



11TH NATIONAL STAKEHOLDERS FORUM AND
CELEBRATION OF NESREA @ 10

Advocacy for Eco-innovation for Sustainable Green Economy

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INTRODUCTION

In our world today technological campaigns and environmental sustainability are at the cross roads



Multiplicity of environmental pollution and degradation have plagued pristine ecosystems worldwide.

Introduction

The old way of doing business, based on finite fossil fuels and the exploitation of natural resources, is no longer sustainable.

Emerging and developing countries now face the challenges of restructuring current economic models to ecologically sustainable ones.



Introduction

- There is increasing global interest in big issues in Africa and particularly Nigeria but limited competencies, policies and frameworks to combat big challenges
- Nigeria is witnessing an increase in technological development and industrialization across a wide range of sectors which have resulted in continuous environmental pollution and degradation.



Introduction

- There is a need for national sustainable industrialization models for green business growth under the new global agenda known as **Eco-innovation**.
- **Eco-innovation** has the capacity to deliver the tools needed for Green Growth and sustainable **green economy**.



eco  **INNOVATION**

The logo for "eco INNOVATION" features the word "eco" in green, followed by a circular icon containing a green globe with a white recycling symbol, and the word "INNOVATION" in green below.

Eco-innovation

Eco-innovation is any innovation resulting in significant progress towards the goal of sustainable development, by reducing the impacts of production modes on the environment and enhancing nature's resilience to environmental pressures.



eco  **INNOVATION**

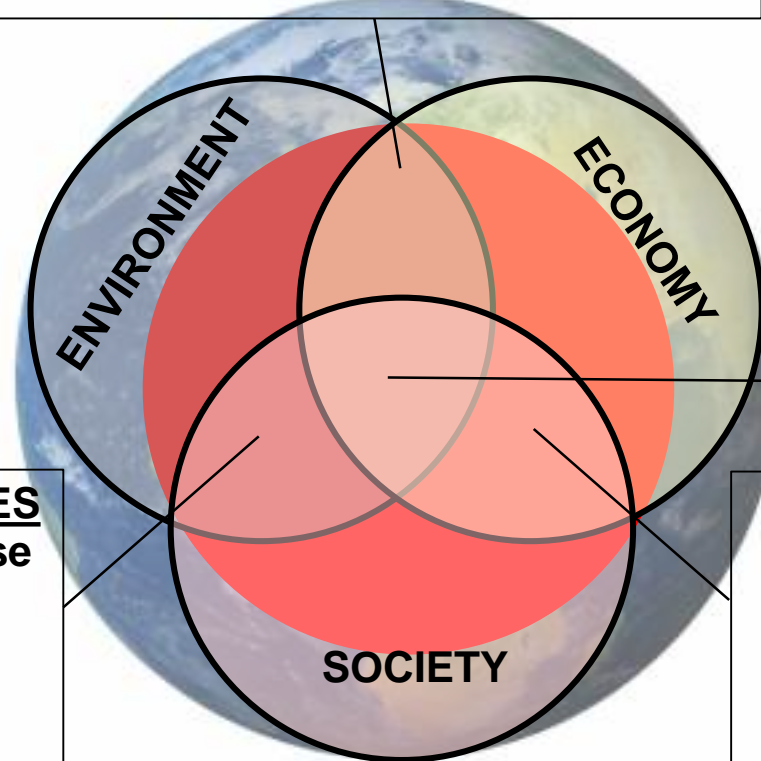
The word "eco" is in a large, bold, green font. To its right is a circular logo with a green globe and a recycling symbol. Below this, the word "INNOVATION" is written in a smaller, green, all-caps font.

ECO- INNOVATION

An “operational”
definition”

SUSTAINABLE ECONOMIES

Energy (carbon)
Water
Food
Natural resources
Waste



ECO-INNOVATION

SUSTAINABLE SOCIETIES

Resource access and use
Employment
Income
Skills
Health

EQUITABLE SOCIETIES

Resource access and use
Employment
Income
Skills
Health

Eco-innovation

Eco-innovation is a desired model for

- Increased knowledge index (KI)
- Commercialization of research output
- Stemming the stream of unemployment and employability of graduates
- Development of skills and entrepreneurship
- Boosting the growth of National Gross Domestic Product (GDP).



eco
INNOVATION

- ***Eco-Innovation offers real opportunities for sustainable development of new products, services and technologies providing greater opportunities for technical and vocational training to deliver effective climate change adaptation.***

Drivers of Eco-innovation

Eco-innovations stems from various stimuli or drivers (Horbach 2008; del Río González 2009).

- ✓ Internal stimuli
- ✓ External stimuli

Internal stimuli are environmental responsibility (green ethos) and environmental management systems.

External stimuli are environmental regulations, innovation subsidies, pollution taxes, demand from users, and pressure from local communities.



SECTORIAL APPLICATION OF ECO-INNOVATION

THE MANUFACTURING SECTOR

Extraction of materials (resources) - In this step, resources needed for product manufacturing are collected. Some equipment is used for environmental impact reduction in this stage.

Material and component production (materials/parts) - This is a stage where interim products including materials and components are manufactured. Such interim products and their designs are intended for environmental impact reduction.

Design and material selection (design) - In this step, designs and materials are carefully selected for product manufacturing, including environmentally compatible designs.



The Manufacturing Sector

Product manufacturing (production) - Products are manufactured in this step using materials and components in an environmentally friendly manner.

Transportation - In this step, materials, parts, and products are carefully transported to result in a low environmental burden.

Product use, maintenance, and repair (use/repair) - In this step, products are used by consumers and maintenance and repairs are carried out.

End Life- In this step, products are disposed and recycled sustainably.



Green Transportation

- Green Transportation, encourages eco-friendly transportation and reduces negative impact on the environment.
- It revolves around efficient and effective use of resources and modification of the transport structure.

Modes of Green Transportation

- Bicycles
- Electric bikes
- Electric vehicles
- Green trains
- Electric motorcycles
- Multiple occupant vehicles
- Hybrid cars
- New hybrid buses
- Pedestrian activities



Agriculture and Forestry

Advances in agricultural biotechnology have contributed significantly in the following ways:

- Reducing the release of greenhouse gas emissions from agricultural practices.
- Biotech crops reduces the reliance on pesticide, as a result, decrease the environmental impact associated with herbicide and insecticide use.
- There have been substantial net economic benefits to farmers due to increased yields and reductions in the cost of production.

Commonly Modified crops



Medicine and Pharmaceutical Industry

- Innovations in biotechnology has contributed greatly towards the growth of medicine and public health industry.
- It promotes effective drug delivery approaches, new methods for therapeutics, nutritionally enriched genetically modified crops and efficient methods for environmental cleanup.
- Quality healthcare and life expectancy have been enhanced worldwide through the services provided by biotechnology.
- Parasitic and infectious diseases have been diagnosed rapidly at relatively low cost in environmentally friendly manner.



Bio-based industries

Bio based industries, present opportunities for countries to use their biotechnological capabilities for national energy security and chemical supply sustainably.

Biotechnology has been applied in diverse sectors as chemicals, plastics, food processing, textiles, pulp and paper, mining, metal refining and energy.

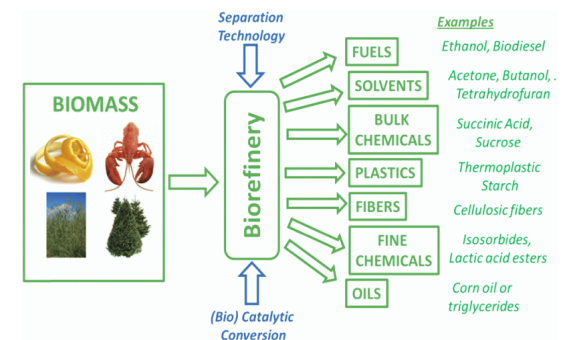
Several studies show that biotechnology can not only reduce costs but also reduce the environmental footprints.



Bio-based industries....

Industrial biotechnology, which is at the center of the bio based economy, generates economic opportunity, investment and employment in:

- Agriculture, especially through the development of new crops and new uses for crop residues and waste;
- Biofuel production and biomass resource optimization.
- Renewable chemical and bio based polymer production.
- Bioprocesses are used in pharmaceuticals and related manufacturing industries.



Advocacy for Bio-based Economy

- Potential benefits of the transition to a bio-based economy include a reduction of greenhouse gas (GHG) emissions, decrease in dependence on fossil resources, wiser management of natural resources, and improved food security.
- Reports have shown that over 90% of oil-based products could be replaced by bio-based alternatives.
- This type of economy creates sustainable systems of production and consumption that is needed to respond to societal challenge (climate change, natural resource scarcity and environmental pollution) and demand transformative change.





International Green Funding & Financing

IN THE LAST FIVE YEARS, THE GLOBAL PREMISE FOR GREEN AND CLIMATE-ORIENTED FUNDING, GRANTS AND FINANCE FOR AFRICA HAS SURGED INCREDIBLY



GREEN BONDS

FINANCING A SUSTAINABLE FUTURE



International Green Funding & Financing

SWITCH Africa Green

The European Union supports various initiatives in the area of Green Economy such as;

- ✓ Switch Asia
- ✓ Switch Mediterranean
- ✓ Partnership for Action on Green Economy
- ✓ SWITCH Africa Green



capacity4dev.eu

Connecting the development community



Switch Africa Green is an EU Initiative for Africa



International Green Funding & Financing

Switch Africa Green

SWITCH Africa Green is an EU funded programme being implemented by UNEP (in collaboration with UNDP and UNOPS) in 6 pilot countries in Africa.



The overall objective of SWITCH Africa Green is to support 6 pilot countries in Africa to achieve sustainable development by engaging in transition towards an inclusive green economy, based on sustainable consumption and production patterns, while generating growth, creating decent jobs and reducing poverty.



The objective will be achieved through support to private sector led inclusive green growth.



International Green Funding & Financing

Switch Africa Green

The specific objective is to support the development of green businesses and eco-entrepreneurship and use of SCP practices by having in place

- (i) MSMEs and business service providers that are better equipped to seize opportunities for green business development,
- (ii) better informed public and private consumers, and
- (iii) enabling conditions in form of clear policies, sound regulatory frameworks, incentives structures, tax, other fiscal and market-based instruments influencing key sector(s) in the 6 African countries.



International Green Funding & Financing

Switch Africa Green

Priority sectors for each country

Burkina Faso: Manufacturing, Integrated Waste Mgt, Tourism

Ghana: Manufacturing, Integrated Waste Management, Tourism

Kenya: Agriculture, Manufacturing, Tourism

Mauritius: Agriculture, Manufacturing, Tourism

South Africa: Agriculture, Integrated Waste Mgt, Manufacturing

Uganda: Agriculture, Manufacturing, Tourism



gogreen
FINANCING

GREEN BANKING



GREEN BONDS

FINANCING A SUSTAINABLE FUTURE



Green finance is a broad term that refer to financial investments for sustainable development projects and initiatives, environmental products, and policies that encourage sustainable economy.

A **Green Bank** is a financial institution, public or quasi-public, that uses innovative financing in partnership with the private sector to accelerate deployment of clean energy technologies and energy democracy.

A **Green Bond** is a tax-exempt bond issued by federally qualified organizations or by municipalities for the development of projects that generate environmental benefits.



RESOURCE MOBILIZATION - INTERNAL

GREEN CLIMATE FUND – Nigeria will benefit \$500 million concessionary loan funding from the green climate fund, courtesy of the United Nations Framework Convention on Climate Change. However, there is an opportunity for Nigeria to develop several more proposals to access more volumes of green climate funds.

GREEN BOND – As part of Nigeria's economic recovery and growth plan (ERGP) and signing of the budget, all is now set for the issuance of the Nigeria's "green bond" to fund environmentally focused initiatives.

GREEN FINANCING/INVESTMENT DRIVE – Expanding the on-going sustainable finance programme in the financial sectors in Nigeria through a strategic partnership that aims to increase sign-ups, participation and implementation is a strategic move that would increase the green resource base.



Tapping into CSR Budgets of Private Sector – Rolling out a private sector CSR alignment campaign to the SDGs, will immediately increase resource base available to achieving the SDGs in Nigeria.

Carbon Credit Market – The Nigerian carbon credit market is still at infancy, and requires a robust policy framework to increase its awareness, operationalization and efficiency in relation to international market.

Effective Tax Regimes – One of the models of resource mobilization is the establishment of a carbon tax regime which has to be strategically deployed through a process of stakeholder engagement, sector analysis and implementation plan.

RESOURCE MOBILIZATION - EXTERNAL

DEVELOPING STRATEGIC PARTNERSHIPS WITH INTERNATIONAL DONOR AGENCIES

A range of international donor, development support and funding agencies abound with a specific mandate for development in Nigeria which must be re-engaged strategically from a resource mobilization perspective.

DEVELOPING STRATEGIC PARTNERSHIPS WITH INTERNATIONAL TECHNICAL ORGANIZATIONS

Realization of the need for extensive knowledge transfer, capacity building and technology innovation, requires strategic alliance with international technical knowledge organisations and institutions to support our research capacities.

Developing and Managing Overseas Investment Fora

- ❖ Organization of international investment fora in strategic countries in partnership with foreign trade and investment commissions of those countries.
- ❖ Organization of international diaspora fora in partnership with Nigerians in diaspora organization for overseas resource mobilization.
- ❖ Organization of a foreign engagement fora with trade and investment representatives of the different high commissions in Nigeria to profile the new sustainability policy reform agenda of the country.
- ❖ Co-Application for International Grants and Funding Opportunities – There are several international development grants and funding opportunities and in several cases, Nigeria and Nigerian organisations and institutions are not aware of these opportunities.

GAPS IN EXISTING INTERVENTIO N MANDATES



- Slow emergence of policy responses
- Gaps in sectorial policy integration
- Existence of barriers to integration agenda
- Lack of political will for real action and implementation
- Gap between legislative requirement and policy formulations
- Integration of stakeholders engagement
- Absence of appropriate indicators with informative values

Others include:

- Poor communications of goals and mechanisms for environmental policy
- Inadequate investment in green technology
- Absence of tax exemptions and incentives for green technology
- Rudimentary green financing protocol
- Insufficient investment and budgetary allocations

Responses and Interventions



Policy Responses

Given the interconnected and multifaceted nature of eco-innovation and transition to green economy policy responses will require:

- Establishment of an overall framework for strategies to improve on the implementation of environmental laws in Nigeria.
- Setting up operational models on capacity building to address gaps between legislative requirement and policy formulations.
- Adaptation of a pragmatic approach for energy efficiency and green economy.



Policy Responses....

- Policy endorsement for International collaboration and agreements.
- Evolution of a dynamic environmental policy that would act as a delivery mechanism for resource efficiency road map.
- Evolving a better policy delivery and implementation mechanism for seamless legislative transition.
- Investment in new low carbon resource efficient and environmentally sound asset base through eco-innovation



Policy Responses....

- **Setting up private sector policy group for SDGs which can be integrated within or function in strategic partnership with private sector Advisory group but bring a policy development, advocacy, implementation and monitoring dimension to the operational industry activities of the PSAG.**
- **Design and implementation of a national policy that institutes the establishment of a series of private sector driven knowledge transfer and technology innovation hubs which must be tied to and hosted by Nigerian Universities but centered around industry-specific private sector objectives**



Advocacy

- Robust stakeholder engagement is a prerequisite for successful implementation of ecoinnovation policies.
- Strong political will and commitment to stakeholder engagement at all levels, guarantees success in environmental governance.
- Promotion of wellbeing between safe environmental threshold is guaranteed by a strengthened knowledge base.
- Promotion of innovation opportunities and increased funding of research for adoption of new green technology.



Institutional Reforms

- Shift in current National Tax Regime to environmentally damaging activities
- Establishment of an overall framework to improve implementation and enforcement of environmental laws in Nigeria.
- Provision of incentives for the adoption of new technologies and removal of barriers to trade in climate change smart technology.
- Mobilization and provision of financial and technological support to build institutional capacity for green economic growth.



Con**clu**sion



This paper has advocated for the deployment of eco-innovation as a veritable tool for achievement of a green economy to ameliorate and prevent the plethora of effects arising from environmental pollution and degradation.

Green growth through sound environmental governance, policy responses and institutional reforms should be applied to all sectors of the economy via new public private partnerships and the use of market based instruments.



