

## **The Feasibility of Climate Compatible Development: An Exploration of Ethiopia's Climate-Resilient Green Economy (CRGE) Strategy**

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### **Introduction**

In many parts of eastern Africa, climate change is bringing about substantial repercussions on overall national development including country's efforts to reduce poverty (Olsson et al., 2014). The devastating effect of the current drought in Ethiopia is a counter example. Although climate change is a global problem, what makes it particularly chronic in Eastern Africa is the strong poverty reduction and climate change nexus. In Ethiopia, where the majority of land is dominated by pastoral life (Yimer 2014), these two concepts – poverty reduction and climate change adaptation – are often treated as two different issues among many scholars, policy makers, and practitioners, even though issues like poverty and inequality are the “most salient of the conditions that shape climate-related vulnerability” (Ribot, 2010). Therefore, climate adaptation efforts in developing countries can be criticized for not making meaningful and lasting impacts among the poor and marginalized citizens (Yimer, 2015). However, since poor and marginalized citizens are most vulnerable to climate impacts, it is highly indispensable for developing nations like Ethiopia to create means (and strategies) to reduce their poverty along with meaningful climate adaptation efforts.

Thus, the country's policy response to climate change has been seizing the opportunity to switch to a new sustainable development model known as the Climate Resilient Green Economy Strategy (CRGE), which lays out the priorities for reducing greenhouse gas emissions while safeguarding economic growth, as well as for reducing the country's vulnerability to climate change has been

adopted since 2011. Ethiopia is one of the first countries in the world to have developed a climate resilient green economy strategy (Fisher, 2013).

### **2. Rationale for the CRGE Growth Trajectory**

The CRGE strategy has the following objectives:

- 1) Building a GE offers an opportunity to achieve economic development targets sustainably.
- 2) If climate change mitigation and adaptation are seen as goals in conflict with economic development, there are risks that the adaptation (mitigation) strategies will be de-prioritized and under-funded.
- 3) Ethiopia could exchange GHG emission abatement costs for climate finance to fund some of the required investment.
- 4) The CRGE growth path would improve public health, through better air and water quality, and would promote rural economic development by increasing soil fertility and food security.
- 5) Many of the initiatives offer positive returns on investments, thus directly promotes economic growth by creating additional jobs.

### **3. The Ethiopian CRGE objectives**

The CRGE of Ethiopia has three complementary objectives: These are

- To foster economic development and growth
- To ensure abatement of future emissions, i.e. transition to a green economy
- To improve resilience to climate change.

As a policy instrument to responding to the challenge of climate change, the Climate-Resilient Green Economy (CRGE) Strategy articulated the nexus between climate change and sustainable development.

### *3.1 The central pillars of CRGE initiative*

The green economy plan is based on four pillars:

1. Agriculture: improving crop and livestock production practices for achieving higher food security and farmer income while reducing emissions.
2. Forestry: protecting and re-establishing forests for their economic and ecosystem services, including carbon stocks.
3. Energy: expanding electricity generation from renewable energy sources for domestic and regional markets.
4. Transport, industrial sectors and buildings: Leapfrogging to modern energy-efficient technologies.

#### *3.2.1 Agriculture*

The traditional economic development path could deliver the required growth, but at the cost of significant agriculture land expansion (which leads to accelerating deforestation rates), soil erosion, and higher Green House Gas emissions, which will create the risk of reaching the limits to further development (e.g., by exceeding the carrying capacity for cattle of Ethiopia). Building a green economy will require an increase in the productivity of farmland and livestock rather than increasing the cultivated land area or number of grazed cattle.

*3.2.2 Forestry* Deforestation and forest degradation must be ceased immediately to support the continued provision of economic and ecosystem services and GDP growth. Fuelwood accounts for more than 80% of households' energy supply today, particularly in the rural areas. Furthermore, forests contribute an estimated 4% to GDP through their production of honey, forest coffee, and timber. Forests also provide other sources of significant ecosystem services: they protect soil and water

resources by controlling the discharge of water to streams and rivers, preserve biodiversity, function as a carbon sink, reduce air pollution which leads to health benefits, and boost land fertility.

#### *3.2.3 Energy*

Electricity is a fundamental enabler of modern economic development, by powering cities and industrial activity, and pumping water for irrigation purposes in agriculture. If electricity is not adequately scaled up to support economic development, it also risks becoming a fundamental bottleneck to growth. To support economic development at an annual growth rate of more than 10%, which is the target of the national government, it is necessary to expand electric power supply at a rate of more than 14% per year. Ethiopia is endowed with ample natural resources to meet this demand, primarily due to its vast potential for renewable energy sources: hydro, geothermal, solar and wind power – all of which would deliver electricity with virtually zero GHG emissions. Hence, increasing the energy supply and at the same time maximizing energy efficiency offers the possibility to export clean energy to neighboring countries.

#### *3.2.4 Transport, industrial sectors and buildings*

A short planning horizon in the government as well as the lack of immediate funding often leads to the adoption of technologies that require the lowest upfront investment. However, these technologies are usually less resource efficient, hence in the long run will offer lower economic, social, and environmental benefits compared to 'cleaner' alternative technologies which requires a larger upfront investment. The huge investment on the railway transport is a counter example of this.

## **4. Conclusion**

Understanding the potential economy-wide impacts of climate change for a given country is critical when designing national adaptation strategies and formulating effective global

climate-policy agreements. The impacts of climate change are particularly large in developing countries, thus countries like Ethiopia need to tailor adaptation policies to offset the specific anticipated climate change impacts. This paper narrates how policy responses to climate change are shaping the agricultural sector in Ethiopia, and their significance to the country's future development. The Ethiopia Climate Resilient Green Economy (CRGE) Strategy aimed to develop a climate-resilient green economy and to attain middle-income status by 2025. Under this broad banner, emerging policy narratives aim to achieve 'climate-smart' agriculture, establish more intensified and commercial approaches and in the livestock sector, seek major transformations in pastoralism within the country's lowland periphery. However, a number of structural gaps are emerging, such as incompatibility between certain policy objectives. It aspires, for instance, to limit emissions, while encouraging large scale livestock production at the same time.

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