



POLICY Brief¹

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Professionalism and Economic Thinking for Development!

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European Union

Green Legacy Initiative for Sustainable Development

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Executive Summary

This policy brief presents the role of Green Legacy Initiative (GLI) in sustainable development of Ethiopia. Moreover, it tried to identify the main challenges for implementing the GLI. Findings of the research show that GLI has a huge potential for providing different products to the local community and also enhance the carbon sequestration capacity to mitigate climate variability and change within the country. In order to improve the role of GLI in the sustainable development of the country, it is mandatory to address implementation challenges specifically related to technical or biophysical, socioeconomic, policy and institutional factors and project characteristics itself.

1. Introduction

Ethiopia is a country with severe environmental degradation problems including *soil erosion, land degradation, rainfall and temperature variability*. Though several direct and indirect drivers of deforestation and forest degradation have been identified, there have not been significant progresses made in reversing the situation. The mass tree planting program called the Green Legacy Initiative (GLI) was launched by the Prime Minister of Ethiopia in 2019 with the objective of reducing the impact of climate change and to sustain the green growth path of the country. Hence, a total of 4 billion, 5 billion, and 6 billion seedlings were planted in 2019, 2020, and 2021, respectively. This provides several opportunities such as mitigating the impacts of climate change and enhance the ecosystem services, generates revenue from both timber and non-timber products, which improve livelihood, and enable the country to meet national and global restoration and reforestation commitments. However, this kind of programs needs to be closely followed and monitored, as well as challenges should be identified for successfully attain the objectives set by the initiative. Thus, the purpose of this policy brief is to identify the role of GLI for sustainable development of the country and to identify challenges in implementing the program.

¹ This policy brief is extracted from a research report on 'Green Legacy Initiative for Sustainable Economic Development in Ethiopia' submitted to the Ethiopian Economic Association

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2. Rationales for Action

The government claimed that it has achieved the targets set in all the three mass tree planting periods (2019-2021), implementation of the GLI. While this is an encouraging step, there should be a continuous assessment of the performance and the contribution of already planted trees. One of the main contributions of this study is that it shows the carbon sequestration potential of the initiative both at the national and regional levels. Given the high number of seedlings planted, about 15 billion in the previous three years, it will certainly contribute to the green growth objective and Sustainable Development Goals (SDGs). The country can also generate a significant amount of revenue from carbon trading. However, this requires assessment of the carbon sequestration potential of the GLI and identification of its potential in climate mitigation.

The most important part of the initiative is not only to plant billions of seedlings as possible since planting alone cannot be considered as a measure of success. Experts view suggests that there are still implementation challenges, which hamper the expected benefits of the country from the GLI. Hence, this policy brief presented the main implementation challenges of the GLI considering the previous three planting periods (2019, 2020, and 2021).

3. Results and discussion

3.1 Performance of GLI

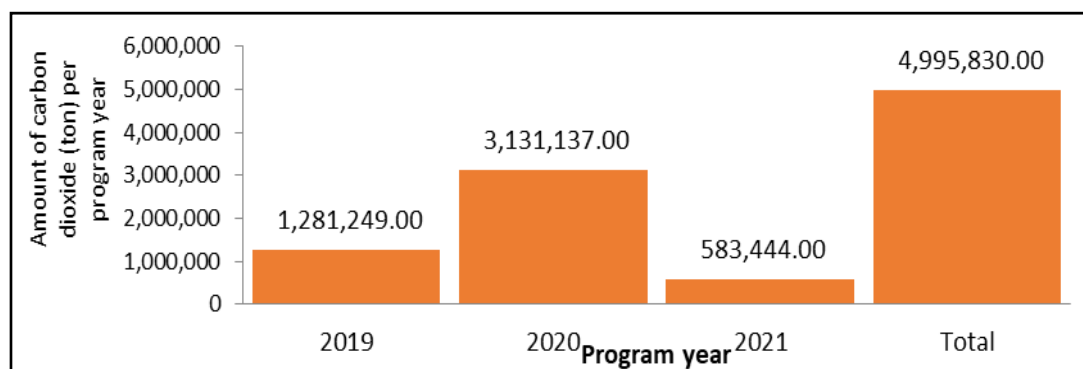
The study used secondary data collected from various sources to compare the planned versus actual performance (tree planting) for the aforementioned years both at the national and regional levels. Different types of tree species (e.g., *gravelia robusta*, *Junipurus procera*, *cordia africana*, *eucalyptus globulus*, *acacia decurens*, *cassia siama*, coffee, chat, and fruits) were planted. Regional states of the country had different initiative and accomplishment regarding GLI implementation with Oromia and Amhara regions are better performers followed by SNNP region in terms of the number of seedlings planted. This is mainly due to the relatively better facilities (resources and expertise) to raise and plant seedlings in these regions. The suitability of agro-climatic zone, political and professional commitment of leaders have also contributes to the success of implementing the initiative in these regions. Despite the success in terms of the number of seedlings planted, post planting activities have not received as much attention as the planting phase.

3.2 Effect of the GLI in sustainable development of the country

It is clear that conventional way of development will undermine the threat of climate change as it is based on intensive use of natural resources and hence release more emissions. That is why countries follow green growth path and ensure sustainable development. The GLI creates various opportunities such as supply of forest products, awareness creation, job opportunity, carbon trading, improve air quality, conserve biodiversity, reduce soil erosion, aesthetic values, and wildlife preservation. It is known that forests are the source of food, fuel wood, honey, wild coffee, spices, medicinal plants, and other benefits to the people in developing countries including Ethiopia. In addition, forests and trees planted on farmlands help reduce soil erosion, greenhouse gas emissions and mitigate climate change. Therefore, forests and trees have a critical role to play in the green growth of Ethiopia. The forest sector also plays a significant role for the development of agriculture, industries, and service sectors. In sum, forests and trees contribute directly and indirectly to achieving many of the SDGs and thus improving the well-being of the global population, especially the poor.

Carbon sequestration role of the GLI was conducted using secondary data collected from the relevant government offices. Assessment has been done both for the regions and the country, considering only the area covered by forestry. Areas covered by agroforestry or urban greening were not considered in the estimation of carbon sequestration. The standard method developed by USAID-Winrock international was employed for estimation of carbon sequestration. Figure 1 show that the highest carbon sequestration was in 2020, which was because of the relatively large area covered by trees in the GLI campaign. It has to be noted, however, that the results are rough estimation based on the assumption of projected emissions and mitigation potential of the trees planted under the initiative.

Figure 1: Amount of carbon dioxide sequestered (tons of CO₂) by program year at National level



(Source: Own computation based on GLI data). Note: Tigray was not included in the year 2021. There were no tree planting activities because of the conflict in the region.

Regional level exercises show that Oromia region has the highest amount of carbon sequestered in all the three planting periods. Amhara and SNNP regions took the second and third positions, respectively. The three regions had the highest amount of seedling planted, which enable them to have huge carbon sequestration. The monetary benefits of the initiative can be computed using price per ton of carbon sequestered. Moreover, carbon pricing can be implemented through emissions trading systems, wherein the price per ton of CO₂ sequestered depends on demand and supply. The country can derive a significant amount of revenue from sale of carbon. With the price on carbon rising to \$30/ton and taking into account the amount of carbon dioxide sequestered as indicated in figure 1, one can calculate that the country can derive a significant amount of revenue per year from such initiative.

3.3 Implementation challenges of GLI

While the official government data show that the GLI performs well over the last three years, the study revealed that there are several challenges that would make it difficult to achieve what is claimed by the government from the initiative. The barriers can broadly be categorized into four groups: First, the policy and institutional factors including lack of land use policy and plan, unclear land tenure system, lack of security and political stability, unavailability of clear implementation guidelines, and poor institutional arrangements. Second, the economic drivers such as lack of sufficient budget, poor provision of nursery equipment and materials, lack of transport service and markets for forest products, and lack of appropriate incentive mechanisms. Third, the bio-physical factors including inappropriate site selection for tree planting (species-site matching problems), poor soil depth, lack of enough moisture, unavailability of sufficient number of seedlings, poor quality of seedlings, inappropriate tree species and planting time. Finally, problems related to the project characteristics such as lack of clear purpose of planting, weak coordination of project implementers, difficulty of accessing some of the planting sites, lack of coordination among relevant stakeholders, and lack of monitoring and follow up; also hamper implementation of the GLI.

To conclude, there are several factors that affect success implementation of the massive afforestation and reforestation programs of the GLI. These factors interact and cannot be considered in isolation. Therefore, understanding the complex interactions among those factors and their influence on afforestation and reforestation program of the country is crucial to clearly achieve goals of the GLI.

4. Conclusion and recommendations


The study finds that the performance of the GLI over the last three tree planting periods was well beyond the target. More than 15 billion seedlings have been planted during the last three tree planting campaigns. Regional variations were observed in implementing the GLI due to differences in resources, suitability of agro-climatic conditions to raise and plant seedlings, political instability, etc.




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Conflict of Interest

There is no conflict of interest between researchers.

Successful implementation of the GLI could contribute to address the green growth objective of the country. The GLI has a huge potential in carbons sequestration for climate change mitigation of the country.

There are several barriers related to the socioeconomic, technical, policy or institutional and characteristics of the project itself that affect the performance of the initiative. Therefore, to derive the expected economic, social, and environmental benefits from the GLI, the following issues need to be addressed.

- There is a need to finalize and implement the draft land use policy and plan. Similarly, detail guideline should be prepared and delivered to the concerned party to create awareness on how the trees planted could be managed, maintained, and utilized.
- Considerable attention should be given to post-planting activities such as watering, weeding, and other necessary maintenances. This should also be complemented by protecting the seedlings from free grazing by the local smallholders.
- Environmental factors such as climatic condition, soil moisture, rainfall, temperature, etc. need to be considered in selecting trees for planting, since tree species have different requirements of sunlight, soil moisture and nutrients to grow successfully.
- The program should also provide incentives for farmers involved in tree planting. This could be in the form of providing seedlings, creating opportunities for income generating activities, etc.
- Strong coordination among the various stakeholders both at the national and local level is necessary. In addition, collaboration between local government representatives and local stakeholders is vital to address some of the issues related to coordinating the tree planting campaign.
- To enhance the involvement of various stakeholders including the local community and ensure sustainability of the initiative, the country should set up a formalized institutional arrangement with clear roles, rights and responsibilities regarding the GLI.
- The government should look for customers for the carbon trading and clear rules and guidelines should be prepared on the benefit sharing mechanisms. Rational and equal share of benefits from carbon trading could play significant role in the efforts of mitigate climate change.

Additional Readings

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