress, assess impact, and plan for future expansion 6. Convene a 3rd COOU Climate Action Summit 	<ol style="list-style-type: none"> 1. Resources for scaling up and evaluation activities 2. Personnel and business plan for COOU Fruits Market. 3. Personnel for carbon sequestration audit. 4. Personnel and resources for evaluation and planning 5. Resources for 3rd COOU Climate Action Summit. 	<ol style="list-style-type: none"> 1. Significant reduction in carbon emissions 2. Carbon sequestration data for carbon credits. 3. Comprehensive evaluation and planning for future expansion 4. Revenue generation from COOU Green Economy. 5. 3rd COOU Climate Action Summit.

Committee Members

As constituted by the Ag. Vice Chancellor, Professor Kate Azuka Omenugha, fnipr, members of the Tree Planting and Climate Action Committee are:

1. Prof. K.K. Nwozor - Chairman
2. Prof. Celestine Ugwumba - Deputy Chairman
3. Prof. Nnamdi Obikeze
4. Prof. MaryJude Igbodika
5. Prof. Ifeoma Mbachu
6. Prof. Emmanuel Onyema Iloh
7. Dr Madumelu H.C. Madubueze
8. Dr Jude Obi
9. Dr Emeka Ezechukwu
10. Dr Innocent Ezeomodo
11. Dr E.C. Okoli
12. Dr M.J. Nworji
13. Mrs Grace Echezona
14. Mr Collins Okelue
15. Director of Physical Planning
16. Head of Works, Igbariam Campus
17. Head of Works, Uli Campus
18. Dean, Students Affairs.