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African Fertilizer & Soil Health Issues in the Context of Multiple Shocks: Lessons from Ghana, Kenya, Nigeria, Senegal, Tanzania, and Zimbabwe

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Introduction

- Low soil fertility in SSA limits crop productivity among small-scale farmers ((Vanlauwe and Giller, 2006)
- Achievements have been made to the African fertilizer sector since the time the Africa Fertilizer Summit (AFS-I) was held in Nigeria in 2006
- Since the Africa Fertilizer Summit in 2006, fertilizer use in SSA has risen from 8-9 kg/ha to 17kg/ha
  - still low ➔target was 50kg/ha;
  - world average is 135 kg/ha
- Smallholder farmers face numerous challenges that limit their fertilizer demand

Objectives

- Describe fertilizer markets
- Take stock of fertilizer and soil health policies in selected SSA countries
- Identify actions to promote developing fertilizer supply chains

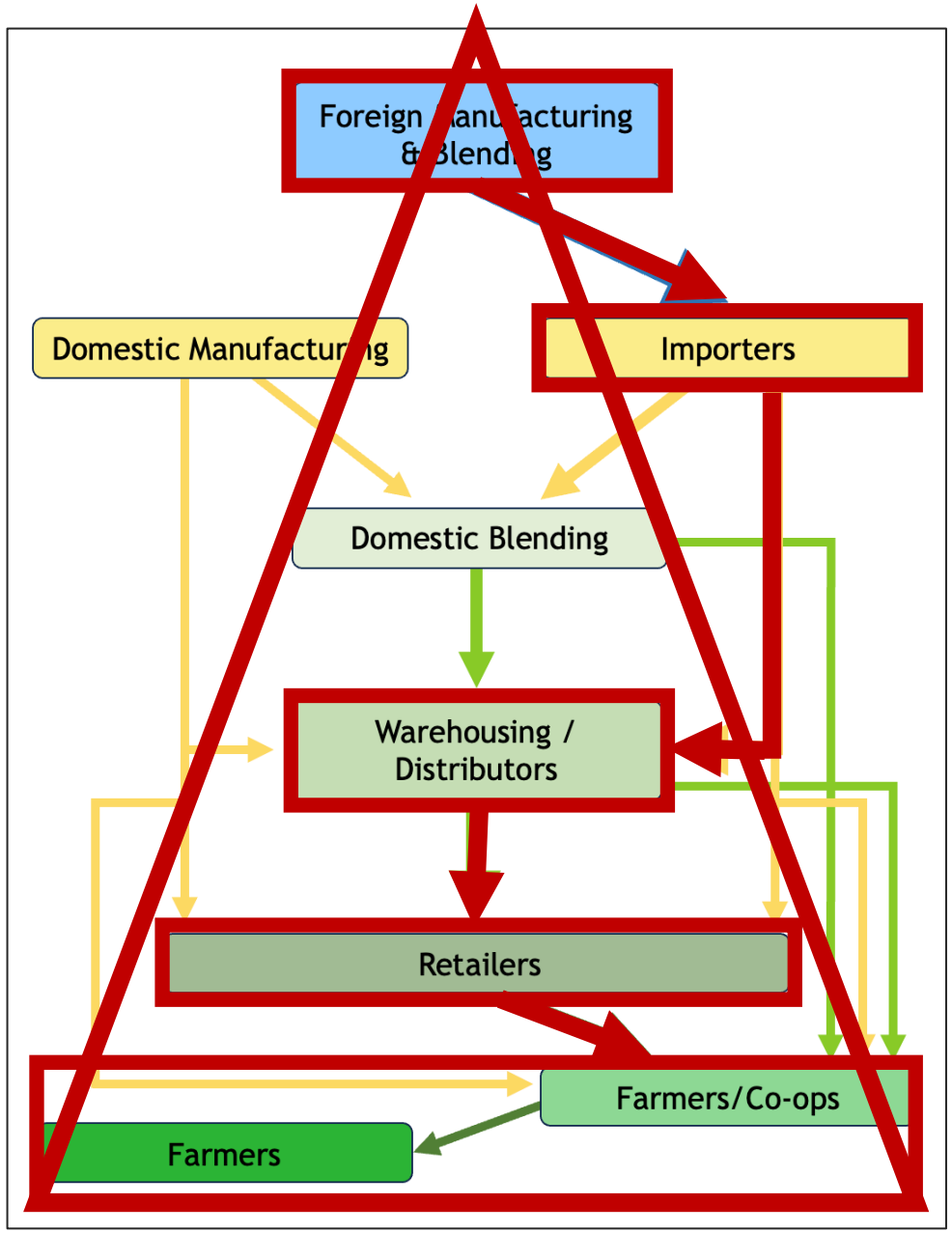
Project Countries

- Senegal
- Ghana
- Nigeria
- Kenya
- Tanzania
- Zimbabwe

ANAPRI centers in each country carried out studies

Structure of SSA fertilizer industry

- General framework
  - Thickness of line indicates prevalence
- Mostly imported
  - Even when blending is domestic
- Pyramid structure
  - Concentrated at top; more competitive at retail



Manufacturing

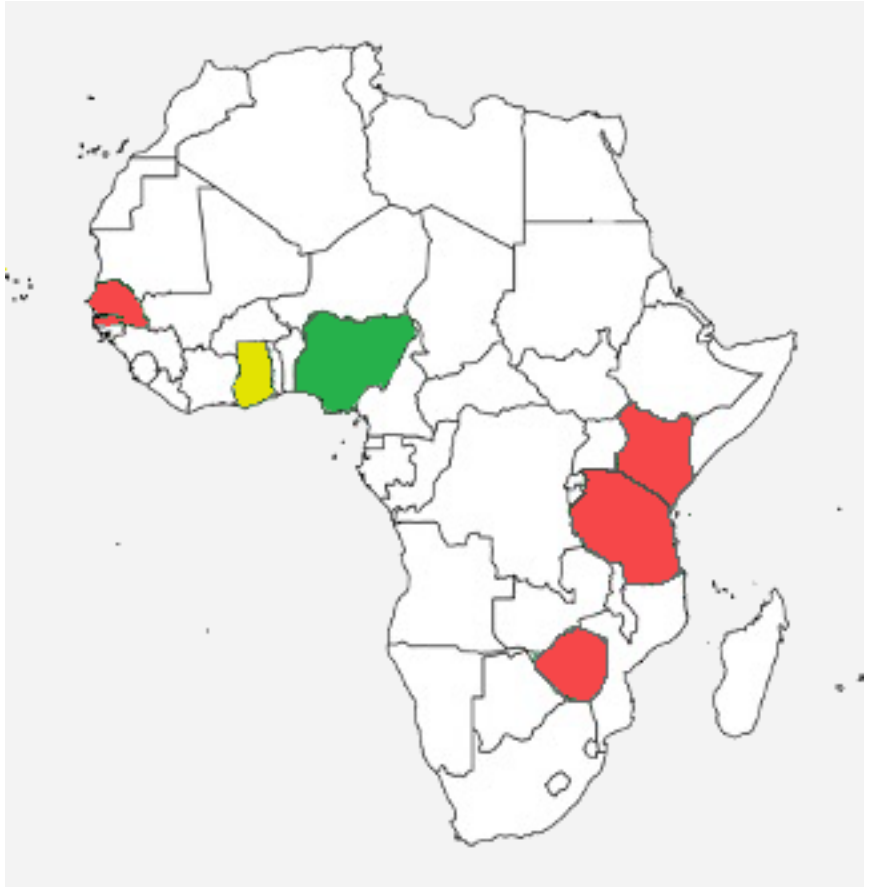
- Vast majority of production is north of Sahara
  - 78% in Egypt & Morocco
  - Access to Europe and global markets (via Atlantic Ocean)
- Vast majority of farmers are south of Sahara
  - Little or no advantage importing North African fertilizers compared to fertilizers produced anywhere else.
- SSA (Senegal, Nigeria, Zimbabwe, RSA) produces some fertilizers.
  - High market concentration in production
  - These countries also export fertilizer
- All countries, even producers, import fertilizer
  - High concentration in importing
  - High fixed costs for new entrants
  - Competing with established former parastatals

Price buildup

Cost category	Senegal	Tanzania	Ghana	Nigeria
CIF	65%	53%	61%	58%
Domestic Transport	11%	19%	2%	12%
Port fees, handling, taxes	5%	9%	18%	11%
Financing	9%	5%	12%	9%
Marketing, storage, distribution	10%	14%	8%	9%
Total	100%	100%	100%	100%

- Majority of domestic costs determined by global prices
- Domestic transport is major source of domestic cost
  - Rail systems are old, not standardized and do not connect major markets
  - Within-country transportation occurs over dilapidated road networks
  - Large share of transportation costs are from fuel (African countries are fuel price takers)
- Domestic price buildup are incurred at ports as handling costs (unloading and bagging) and taxes

Policy stocktaking: Dedicated fertilizer policy

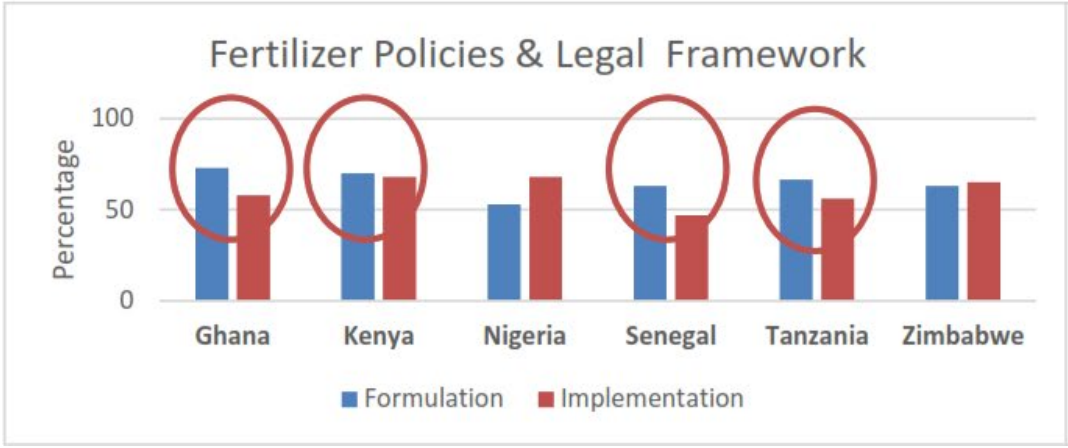


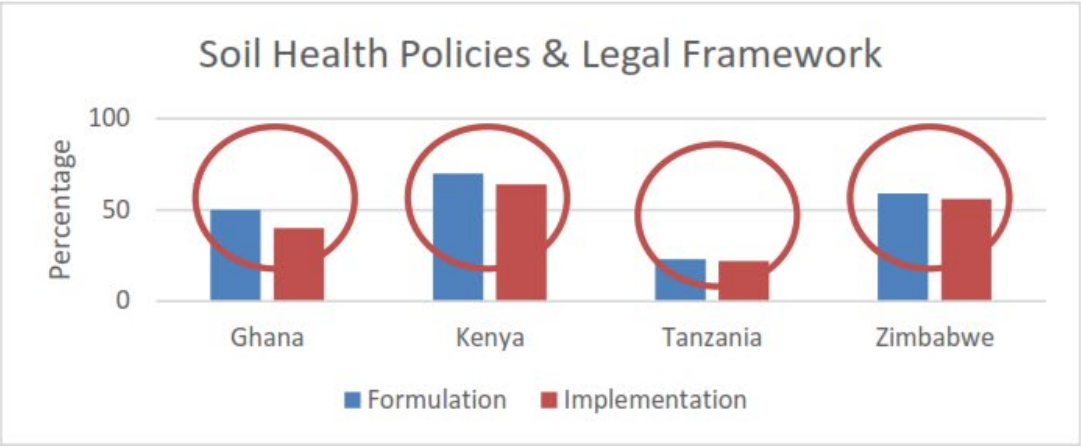
- Policies range from nascent to mature
- Most countries do not have a dedicated soil health policy
- Statements on need for soil analyses, but no details for implementation
- Most have no dedicated fertilizer policy or policy is not implemented (Ghana)
- Fertilizers are mentioned extensively, but objectives are unclear

Findings: Outdated legislation

Country	Date
Ghana	**2010**
Kenya	**1967 amended in 2015**
Nigeria	**2019**
Senegal	**1962**
Tanzania	**2009**
Zimbabwe	**1952**

- Policy is dated; not keeping up with scientific and industrial developments, including new fertilizer types.
- **Inadequate funding** means policy implementation scores are lower than scores on policy formulation
- Heavy focus on fertilizer subsidies





Findings: Subsidies

- First-generation: Post-colonial
  - Untargeted
  - Prohibitively expensive
- Second-generation
  - More targeted
  - Large share of agricultural budgets
  - Government procurement/distribution
    - Crowding out private sector
    - Crowding out other gov't investments
    - Leakage/corruption
    - Yield effects lower than expected
- Many countries shifting to voucher, private-sector inclusive programs
  - Is this a "third-generation" that will address previous problems?
  - Will government stay the course when there are shocks?

Recommendations

- Formulate comprehensive national policy on fertilizer and soil health
- Implement policies (e.g., infrastructure investment) that minimize domestic costs
- Reform national subsidy programmes (the “third-generation”?)
- Explore opportunities for local fertilizer manufacturing (where possible) and blending context-appropriate products

Thank you!

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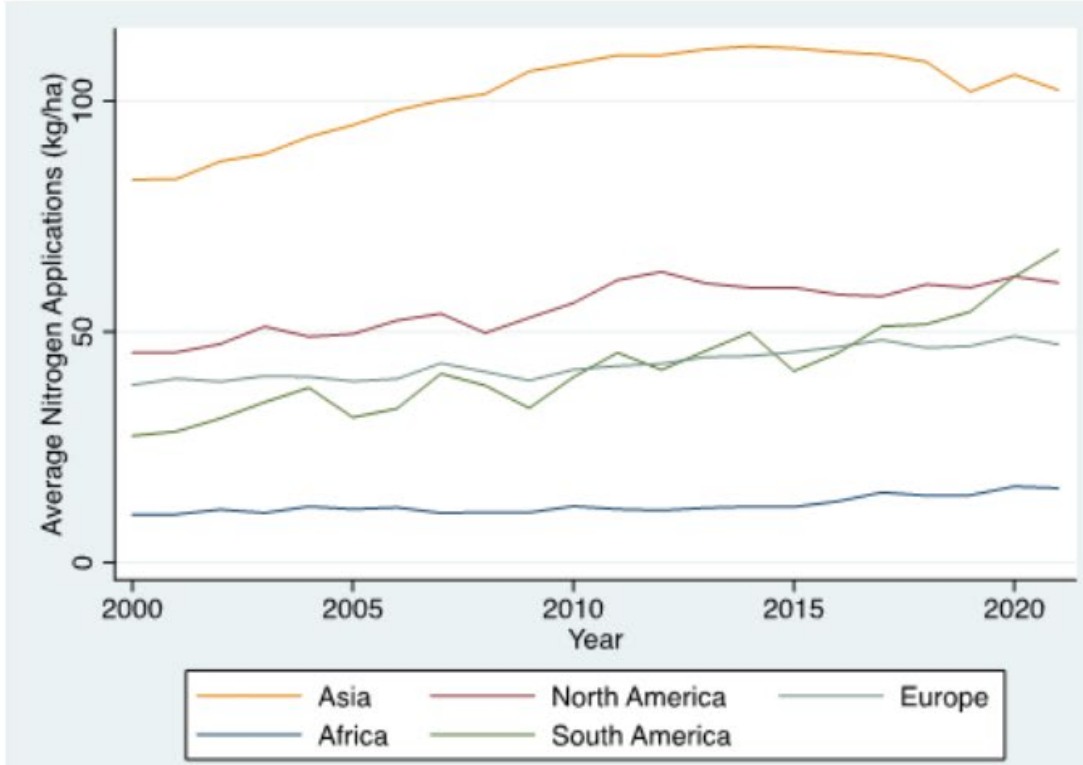
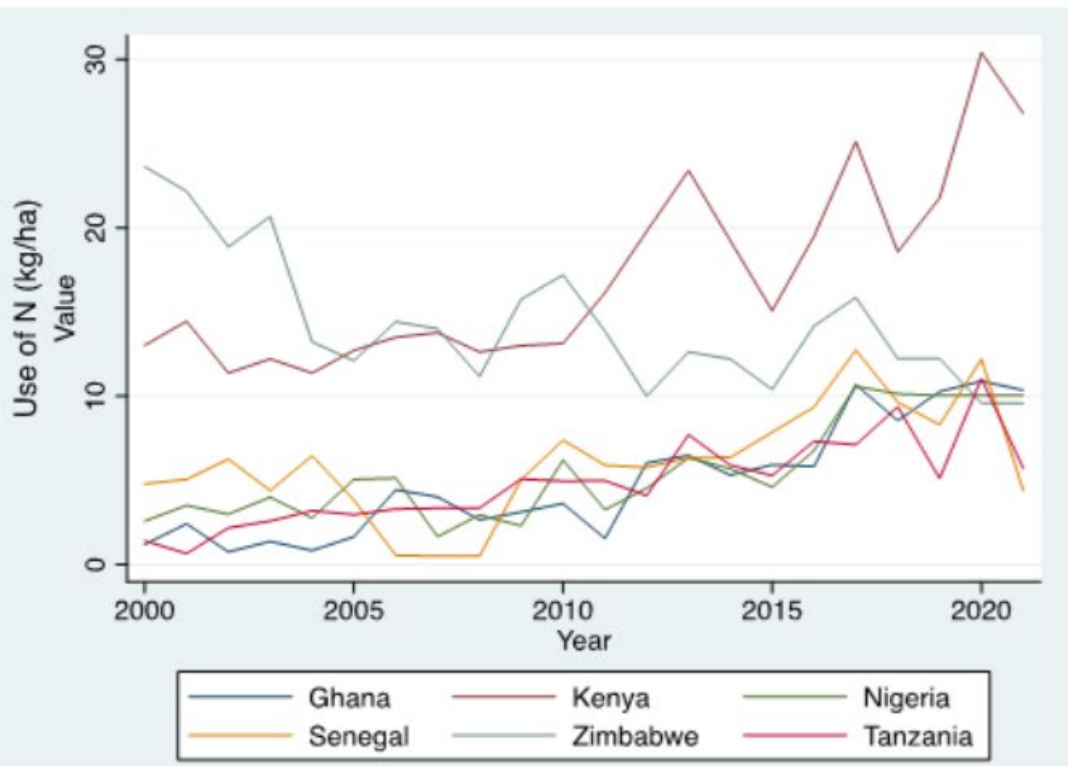
- USAID

Inorganic Nitrogen Fertilizer Use (kgs per ha) in Select Regions and Countries





- Strategic Framework for Development of Typology-Based Fertilizer Policy and Regulatory systems in Africa South of the Sahara: ReNAPRI Report
- ReNAPRI AFS II Activity 1.8 Country Reports
- Farmer’s risks and economic use of fertilizer in Africa South of the Sahara - ReNAPRI Report
- SPR Workstream 1 & 2 National Technical Reports