POLICY BRIEF - KENYA

RESEARCH PROGRAM ON Water, Land and Ecosystems

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

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

POLICY RECOMMENDATIONS

- Undertaking valuation of ecosystem services can help 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 Policy, 2013 under section 5 on environmental stewardship, 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.
- 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 between the pastoral and farming communities, will reduce land disputes as well as 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

Kenya faces high levels of food insecurity and ecosystem degradation. For instance, the country's Food Security Indices for 2014, 2015, and 2016 are 34.2, 35.1 and 42.7, respectively (GFSI, 2014; 2015; & 2016). Besides, 30% loss of irrigated lands due to salinization (Liniger et al., 2011) and loss of soil by water erosion estimated at 72 tons per hectare per year (Graff, 1993) have been reported in the country. Earlier, Dregne (1990) reported irreversible soil productivity losses of at least 20% due to erosion to have occurred over the last century in Kenya. This puts a heavy financial burden on the country.

For instance, the annual cost of land degradation between 2000 and 2009 was about 11 billion US$, representing about 5% of the country's GDP (Kirui and Mirzabaev, 2015). Specifically for maize, wheat and rice, the cost of cropland degradation as a result of soil fertility mining is estimated at US$ 5.36 million per year, which is 0.05% of the country's annual GDP. Over a 30-year planning horizon, the costs of action against land degradation were estimated at about 18.1 billion US$, but the costs of inaction are substantially higher, i.e., 74.9 billion US$ (Kirui and Mirzabaev, 2015). This implies that at the end of 30-year period, the returns to taking action against land degradation are about US$ 4 for each dollar invested 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 Africa[1] led a review of how relevant policies and agricultural production systems influence regional trade as well as on how the inter-linkages between agricultural production systems, gender and the state of ecosystems influence food security in the EAC region. In Kenya, two agro ecologies under the Lake Victoria zone i.e. the Low Midland (LM) and Upper Midland (UM1) Zones, were used as case studies, while the national policies and strategies under trade, agriculture, environment, land and water were reviewed.

[1]WaLETS Implementing partners:

Kilimo Trust — regional solutions to local problems

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THE EVIDENCE

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

- 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.
- Weak enforcement of rights of women and other marginalized groups as well as ineffective management of disputes between the farming and pastoral communities 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, over 60% of Lake Victoria Zone is marginally suitable for lowland rice production but production of the crop occurs in the region especially within the Upper Midland (UM1) Zone.
- 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 services. To the contrary, producing under suitable areas is capable of providing significant productivity increases and enhanced ecosystem services (FAO, 2011).

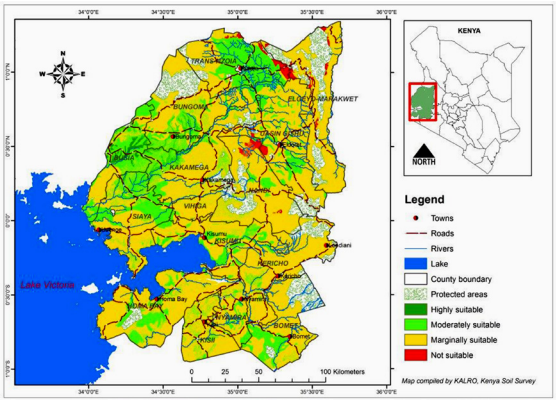

Figure 1: Lowland rain fed rice suitability map for Low Midland and Upper Midland (UMI) Agro ecologies of Kenya

Fig 2: Integrated soil fertility management by intercropping of maize and beans in Western Kenya

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For further information, please contact:

admin@kilimotrust.org

http://wle.cgiar.org

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