



2021 World Environment Day Theme: Ecosystem Restoration

June 7, 2021

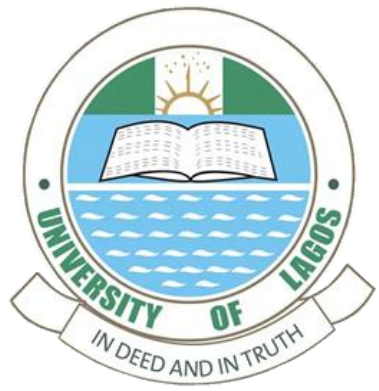
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OUTLINE

My Background



Ecosystem Restoration



Current Environmental Challenges in Nigeria



The UN Sustainable Development Goals & Ecosystem Restoration Priorities



The AU Agenda 2063 Goals & Ecosystem Restoration Priorities



Ecosystem Restoration in Nigeria - Management and Regulatory Frameworks



Ecosystem Restoration in Nigeria - Research Group Contributions



How You Can Be Involved

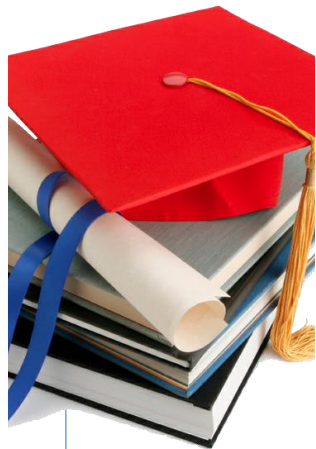
Disclaimer



Disclaimer

The views in this presentation are **personal** and not necessarily representative of my institution's, international or national government agencies' views on **Ecosystem Restoration**.

My Background



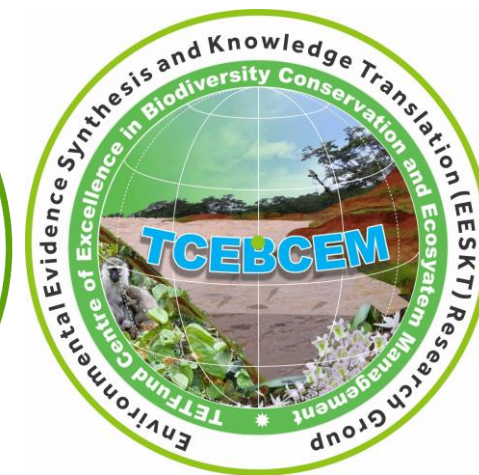
Education

- BSc (Hons) Zoology
- MSc & PhD Environmental Toxicology and Pollution Management



Work/Professional/Projects Experience

- Lecturer, Dept. of Zoology, University of Lagos
- **Project Lead**, Evidence Use in Environmental Policymaking in Nigeria (EUEPiN)
- **Lead**, Environmental Evidence Synthesis and Knowledge Translation (EESKT) Research Group, TETFund Centre of Excellence in Biodiversity Conservation and Ecosystem Management (TCEBCEM)
- **Panel Reviewer** (Ecology/Waste Management) – FMENV EIA
- **SAP Fellowship** – Federal Ministry of Science and Technology
- **Industry Experience** – EPNL, DPR, MDS

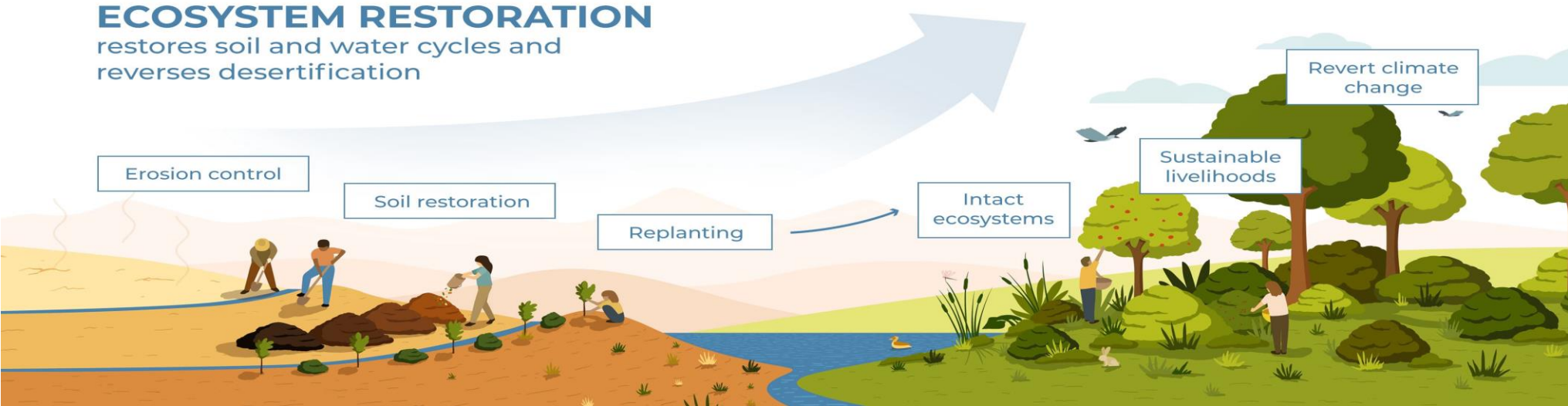
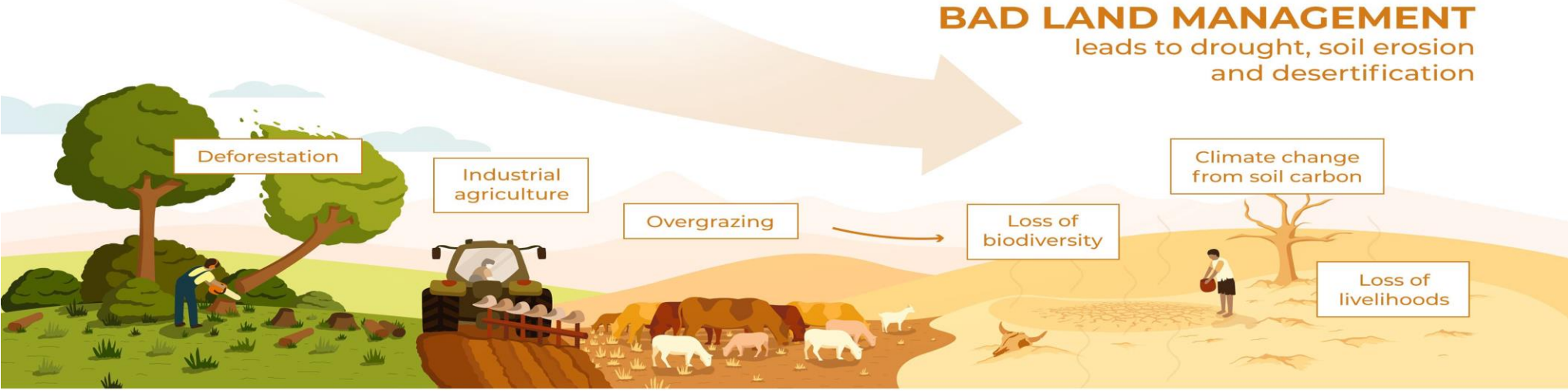


My Background, Cont'd

Current Research Interests/Projects

- **Effect-Directed Analysis** of sediments and wastewaters
- Development of low-cost **wastewater treatment** methods
- Method development for **Fish Embryo Toxicity** using indigenous species
- **Ecological risk assessment** of PAHs, pesticides and wastewaters
- **Climate change-pollutant** interactions and effects on aquatic biota
- **Environmental risk communication** to stakeholders and policymakers

Environmental Restoration



Ecosystem Restoration, Cont'd



"aims to prevent, halt and reverse the degradation of ecosystems on every continent and in every ocean,"
according to the UNEP



Ecosystem restoration can take many forms: Growing trees, greening cities, rewilding gardens, changing diets or cleaning up rivers and coasts. This is the generation that can make peace with nature.

Source: <https://www.unep.org/events/un-day/world-environment-day-2021>

Current Environmental Challenges in Nigeria

Solid waste

Industrial waste

Water pollution

Air pollution

Deforestation

Climate Change

Flooding

Desertification

Oil Spillage



A girl walks on a dump in Bariga shanty fishing community, Lagos, Western Nigeria in 2019.

Source: AFP



Onitsha, a city in eastern Nigeria, was rated as world's most polluted city according to data from WHO in 2016



Kaduna, a city in northern Nigeria also renown for its high pollution rate

Nigeria generates more than 32 million tons of solid waste annually, out of which only 20-30% is collected (Bakare, 2020)

UN SDGs Linkage with Environment



Source:
<https://www.decadeonrestoration.org/what-ecosystem-restoration>

UN SDGs Targets & Indicators – Ecosystem Restoration Priorities

Targets

- 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials



Indicators

- 6.3.1: Proportion of wastewater safely treated
- 6.3.2: Proportion of bodies of water with good ambient water quality

UN SDGs Targets & Indicators – Ecosystem Restoration Priorities, Cont'd

Targets

- 12.4: By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment



Indicator s

- 12.4.2: Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment

UN SDGs Targets & Indicators – Ecosystem Restoration Priorities, Cont'd

Targets

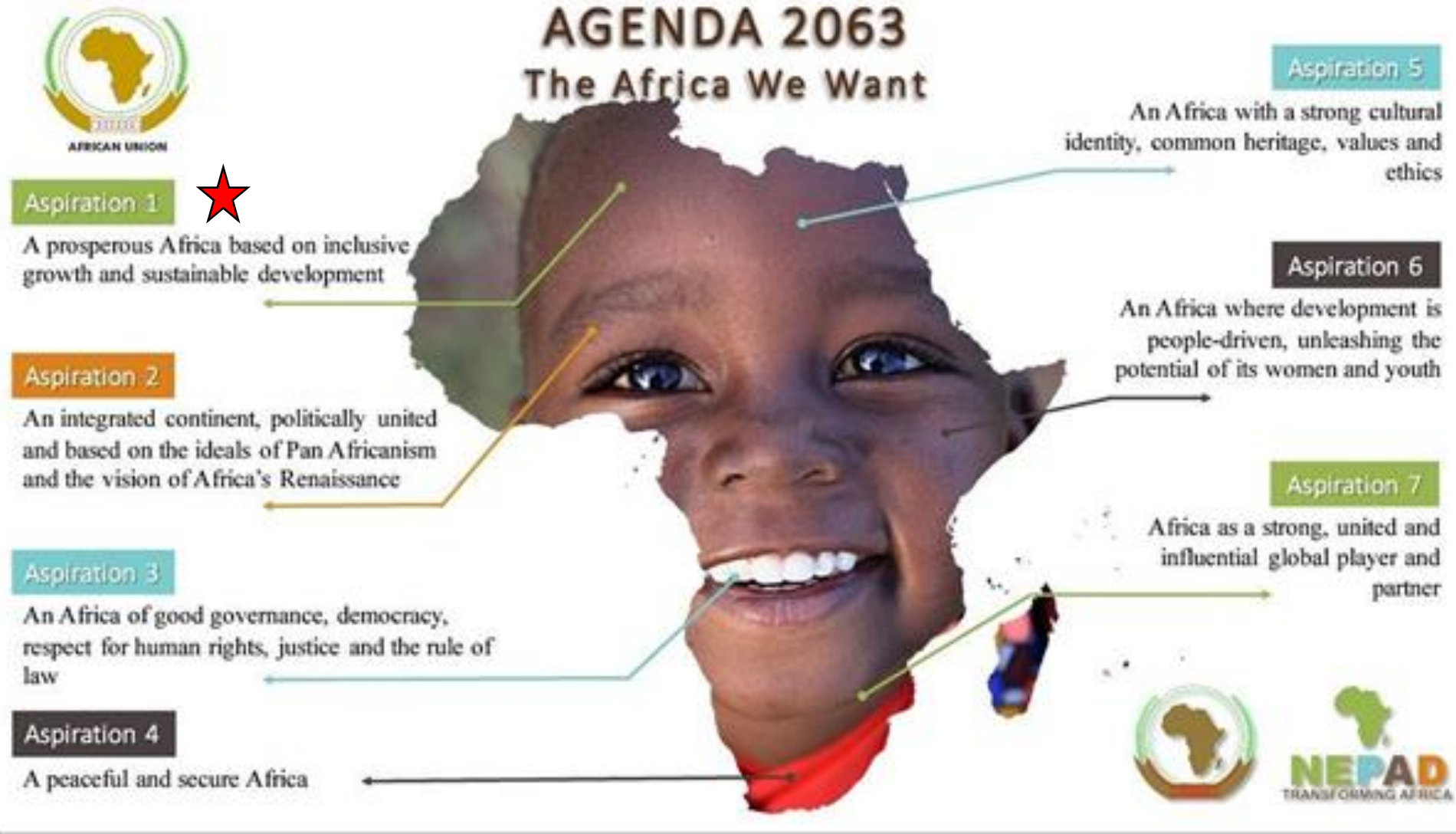
- **14:1** By 2025, prevent and significantly reduce marine pollution, in particular from land-based activities



Indicators

- **14.1.1:** Index of coastal eutrophication and floating plastic debris density

The African Union Agenda 2063 Aspirations



Overview

- 7 Aspirations
- 20 Goals

Source: [AU Watch](#)

AU Agenda 2063 Goals & Ecosystem Restoration Priorities



Aspiration 1: A prosperous Africa



Goal 1: A High Standard of Living, Quality of Life and Well Being for All Citizens



Goal 7: Environmentally sustainable and climate resilient economies and communities



Priority Area: Modern and Livable Habitats and Basic Quality Services



Priority Area: Water security



Priority Area: Climate resilience and natural disasters preparedness and prevention

Ecosystem Restoration in Nigeria – Management and Regulatory Frameworks

Regulatory & Development Approaches

- Federal Ministry of Environment
 - NESREA
 - NOSDRA
 - National Parks
- State Ministries of Environment
- National Emergency Management Agency
- [Office of the Special Assistant to the President on SDGs in Nigeria](#)

Action Points

- Open Access and Centralized database of Monitoring and Data
- Strong and productive collaborations between industries

Our Research Efforts towards Ecosystem Restoration



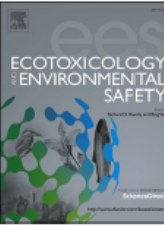
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Ecotoxicology and Environmental Safety

journal homepage: www.elsevier.com/locate/ecoenv



Antibiotics, algal evaluations and subacute effects of abattoir wastewater on liver function enzymes, genetic and haematologic biomarkers in the freshwater fish, *Clarias gariepinus*

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How You Can Be Involved

REIMAGINE. RECREATE. RESTORE.

This is our moment.

We cannot turn back time. But we can grow trees, green our cities, rewild our gardens, change our diets and **clean up rivers and coasts**. We are the generation that can make peace with nature.

Let's get active, not anxious. Let's be bold, not timid.

Join [#GenerationRestoration](#)

Source: <https://www.worldenvironmentday.global/>

How You Can Be Involved, Cont'd

Join the UN Decade on
Ecosystem Restoration Hub

References

Briggs, D. (2003). Environmental pollution and the global burden of disease. British Medical Bulletin 68(1): 1-24.

Morand, S and Lajaunie, C. (2018). A brief history on the links between health and biodiversity. In: Biodiversity and health: Linking Life, Ecosystems, Societies. Pg. 1-14.

[African Union](#)

[African Knowledge Base \(AKB\) Platform](#)

[Sustainable Development Goals Knowledge Platform](#)

