

Governance Challenges in an Emerging Bio-Economy: A Case Study of Maize Value-Webs in Nigeria



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1. Background

- ❖ Biomass demand for food and industrial uses could be met by shifting to the bio-economy (Oladeji 2013)
- ❖ Value-web approach captures the entire biomass sector (Virchow *et al.* 2014)
- ❖ Supportive programs and policies are required for a successful transition to the bio-economy (Aina *et al.* 2015)
- ❖ The Growth Enhancement Support Scheme (GESS) was launched to increase agricultural productivity
- ❖ GESS is aimed at efficiently distributing agricultural inputs mainly to smallholder farmers through an e-wallet system

2. Problem Statement

- ❖ High yield gap in maize production (Lenis *et al.* 2009; & Aye *et al.* 2013)
- ❖ Corruption across agricultural input distribution systems (Lenis *et al.* 2015)
- ❖ Inherent inefficiencies in the GESS (FAO 2013)
- ❖ Targeted smallholder farmers do not benefit from the scheme (Tsedek Abate *et al.* 2014)

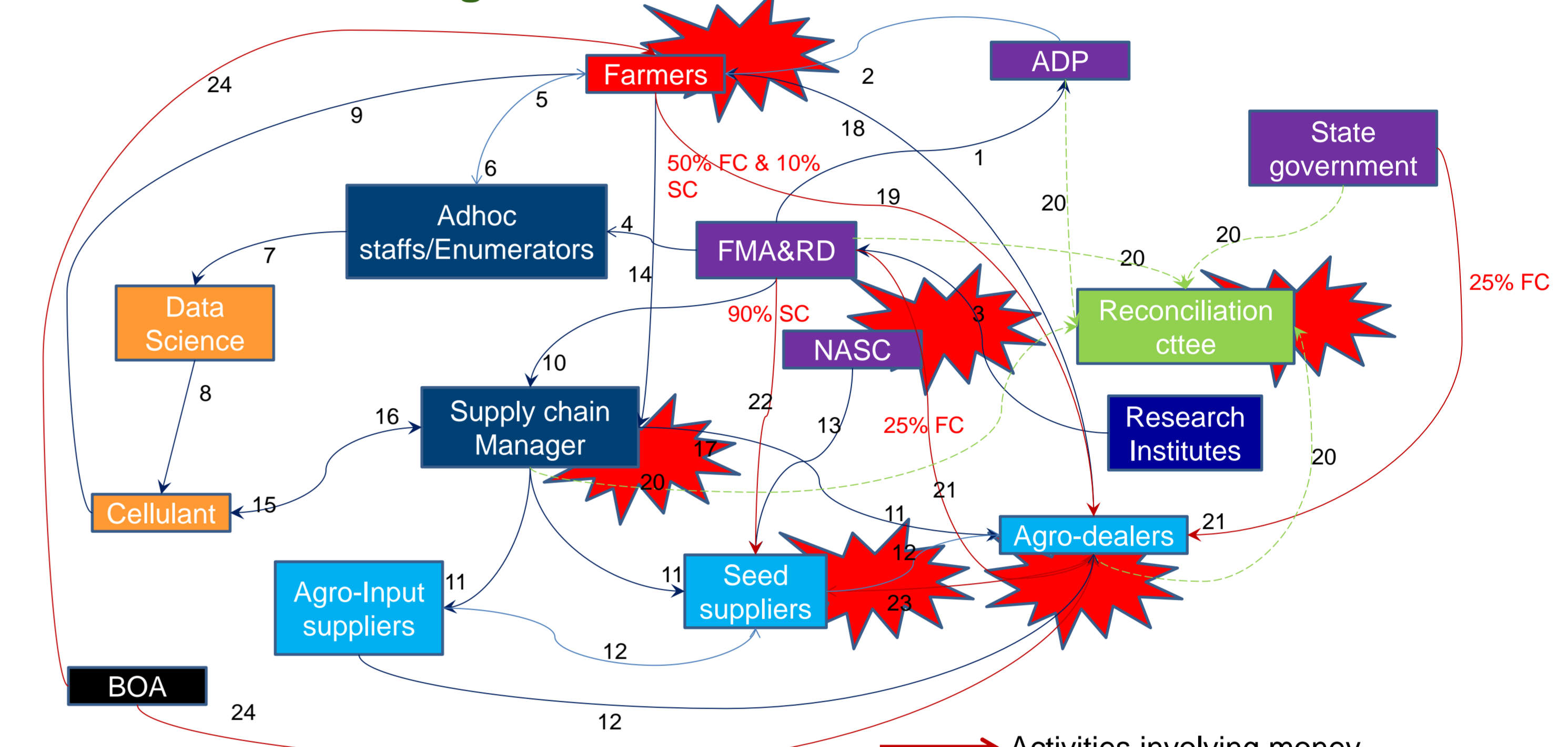
3. Objectives

- ❖ To assess the potential of maize biomass production for the emerging bio-economy
- ❖ To analyze the GESS process
- ❖ To identify the governance challenges in the GESS

4. Methodology

- ❖ Data Collection :
 - Interviews
 - Focus Group Discussion
 - Process Net-Map

Governance Challenges



→ Activities involving money
→ Other activities without money

--- Link for reconciliation committee member
★ Entry points for governance challenges

ADP – Agricultural Development Program (Extension Agents)

BOA – Bank of Agriculture

FMA&RD – Federal Ministry of Agriculture & Rural Development

NASC – National Agricultural Seed Council

FC – Fertilizer cost
SC – Seed cost

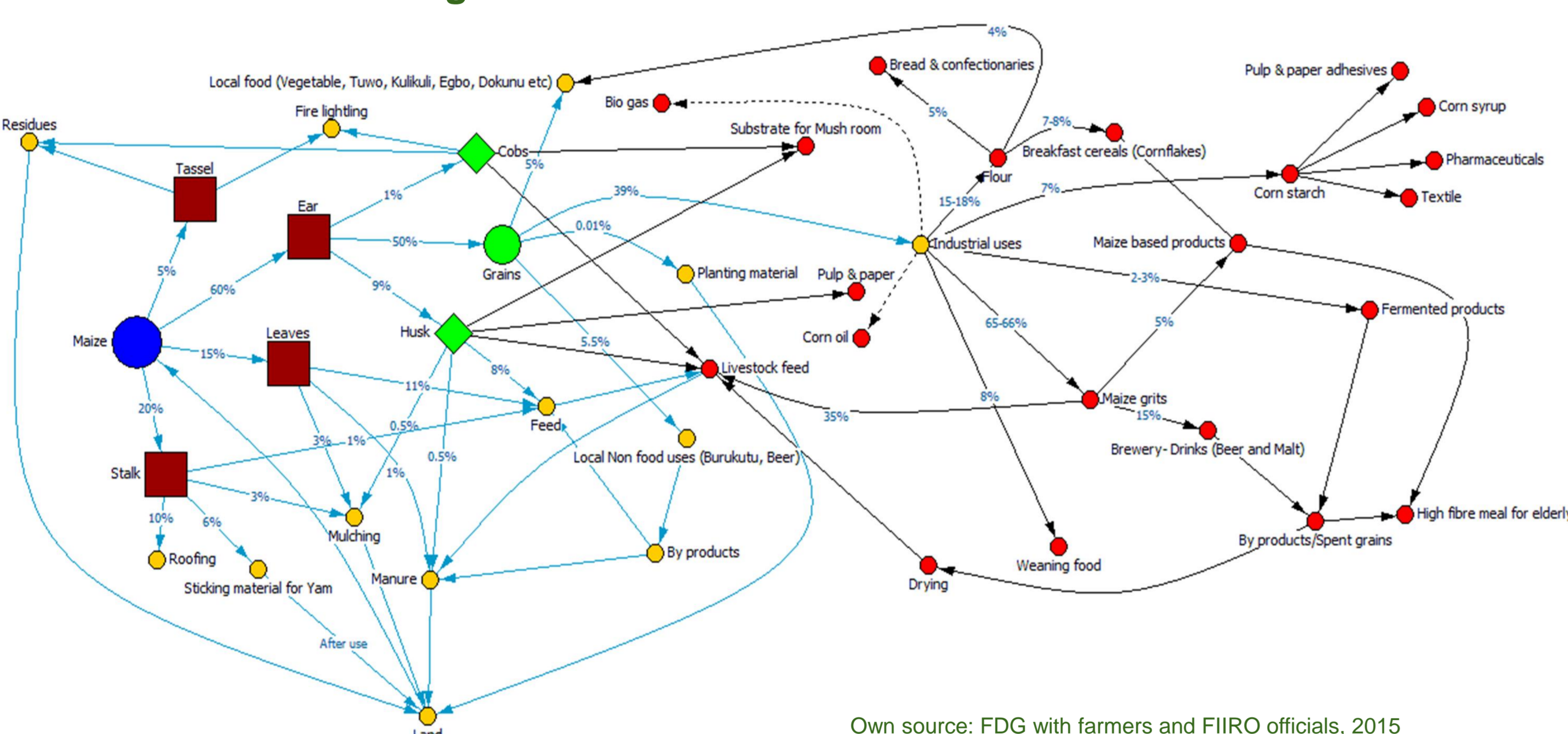
1. FMA&RD informs ADP to provide farmers
2. ADP informs farmers
3. Releases improved varieties on behalf of FMA&RD
4. Employs the adhoc staffs
5. Gives farmers registration form
6. Farmers return filled registration form
7. Filled registration form sent to Data science
8. Transfer electronic form
9. E-wallet text message sent to farmers with details of a particular agrodealer/redemption center to visit
10. FMA&RD employs supply chain manager
11. Supervises & monitors input flow
12. Supply seeds and fertilizers
13. Supervises & check the type & quality of seeds

14. Farmers go to adhoc staff of supply chain manager (SCM)
15. SCM adhoc staff sends message (code) to Cellulant
16. Cellulant replies SCM adhoc staff inputs
17. SCM authorizes agro-dealers to give inputs
18. Agro-dealers give input to farmers
19. **Farmers pay for fertilizer and seeds**
20. **Reconciliation committee meeting for harmonization**
21. **FMA&RD & state governments pay agro-dealers for fertilizer**
22. **FMA&RD pays for seeds**
23. **Agro-dealers pay seed suppliers**
24. **Provides finance**

Own source: FDG with FDA, 2015

Maize value-web in Nigeria

5. Results



Own source: FDG with farmers and FIRO officials, 2015

6. Conclusions

- ❖ Increased maize production fosters the diversification of maize biomass utilization
- ❖ Corruption in the input distribution system has been reduced
- ❖ But governance challenges such as elite capture, input leakages and corruption persist, affecting GESS efficiency
- ❖ Monitoring beyond the redemption centers would reduce entry points for corruption
- ❖ Policies do not support the efficient use of maize biomass in the value web and the development of the bio-economy in Nigeria

7. Recommendations

- ❖ Consistent and supportive policies for GESS should be implemented
- ❖ Continuous revision and monitoring of GESS to reduce entry points for corruption and leakages are needed
- ❖ Incentives for smallholder farmers to make use of the received inputs should be designed