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

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 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, then ecosystems and ecosystem 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 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.
- 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 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

Burundi faces high levels of food insecurity and ecosystem degradation. For instance, the country's Food Security Indices for 2014, 2015, and 2016 are 28.8, 25.1, and 24.0, respectively (GFSI, 2014; 2015; & 2016), while the average annual rate of soil erosion is between 150 – 200 t/year/ha (GIZ Burundi, 2015). Also, according to FAO Aquastat (2007), the water availability per capita in 2007 was 442.2 m<sup>3</sup> and this is postulated to reduce to 264 m<sup>3</sup> by 2030, yet water availability below 1,000 m<sup>3</sup> per capita per year leads to serious challenges on food production and human health. Consequently, ecosystem deterioration puts a heavy financial burden on the country.

For instance, the World Bank (2016) estimated the cost of environment degradation on the country's national economy in 2014 at US\$ 376 million, amounting to 12.1% of the GDB. According to MEEA-TU (2011), the cost of inaction on land degradation to the agriculture sector alone is estimated at US\$ 324 million within five years, while the 5-year National Strategic Plan for Anti-Land Degradation (PAN/LCD 2011-2016) estimates the cost of action at US\$ 20.3 million.

### THE APPROACH

A major approach to mitigate this trend of ecosystem degradation is to understand and address the gaps in the complex inter-relationship 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<sup>1</sup> led a review of how

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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. Maize, beans and rice crops 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.
- Weak enforcement of rights of women and other marginalized groups on access to and control of land is eminent.
- Gender mainstreaming is weak in the national trade policy.

### 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 90% of the arable land in Burundi is marginally suitable for bush beans production. Also, about 55% of the arable land falls under marginal suitability for maize production. To the contrary, these crops are grown in most parts of the country.
- 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

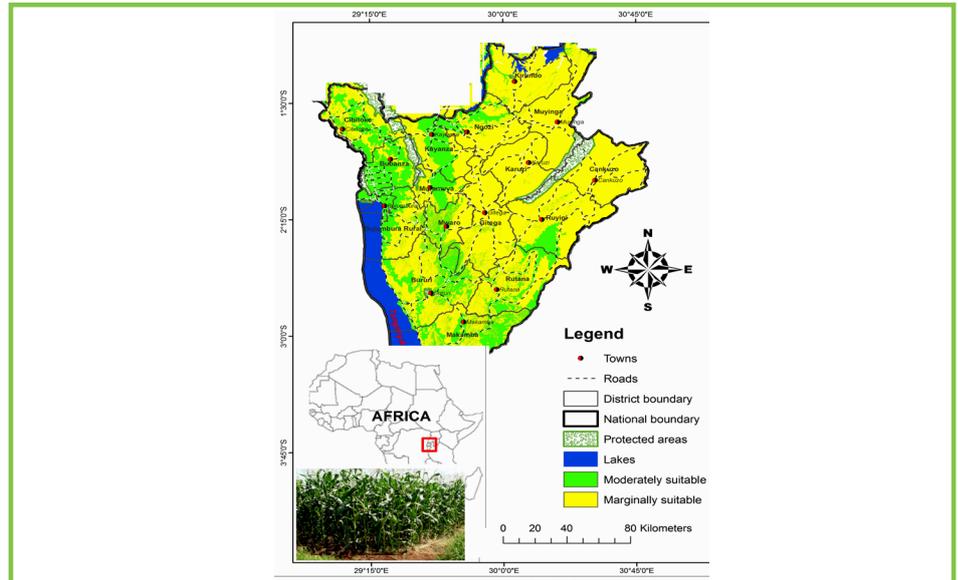


Fig 1: Rain fed bush beans suitability map of Burundi



Fig 2: Land Management for Sustainable Ecosystem Management in Burundi

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).

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