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Regional Trade in Staples for Equitable Food and Nutrition Security and Ecosystems Services in Tanzania

Implementing trade policies that mainstream gender and ecosystem management can steer sustainable agriculture production and ultimately improve food security.

POLICY RECOMMENDATIONS

- Establishing a functional integrated framework that embeds ecosystems into trade will harmonize and strengthen inter-sectoral and multi-sectoral collaboration between key sectors. Optimizing collaboration will result in synergies and ultimately reduce costs, while attaining sustainable ecosystem management.
- Undertaking valuation of ecosystem services can help to ensure that pricing policies are responsive to conserving and sustaining natural resources. If resource users pay a price that reflects the cost of resource replacement or rehabilitation of ecosystems, as stipulated in the Environment Act, 2004, then ecosystems and ecosystems services can be preserved into the future, which is critical to national and regional food security.
- Formulating and implementing guidelines of environmental thresholds will support adoption of environmentally friendly technologies and ultimately sustainable utilization of natural resources used in production of the traded commodities.
- Removing the impediments faced by women in business and proactively promoting the participation of women in trade will boost exports and revenue for the country. Incorporating and implementing comprehensive strategies of gender mainstreaming into the national trade policy will facilitate fair involvement of women and youth in trade.
- Establishing an exclusive and comprehensive legislative framework under a leading institution with mandate to coordinate efforts in land issues, while emphasizing concerns related to gender equality and marginalized groups, will reduce gender inequalities in access to land resources and support improved management and utilization of land and subsequently increased and sustainable agricultural production.
- Establishing suitability zones for production of different crops in which crop and agro-ecosystems match, as well as designing and promoting strategies to ensure production according to crop suitability will increase adoption of appropriate ecosystem management practices for sustainable land and water resources use and ultimately improve food security.

THE CHALLENGE

Deterioration of food security and ecosystem degradation in Tanzania is escalating. For instance, the country's Food Security Indices for 2014, 2015, and 2016 are 29.9, 33.7, and 36.9, respectively (GFSI, 2014; 2015; & 2016), while 51% of land mass is severely degraded. This puts a heavy financial burden on the country.

For instance, the annual cost of land degradation between 2000 and 2009 was about 2.3 billion US\$, representing about 14% of the country's GDP (Kirui, 2015). Specifically for maize, wheat and rice, the cost of land degradation is estimated at US\$ 1.8 million per year, which is 0.01% of the country's annual GDP. Over a 30-year planning horizon, the costs of action against land degradation were estimated at about 36.3 billion US\$, but the costs of inaction are substantially higher, i.e., 138.8 billion US\$ (Kirui and Mirzabaev, 2015). Thus, every dollar invested in taking action against land degradation returns about 4 dollars in the country.

THE APPROACH

A major approach to mitigate this trend of ecosystem degradation is to understand and address the gaps in the complex interrelationship existing between food trade, agriculture, ecosystem management, gender and food security; a relationship that evidently lacks coordination and holistic representation in the various policies addressing ecosystem management and food security.

Thus, Kilimo Trust together with other institutions in East Africa¹ led a review of how relevant policies and agricultural production systems influence regional trade as well as on how the inter-linkages be-

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tween agricultural production systems, gender and the state of ecosystems influence food security in the EAC region. In Tanzania, two agro-ecological zones, i.e., Southern Highlands (SHs) and Lake Zone (LZ), were used as case studies, while the national policies and strategies under trade, agriculture, environment, land and water were reviewed.

THE EVIDENCE

Gaps in national policies hamper sustainable management of ecosystems and gender equality

- Environment is inadequately embedded in the national trade policy, which does not address ecosystem concerns.
- There is no valuation of ecosystem services to guide production of food staples; and neither the environment nor trade frameworks have mechanisms of attaching ecosystem value in pricing and marketing of agricultural goods and services.
- Ecosystem-related policy frameworks do not define environmental thresholds for ecosystem resources used, and the frameworks therefore do not fully support enforcement of sustainable utilization and management of environmental resources.
- Gender mainstreaming is weak in the national trade policy.
- Weak enforcement of rights of women and other marginalized groups on access to and control of land is eminent.

GIS databases and maps show that crop production does not match agro-ecological suitability

- Production of food staples does not necessarily match with agro-ecological suitability. For example, in the SHs and LZ agro-ecologies, the total area of arable land (ha) under maize production is 4,505,613 and 4,327,691, respectively. Of this, 38% in the SHs and 25% in the LZ are marginally suitable for maize production.
- Crop production under unsuitable agro-ecologies increases the need for inputs such as water and nutrients for the crops' growth, but far beyond what the environment can provide. This subsequently exacerbates degradation of ecosystem

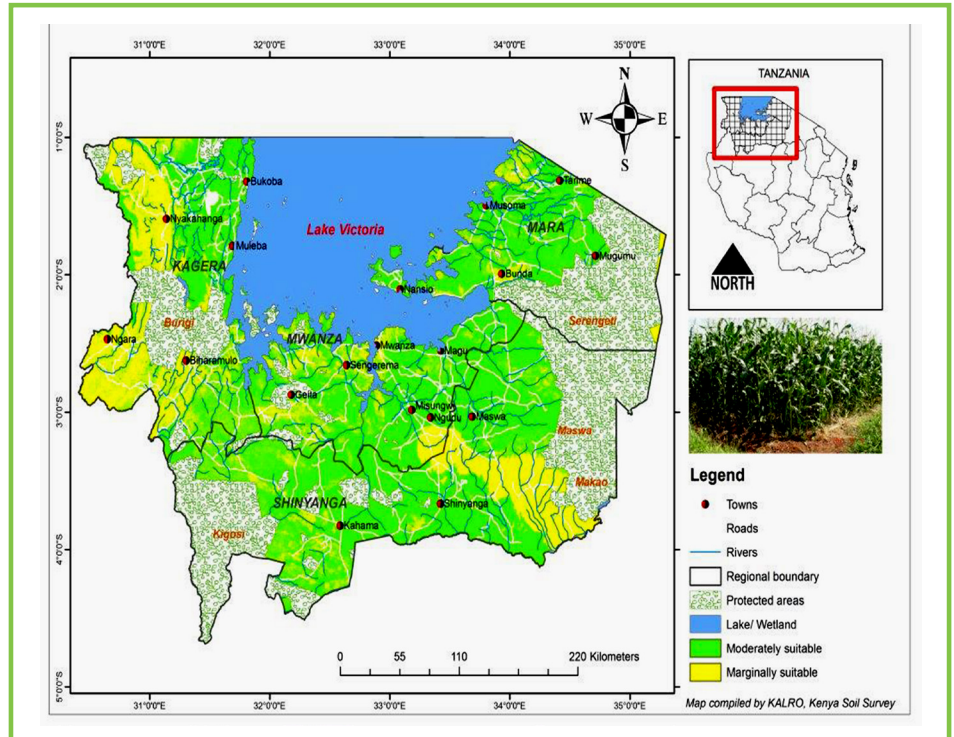


Fig 1: Rain fed maize suitability map for the Lake Zone



Fig 2: Rice production intensification in Kilombero District

services. To the contrary, producing under suitable areas is capable of providing significant productivity increases and enhanced ecosystem services (FAO, 2011).

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