Pesticide in Nigeria & Prospect of Agroecology in 2050

By

Donald Ikenna Ofoegbu

Factors To Consider…

Current State of Agriculture in Nigeria

Land Degradation + Shrinking

- Climate Change
- Flooding
- Erosion
- Desertification
- Drought
- Deforestation
- Artisanal mining
- Poor Urban Development
- Further Distance to farms
- Violent Conflict & Insecurity

Dependence On Chemical Inputs

- 90% Farmers Using Chemical Pesticides
- > 50% of pesticides use Highly Hazardous Pesticides (HHPs)
- > 45% of Registered HHPs banned in Europe
- Increase Loss of Lives and Biodiversity Loss
- Loss of Indigenous plant and animal specifies
- Increasing Chronic Health Diseases (mostly uncheck)
- >76% Nigeria's Food Export Rejection in Europe
- High Import Volumes of Agrochemicals + GMO
- Loss of Food Sovereignty to International Agro-Company
- 70% explore organic pest ctrl, & SHF shifting to organic
- Subsistent farming come back {backyard-home garden}
- Food safety bill, Zero food export rejection

Low Productivity

- Neglect of 70% SHF, > 65% Food Prd
- Poor Agricultural Budget
- Low Access to Inputs by SHF
- Increasing Farm Insecurity
- Increasing Food Import Receipt
- Underutilization of Big Machine
- Labor Shift Away from Agriculture
- Food Insecurity/Malnutrition
- 218mn to 400mn people by 2040
- Food inflation - 37.9%
- Hungry, Anger and Crime

Agroecology in Nigeria by 2050 = f

- ✓ **Climate Change Effects**
- ✓ **Environmental Sensitivity & Prioritization**
- ✓ **Technological Advancements**
- ✓ **Government Policies: Food at All Cost & How?**

Instant ramification (eat now) vs medium and long term sustainability, Consumer Choice

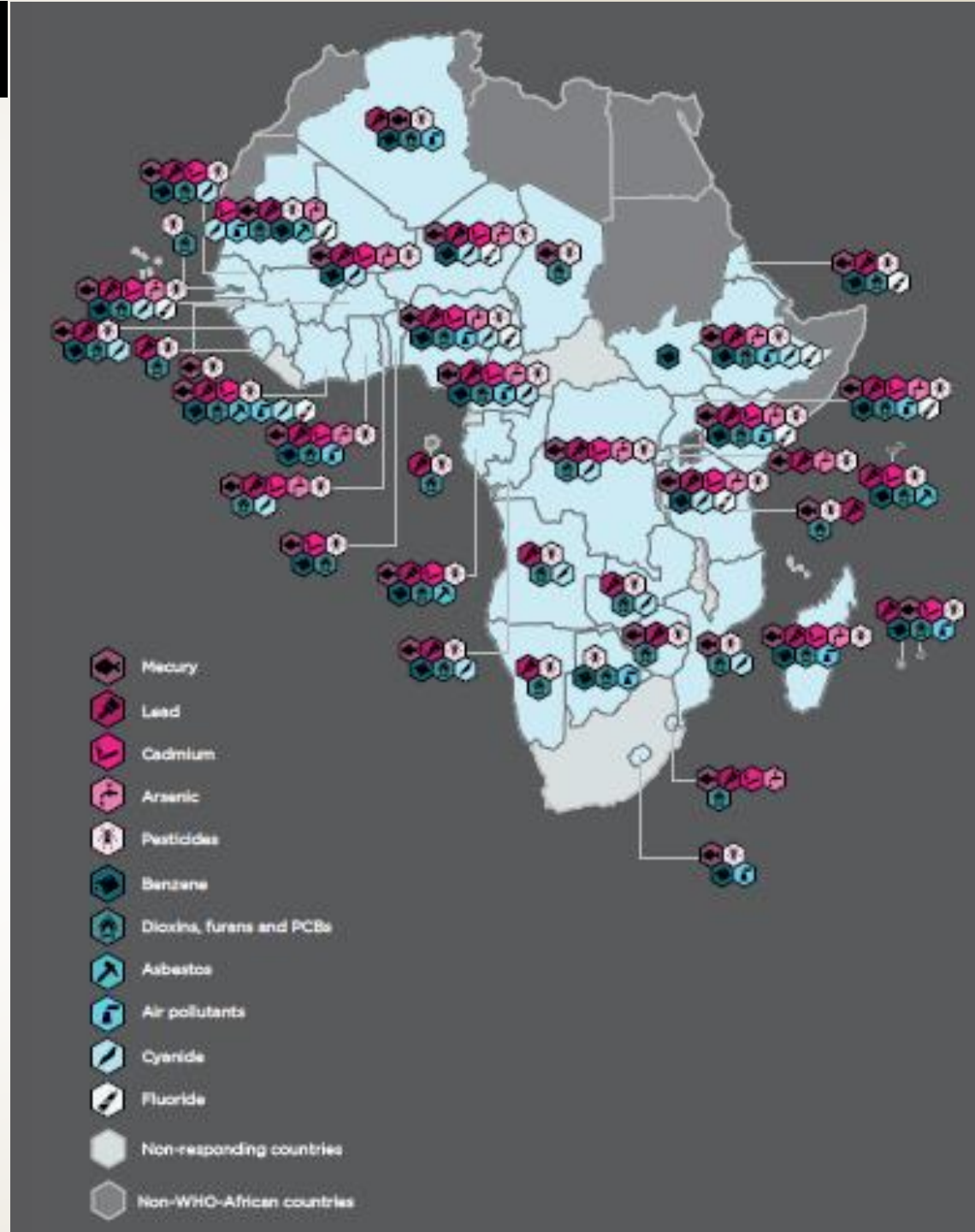
- ✓ **Societal Attitudes Towards Agriculture**

Protecting SHF, Industrial, Food vs Cash Crops, Other Sectors, Safe Food

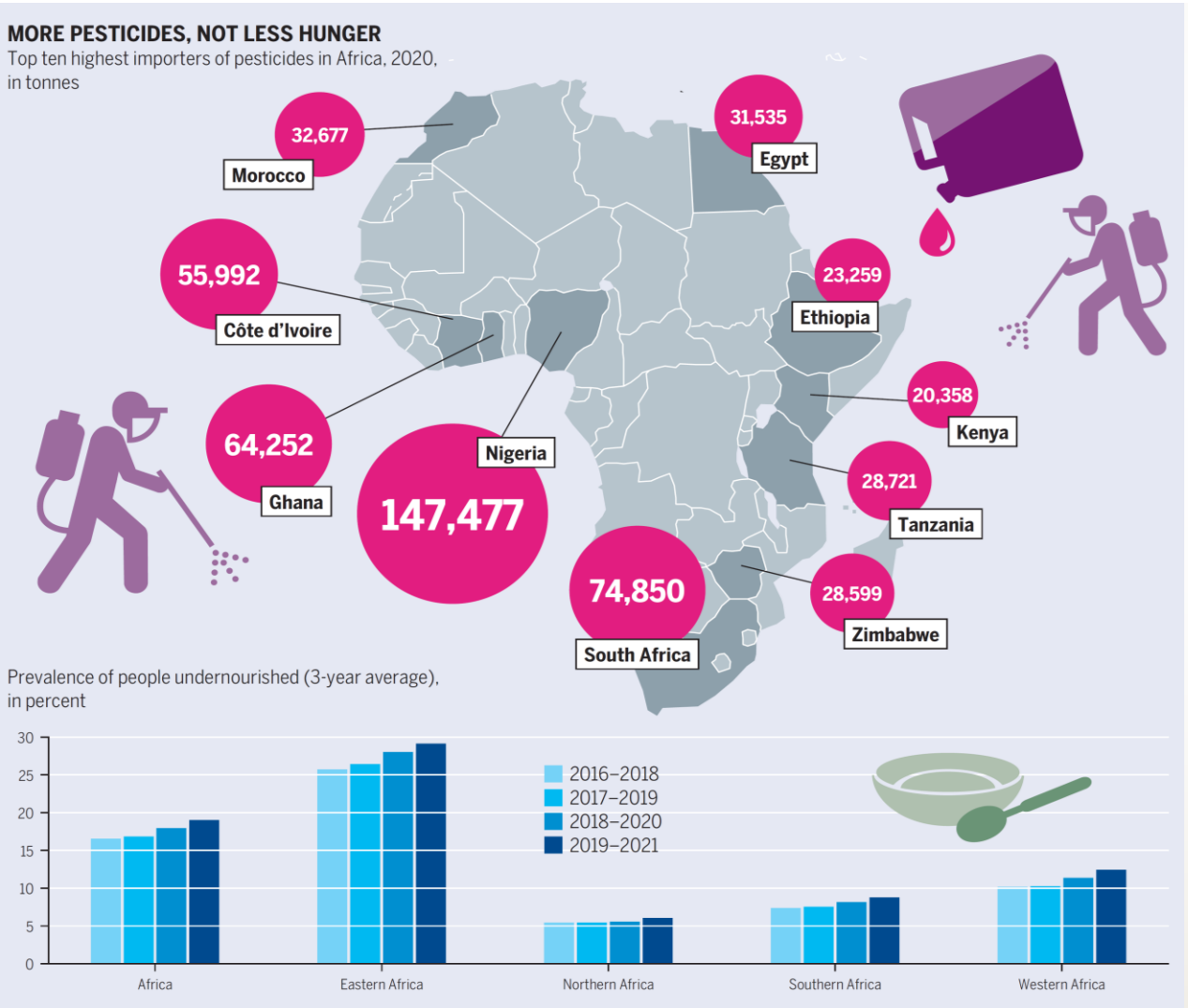
- ✓ **Insecurity/Violence especially on Farms**

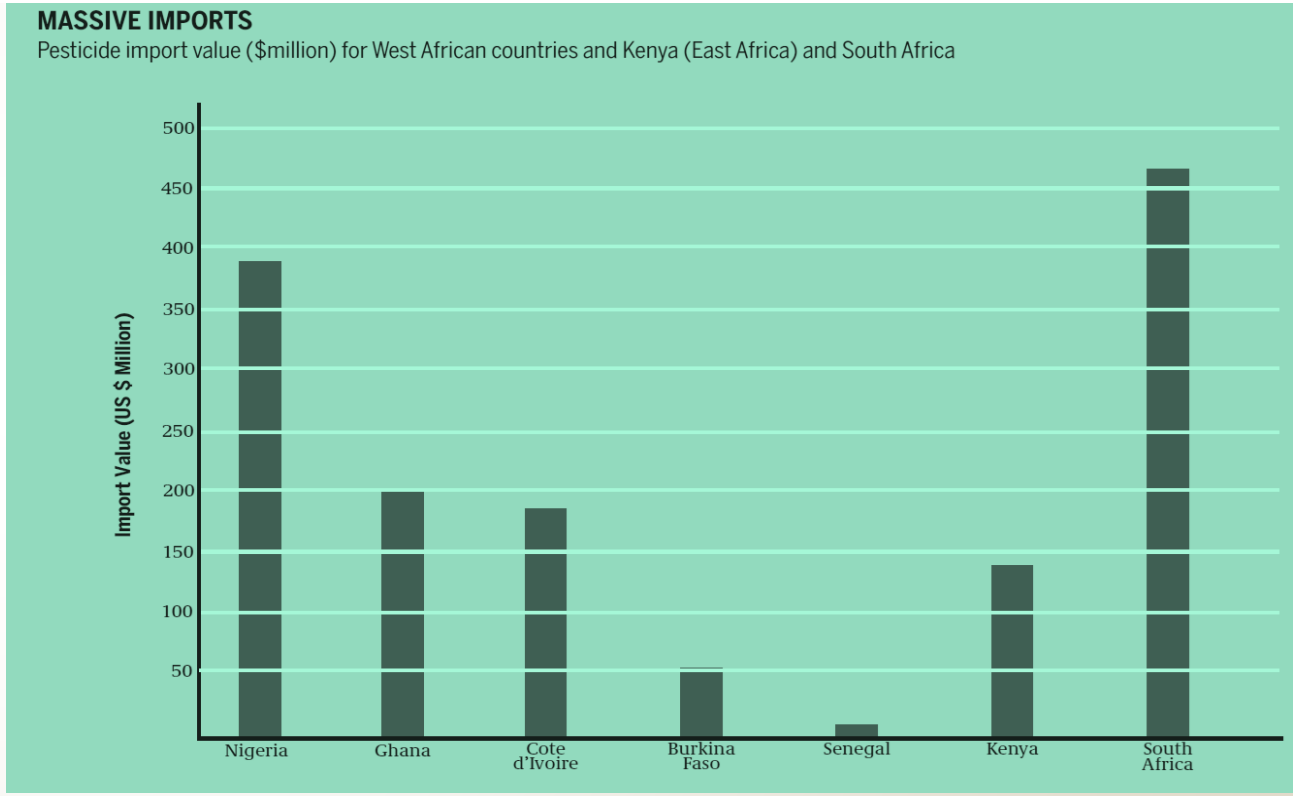
Pesticide Dependence...

1. Pesticides are responsible for around 200,000 deaths every year.
2. 1–5 million cases of pesticide poisoning occur every year among agricultural workers and result in 20,000 fatalities, most of these in developing countries – WHO
3. Over 90% of small holder farmers in Ngeria use chemical pesticides.
4. Over 65% of pesticides registered in Ngeria are Highly Hazardous Pesticides (HHPs).
5. Over 40% of Pesticides approved in Ngeria are banned in EU, due to their high toxicity level on human Health and biodiversity.
6. Ngeria's imports over 140,000 tons of hazardous chemical pesticides for food production
7. 60% of herbicides, 90% of fungicides and 30% of insecticides are known to be carcinogenic – USA EPA
8. There are a minimum of 444 pesticide brands with active ingredients that are probable or classified as cancer-causing in Ngeria according to the AAPN2023 study.



Over the last five years, pesticide imports into Africa have increased signficantly. In West Africa the imports have doubled in five years from 218,948 tonnes in 2015 to 437,930 tonnes in 2020. In 2020, Nigeria's imports alone (147,446 tonnes) exceeded the total imports of Southern Africa (87,403 tonnes) and North Africa (109,561 tonnes). Despite increasing imports in these regions, the informal nature of agricultural production has made it difficult to record how pesticides are used hence the big differences between the imported quantities and use data.





Despite ever increasing pesticides use, the prevalence of food insecurity and malnourishment is not improving. **Between 2019 and 2021 approximately 20 percent of people on the continent were undernourished, which has increased from 16 percent between 2016 and 2018.**

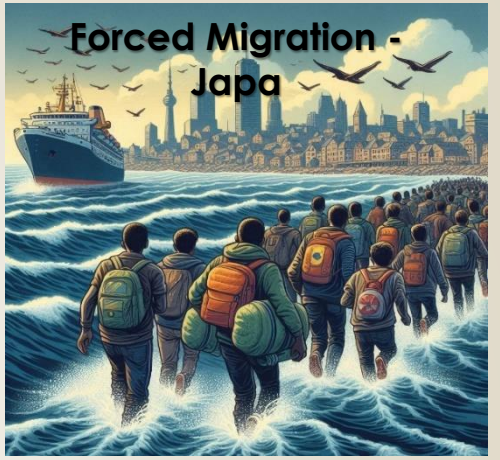
The Consequences & Pressure

Climate change is costing us huge economic, social, security and unity losses...

Nigeria 19th country with least peace.

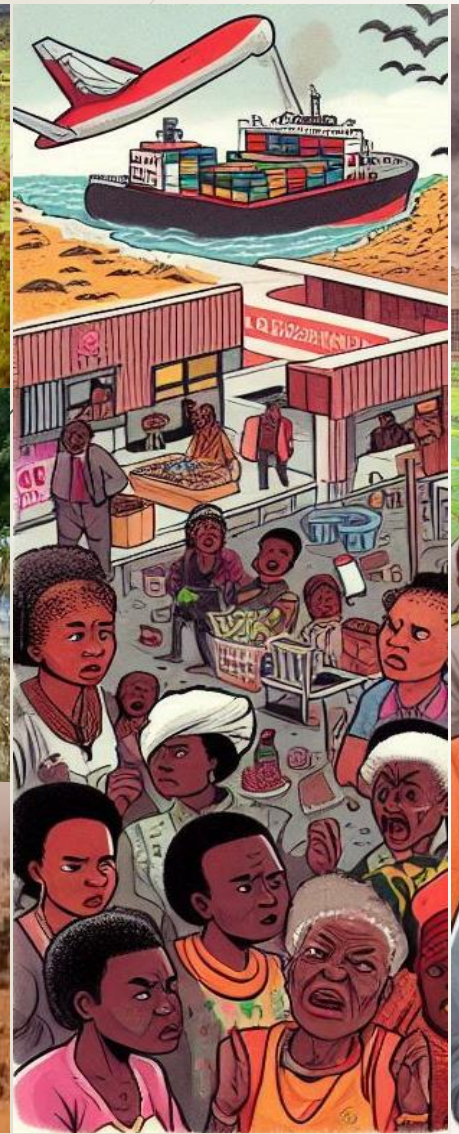
8th country most affected by terrorism

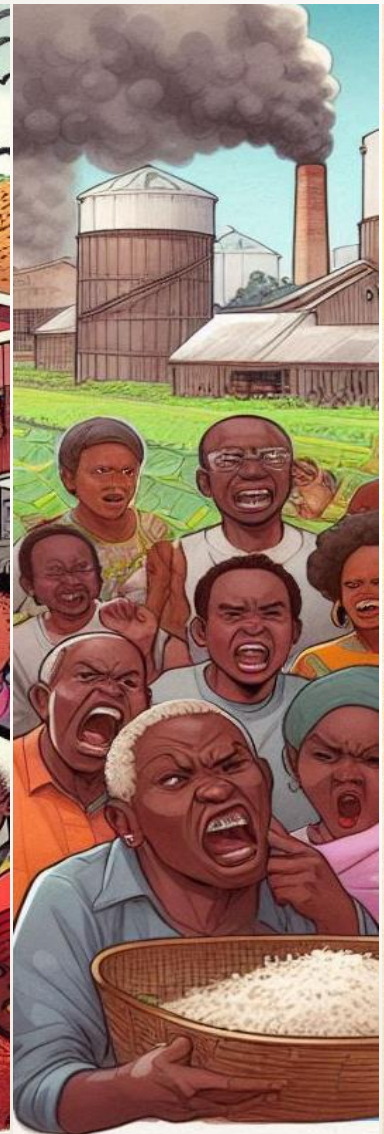
5th country in Africa with the highest risk of genocide and 12th twelfth worldwide.

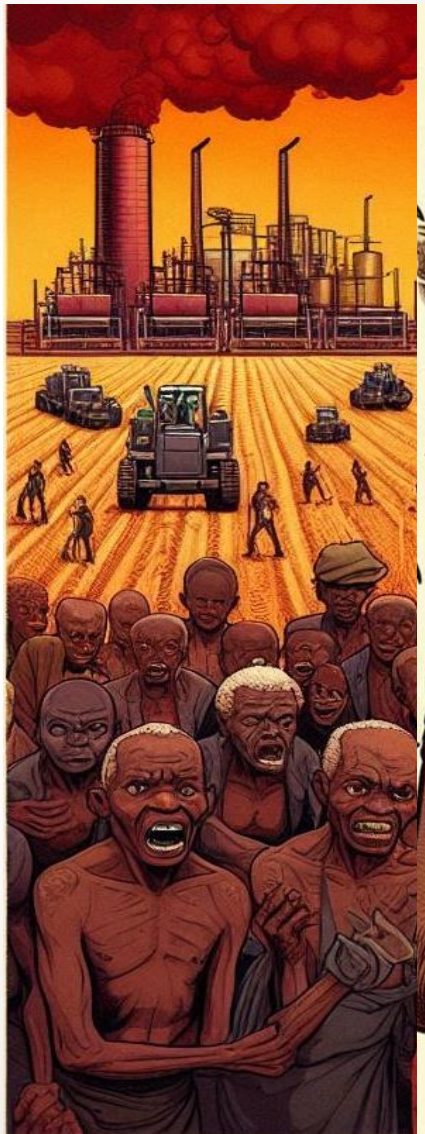


Should We Continue on the same course...·

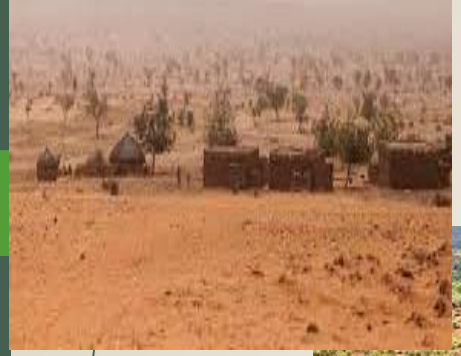
Catastrophe awaits us all·







How Agroecology Addresses the Challenges

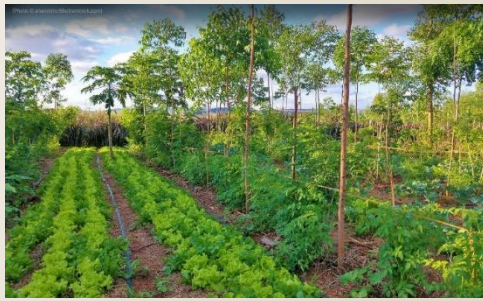


Agroecology is a nature based farm systems that follows nature patterns in ensuring balance in food production, biodiversity restoration and eco-health, while also integrating science to ensure Scalability.

By 2050

Agroecology

- Broad Sustainable Farm Practices
- Biodiversity Restoration
- Climate Resilience - Afforestation
- Agro-Tourism FX
- Food Safety, Food Security & Food Sovereignty
- Organic Food Export
- Environmental Conservation
- Labor Migration for Teeming Population
- Rural Development via local inputs
- Wealth for SHF Farm Communities



Potential Barriers To The Adoption Of Agroecology

- **Lack Of Awareness, Education & Skills On Agroecology And Organic Farming**

  {Demonstration farms, success stories campaigns, educational curriculum, alliance building, marketing}
- **Access To Resources {Limited Access To Land, Water, Seeds, Finance, Subsidy}**
- **Market Access And Value Chains For Agroecology**
- **Lack Of Agroecology/Organic Policy**
- **Poor Governance Framework And Institutional Support To Agroecology/Organic**
- **Social And Cultural Factors I.E Traditional Norms That Limits Land Access**
- **Limited Technological Access For Farmers And Extension Services**
- **Technological Innovations Not Tailored To Local Contexts Are Needed.**
- **Risk Aversion Of Farmers, Financiers, Etc.**
- **Limited Informed Demand For Safe Organic Food By Consumers**
- **Donor Campaigns Promoting Conventional Monoculture And Tech That Threatens Our Food Sovereignty**

Addressing these barriers requires a multi-dimensional approach involving government support, community engagement, capacity building, research, farmers, farm association, and investment in infrastructure.

Propose Strategies To Overcome Barriers

1. Policy Support and Enabling Environment:
- Develop and implement policies prioritizing Agroecology.
- Provide incentives and ensure land tenure security.
- Integrate Agroecology into national agricultural plans.
- Policy should be built on practical solutions and success stories – focus on scaling up.

2. Capacity Building and Training:
- Offer training for farmers, extension workers, and policymakers.
- Establish farmer field schools and demo plots for peer learning.
- Offer Hand-holding technical support to governments

3. Research and Innovation:
- Focus on resilient crops, sustainable pest management, etc.
- Foster collaboration between research institutions and farmers.

4. Financial Support and Incentives:
- Establish financial mechanisms like subsidies, grants, low-interest loans, and carbon credit schemes.
- Support Agroecological cooperatives and enterprises.

5. Market Development and Access:
- Develop market infrastructure and certification schemes.
- Promote consumer awareness of Agroecological products.
- Support the mapping of existing manufactures of organic/Agroecological inputs/programs

6. Community Engagement and Empowerment:
- Facilitate community participation and decision-making.
- Support community seed banks and biodiversity conservation.

7. Extension Services and Advisory Support:
- Strengthen extension services for technical assistance.
- Establish farmer field schools and knowledge-sharing platforms.

8. Policy Advocacy and Networking:
- Advocate for supportive policies and investments.
- Participate in regional and international networks.

Institutional Framework for Agroecology Governance

1. National Organic and Agroecology Department in FMAFS (for now it's a unit under FISS):

- Central body has the mandate to coordinating Agroecology policies.
- Collaborates with stakeholders for coherence.

2. Advisory Board or Council (non existing for now – a multi-stakeholder council of MDA/Farmers/CSOs/Academia group) for policy coordination:

- Provides guidance and recommendations.
- inks government, academia, civil society, and farmers' organizations.
- Ensures coherence between agroecology policies and national development agendas.
- Facilitates collaboration among government agencies and ministries.

3. Agricultural Research and Development Institutions:

- Conducts research on agroecological practices.
- Translates research findings for practical use by farmers.

4. Extension Services under government or private sector (This is non-existential for now – died off):

- Delivers training and technical assistance to farmers.
- Implements best practices in agroecology on the ground.

5. Farmers' Organizations and Cooperatives:

- Channels feedback into agroecology policies.
- Organizes training and mobilizes farmers for collective action

6. Financial Institutions:

- Designs and implements financial mechanisms.
- Ensures incentives reach smallholder farmers and communities.
- (Option: Including carbon credit schemes for carbon sequestration

7. Community-Based Organizations and Civil Society Groups:

- Collaborates to promote agroecology at the grassroots level.
- Facilitates community-led initiatives and knowledge exchange.
- Advocacy, community engagement, and oversight within the institutional framework for agroecology governance in Nigeria.

8. Standards, Monitoring and Evaluation Bodies {Standard Organization of Nigeria, NAFDAC}:

- Assesses effectiveness and impact of Agroecology policies, practices and products.
- Provides feedback for decision-making and adaptive management
- provide standards and safety measure on agroecological outputs.

Thank You.