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

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Abstract

Growing challenges of sustainable development require a shift in the conventional thinking of considering agricultural sector as only the supplier of food. It is increasingly becoming a “supplier of biomass”, which caters to multiple demands of food and non-food purposes. Traditionally, the analysis of biomass sector has been dominated by value chain studies. Recent advances suggest that it is pertinent to look beyond conventional value chains to a more holistic “value web” because the same crops find diverse usages in the biomass-based economy. The value web approach adopted in this study helps in identifying the potential opportunities in the maize sector beyond the focus on food. Maize is one of the most important cereal crops in Nigeria. It is particularly important for the poorer citizens and smallholders for food security purposes. The study employs focus group discussion and uses innovative participatory net-mapping tool to elicit information on how maize biomass flows and the institutional environment governing the sector. The value web also helps to show how maize is used locally by households as well as industrial sector, and the disconnects in the flow due to the current institutional structure. The study found that marketing problem arising from pest and chemical residues *e.g.* aflatoxin is a major constraint for maize utilization by industries producing human consumables. Food and drink industries source for maize grains only from the northern part where aflatoxin infestation is minimal. Inconsistent financial support to the national research institutes and Agricultural Development Program (ADP) is a major problem affecting the sector’s institutional structure. Extensive means of disseminating information to smallholders is through ADP and Maize Association of Nigeria (MAAN). However, smallholder farmers who are not linked to MAAN are disadvantaged. The study suggests that government should consistently finance ADP and national research institutes. Research effort into aflatoxin eradication and local use of maize biomass should be increased. Linkages between state governments and national research institutes as well as between small-scale farmers and MAAN should be made stronger.

Keywords: Institutional challenges, participatory net map, smallholder farmers, value-webs