GGGI INSIGHT BRIEF NO. 8

Accelerating Transformative Climate Action through Long Term – Low Emission and Climate Resilient Development Strategies

Lessons Learned from Ethiopia and Burkina Faso

December 2023

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Cover Photo: A rural woman working at nursery site, Wondo District , Oromia region, Ethiopia

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The authors are grateful to the Ministry of Planning and Development of Ethiopia and the Permanent Secretariat of the National Council for Sustainable Development of Burkina Faso for their continuous guidance and leadership in the development of the Long Term – Low Emission and Climate Resilient Development Strategy (LT-LEDS) in the respective countries. The authors would like to thank all the government and non-government staff who contributed to the LT-LEDS development processes in Ethiopia and Burkina Faso, including all members of the working groups, national and international consultants, stakeholders workshop participants, and partners. The authors would also like to express their gratitude to the French Development Agency/Agence Française de Développement for the financial support provided in the development of the LT-LEDS in Ethiopia and Burkina Faso, including the development of this insight brief.

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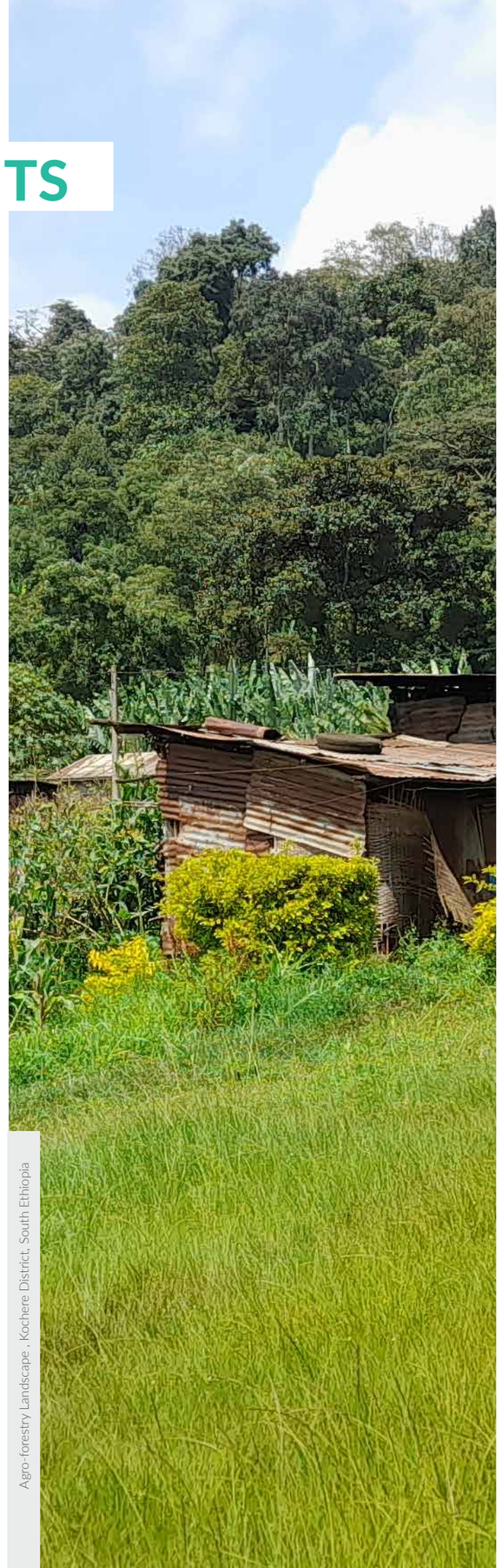


Agro-forestry Landscape , Kochere District, South Ethiopia

EXECUTIVE SUMMARY

The Long Term – Low Emission Development Strategy (LT-LEDS) is an important instrument for envisioning how a country will develop sustainably along a low-carbon growth and climate resilient development pathway. The long-term planning horizon of the LT-LEDS provides an opportunity to consider interactions, synergies, and trade-offs between different sectoral goals, climate mitigation and adaptation objectives, and national development priorities to ensure that any transformational changes planned for implementation will promote sustainable development. For Ethiopia and Burkina Faso and many least developed countries (LDCs), the key sectors to be addressed through the LT-LEDS include the agriculture, forestry, and other land use (AFOLU), energy, while prioritizing climate adaptation and development objectives.

The submission of LT-LEDS is encouraged under the Paris Agreement, but only 68 countries have done so, of which only eight are from the African region. Some of the common challenges faced by LDCs and developing countries in the development of LT-LEDS include limited institutional capacities, human and financial resource constraints, and the lack of data availability to support socio-economic modeling (particularly gender-disaggregated data).

The Global Green Growth Institute (GGGI) has been working closely with its member and partner countries to provide technical and advisory support in the development, update, and implementation of their LT-LEDS. With financial assistance from the French Development Agency/Agence Française de Développement (AFD), GGGI has applied a comprehensive approach in supporting Ethiopia and Burkina Faso throughout the LT-LEDS development process, from initial visioning to the final approval and submission of the LT-LEDS document to the United Nations Framework Convention on Climate Change (UNFCCC). The comprehensive approach leverages the opportunities and benefits of developing the LT-LEDS, which include: (i) aligning low-emission targets with national development priorities; (ii) enhancing local capacity throughout the LT-LEDS development process, including the modeling of different pathways and analysis of relevant sectors; (iii) raising the adaptation policy agenda; (iv) modernizing key economic sectors of the country, while ensuring a just and inclusive transition and the creation of economic and decent job opportunities; (v) tapping into climate finance; and (vi) demonstrating global climate leadership.

This insight brief presents key lessons learned from the LT-LEDS development process in Ethiopia and Burkina Faso, which can be used as a guide and knowledge resource for other LDCs and developing countries, and help accelerate the development and update of their LT-LEDS. The lessons learned are focused on five aspects of the LT-LEDS development process: (i) ensuring ownership and institutional enhancement; (ii) building an iterative process of pathways development; (iii) incorporating mitigation, adaptation, and sustainable development priorities; (iv) ensuring multi-stakeholder participation and gender and social inclusion; and (v) catalyzing climate action implementation through finance planning.

From the experience of LT-LEDS development in Ethiopia and Burkina Faso, a central element is on capacity building and engagement across government institutions and sectors at national and local levels to achieve whole-of-economy and whole-of-society ownership of the LT-LEDS. The strategies adopted to promote a country-owned LT-LEDS process include the establishment of LT-LEDS steering committees, as well as sectoral and cross-sectoral technical working groups, and the frequent interactions and exchanges between them. Where possible, leveraging existing governance and institutional structures for LT-LEDS development is recommended.

The mobilization of committed and capable national resource persons and government champions in various national institutions and departments is a critical success factor for LT-LEDS development, and investment in capacity building is crucial for empowering national stakeholders to actively use LT-LEDS as a planning tool. Integrating analytical work that is backed by scientific knowledge and evidence with a highly participatory and iterative process is an important ingredient for developing a credible, widely-accepted, and robust LT-LEDS. It involves harmonizing the tools, models, and datasets used for the development of LT-LEDS pathways and analysis of scenarios, and aligning the sectoral workstreams with economy-wide analyses. This could be achieved by promoting information sharing between different workstreams or working groups, ensuring methodological alignment, facilitating enhanced policy debate, and identifying complementary analysis based on needs.

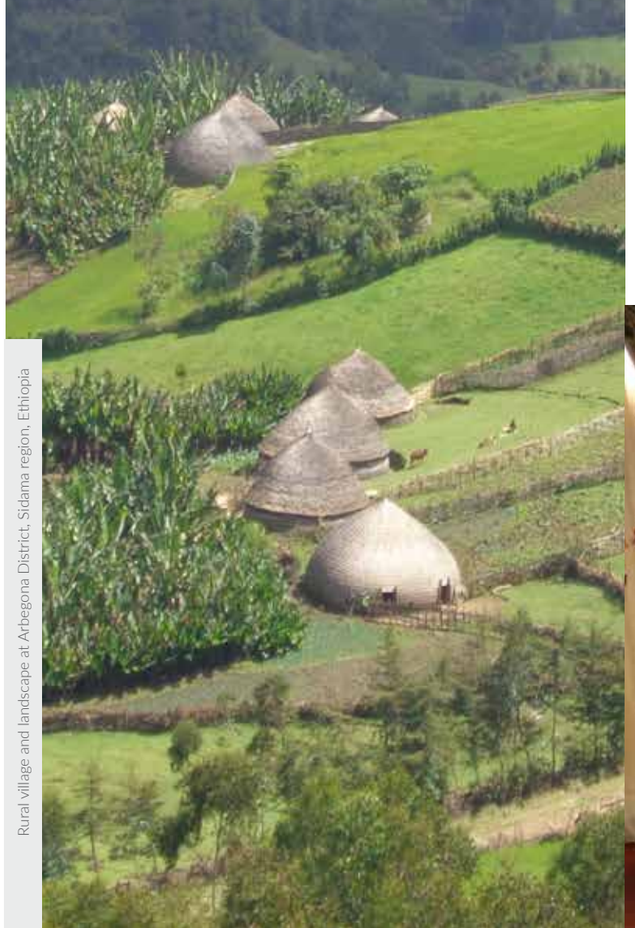
Another important lesson is moving beyond a piecemeal and siloed approach toward more holistic and transformational solutions across different sectors. It involves seamless alignment and adjustment, when necessary, between the LT-LEDS, nationally determined contributions (NDCs), and other key development strategies, and should encompass climate mitigation and adaptation interventions, as well as sustainable

socio-economic co-benefits, such as green jobs and livelihood improvements. Good practices include aligning LT-LEDS data and assumptions with other national processes (e.g., NDCs, national adaptation plans, and national development plans), incorporating climate projections into scenario development, assessing synergies and co-benefits of mitigation and adaptation actions, engaging diverse stakeholders, and promoting cross-sectoral collaboration.

Embedding gender, diversity, and social inclusion dimensions in the LT-LEDS development process must take place at the outset. This is because LT-LEDS proposes changes that will bring about social outcomes that are usually not equally distributed among men, women and other social-economic groups. It is therefore important to conduct a gender-differentiated analysis and the mapping of social and gender infrastructure in government to understand the positioning of men and women in the relevant sectors and the barriers they face in accessing socio-economic benefits. Other good practices include the calculation of gender-disaggregated employment impacts, qualitative analysis of gender impacts, and the integration of gender and social inclusion into the governance structure of the LT-LEDS, to ensure more inclusive and equitable LT-LEDS outcomes.

The LT-LEDS finance plan lays out priorities for attracting international and private sector financing to operationalize the transition to a low-emission pathway and reach net-zero emissions by mid-century. The development of the LT-LEDS finance plan is a participatory exercise, and involves estimating the investment requirements and financing gaps. Good practices include building upon existing NDC and national adaptation plan (NAP) costing exercises, when possible, by considering the same specific objectives and principles, and validating public information on climate finance flows with government stakeholders. The development of the LT-LEDS finance plan also involves stocktaking of current and potential financing barriers, financing sources, and instruments, and aligning financial tools and instruments to specific prioritized sectors. Good practices include keeping a long-term vision and account for future changes in the financing ecosystem, prioritizing the assessment of innovative financial mechanisms, and assessing both the barriers and successes of existing and planned financing instruments.

Toward achieving the long-term goals of the Paris Agreement, the LT-LEDS plays an important role in enhancing and raising the ambition of updates to NDCs, and guiding LDCs and developing countries on climate-resilient development pathways. We hope this insight brief will help LDCs and developing countries accelerate transformative climate action through the LT-LEDS process.



Rural village and landscape at Arbegona District, Sidama region, Ethiopia

1. Background

The Long Term – Low Emission Development Strategy (LT-LEDS) framework encompasses mid-century long-term strategies that steer a country on a low-carbon and climate-resilient development direction, while achieving national socio-economic objectives. The LT-LEDS is aligned with the aims of the Paris Agreement and the United Nations Framework Convention on Climate Change (UNFCCC) to keep global average temperature rise to well below 2°C and limit warming to 1.5°C.

In the synthesis report of the first global stocktake, the UNFCCC urges Parties to review and communicate their LT-LEDS to ensure alignment with the 1.5°C pathways, and encourages those that have not done so to submit their LT-LEDS by the end of 2024. Recognizing countries' differentiated responsibilities and capabilities, the report calls for Parties to integrate net-zero objectives in their LT-LEDS, and for least developed countries (LDCs) and developing countries to incorporate climate adaptation and sustainable development objectives in their LT-LEDS.

Given the complexity of developing LT-LEDS, only 68 countries have developed LT-LEDS or Long-Term Visions, of which only eight are from the African region. The Global Green Growth Institute (GGGI) has been working closely with its member and partner countries, and providing support in the development, update, and implementation of their LT-LEDS. GGGI's comprehensive approach supports countries throughout the entire LT-LEDS development process from initial visioning to the final approval and submission to the UNFCCC, and the implementation of the LT-LEDS.

In Ethiopia and Burkina Faso, GGGI, as a trusted advisor and embedded in the governments, provided technical and advisory support throughout their LT-LEDS development process, with funding support from the French Development Agency/Agence Française de Développement (AFD). Drawing lessons learned and good practices from existing LT-LEDS experiences in African LDCs can provide valuable knowledge and information for other LDCs and developing countries, and help fast-track the development and update of their LT-LEDS.

This insight brief aims to share some key lessons learned from the LT-LEDS development process in Ethiopia and Burkina Faso, which can be used as a guidance and knowledge resource for experts and practitioners working in the field of climate action planning and strategy development in LDCs and developing countries. This insight brief can also be used by donors and technical assistance organizations to support governments in developing their LT-LEDS, and by Ethiopia and Burkina Faso when they update their LT-LEDS.

The next section highlights the importance of LT-LEDS for LDCs and developing countries. This is followed by an overview of GGGI's comprehensive approach to supporting countries in the development of their LT-LEDS. Section 4 presents the lessons learned on various aspects of the LT-LEDS development process, including: ensuring ownership and institutional enhancement; building an iterative process of pathways development; incorporating mitigation, adaptation, and sustainable development priorities; ensuring multi-stakeholder participation and gender and social inclusion; and catalyzing climate action implementation through finance planning.

LT-LEDS gender focal points workshop participants in Ouagadougou, Burkina Faso

2. The Importance of LT-LEDS for LDCs and Developing Countries

The LT-LEDS is a key tool for bridging developing countries' **sustainable development and climate mitigation and adaptation objectives,** following a holistic, long-term planning approach. The LT-LEDS can strengthen climate resilience and promote low-emission growth by assessing cost-effective climate mitigation and adaptation measures in an integrated manner. The long-term planning horizon of the LT-LEDS provides an opportunity to consider interactions, synergies, and trade-offs between different sectoral goals, mitigation and adaptation objectives, and national development priorities to ensure that any transformational changes scheduled for implementation will promote sustainable development.

Importantly, the long-term perspective of the LT-LEDS allows for discussions beyond incremental technological substitutions and innovations, and considers **larger-scale transformational changes**. The LT-LEDS can provide evidence-based, long-term planning for decarbonizing, climate proofing, and modernizing key economic sectors of the country, while ensuring a just transition and the creation of economic and decent job opportunities.

Given that LDCs and developing countries are highly vulnerable to climate change and climate variability and impacts, but have very low contributions to global greenhouse gas (GHG) emissions, the development of an LT-LEDS is an opportunity to raise the **climate resilience policy agenda.** Therefore, the LT-LEDS can incorporate climate resilience issues throughout the LT-LEDS development process.

The LT-LEDS plays an important role in driving the alignment of developing **countries' nationally determined contributions (NDCs) and near-term actions with longer-term Paris Agreement goals**. The LT-LEDS also provides a structure for establishing milestones in countries' NDCs. Developing and updating the NDCs with an aim to meet the LT-LEDS targets will help distinguish the short- and long-term measures that a developing country can use to achieve its climate ambition (both in mitigation and adaptation), and direct successive NDCs in becoming more ambitious.

Moreover, the LT-LEDS outlines the priorities for **attracting international and private-sector financing** for green, low-carbon, and climate-resilient projects over the short- and long-term. The LT-LEDS provides country program guidelines for pipeline development priorities and transformational investment identification. The LT-LEDS can help identify funding sources and innovative financing mechanisms, and accelerate the process of tapping international climate and private finance, including carbon finance under Article 6 of the Paris Agreement, for the implementation of prioritized climate actions that generate significant development benefits.

The LT-LEDS development process – through its various stages, including the modeling of different pathways and analysis of relevant sectors – if well designed, can be a suitable vehicle for **enhancing the capacity of government staff and relevant stakeholders** to update the LT-LEDS in light of new information, while ensuring wide acceptance and continuity. In parallel, through the development of the LT-LEDS, LDCs and developing countries can demonstrate their **global leadership on climate policy,** and demand further action and enhanced ambition by high-emitting countries.

Finally, the LT-LEDS provides valuable inputs that allow countries to comply with climate transparency requirements established by **the Enhanced Transparency Framework**. The LT-LEDS' quantitative results are particularly useful for reporting certain values and assumptions when developing or updating the NDCs, and providing information in the common tabular formats for the reporting of progress toward achieving the NDCs. This will allow countries to fulfill their transparency commitments through the various reporting documents (e.g., National Communications, Biennial Transparency Report, etc.).

3. GGGI's Approach to Supporting Countries Develop their LT-LEDS

Although there is no one-size-fits-all when it comes to strategy development, particularly in establishing LT-LEDS, there are some important factors that can support LDCs and developing countries that want to pursue LT-LEDS. GGGI follows a country-driven, customizable, and streamlined approach to support its member and partner countries in the development of a country-owned, robust, and implementable LT-LEDS. GGGI's approach to LT-LEDS development is based on the following key principles:

- **Country-owned and demand-driven approach for enhancing institutional capacity**
  GGGI works under the leadership and guidance of host country governments as part of a nationally-driven process of developing the LT-LEDS. The development and implementation of the LT-LEDS is viewed as an opportunity to enhance local institutional capacity, and this is one of the main objectives of the LT-LEDS development process. GGGI engages directly with government institutions and national experts and stakeholders in capacity building and the co-creation of sectoral and economy-wide low-emission and climate-resilient development pathways.

- **Forming strategic partnerships**
  The establishment of strategic partnerships with government and international development organizations through memorandums of understanding (MoUs) contributes to a successful LT-LEDS development process. For example, in Ethiopia and Burkina Faso, a tripartite MoUs were signed between AFD, GGGI, and the governments of Ethiopia and Burkina Faso, respectively. These MoUs set out the conditions under which AFD and GGGI supported the governments of both countries in formulating their LT-LEDS. Furthermore, the establishment of technical working groups helped bring together the partners. Extended strategic partnerships were also formed with various international organizations such as the Food and Agriculture Organization, Stockholm Environment Institute, and World Resources Institute.

- **Participatory and inclusive process**
  GGGI, under the leadership and guidance of the governments, designs from the outset an inclusive LT-LEDS development process that requires coordination among ministries, agencies, and departments. This ensures policy harmonization and alignment, while considering interactions, synergies, and trade-offs of climate interventions. GGGI also supports the governments in establishing an LT-LEDS process that is fully participatory, cross-sectoral, and engages a broad range of stakeholders at different levels. It provides the basis and inputs for exploring and developing the sectoral and economy-wide pathways. It also boosts understanding between ministries, government agencies, and other stakeholders, while enhancing the political and social buy-in needed for implementation and a shared vision.

- **Holistic and integrated approach aligned with national development planning processes**
  GGGI leverages a holistic and integrated approach to facilitate a multi-level and multi-sectoral sharing of knowledge, learning, and coherent action. GGGI's approach includes an integration of the NDCs and LT-LEDS into national development planning processes, which simultaneously addresses emissions reduction, climate resilience, and other development objectives. Given the complex and multi-sectoral nature of the LT-LEDS, integrating robust analytical work with a highly participatory and iterative process is an important ingredient for developing a credible, widely-accepted, and robust strategy, informed by scientific knowledge and evidence, and aligned with stakeholders' views and priorities. As stated above, LT-LEDS is a long-term strategy for climate-compatible growth addressing both climate mitigation and adaptation objectives in the process of strategy development. Incorporating mitigation and adaptation priorities and actions in the LT-LEDS allows for a holistic country strategy development, avoiding silos, while enhancing coordination and capitalizing on maximization of synergies and minimization of trade-offs.

- **Focus on socio-economic benefits and financing opportunities**
  In line with the country's development objectives, the LT-LEDS process incorporates knowledge and provides analysis, not only on GHG emission reductions, but also on socio-economic opportunities and benefits that climate actions in all sectors can generate. Access to clean energy and sustainable services, reduced air pollution, enhanced food security, increased employment and economic opportunities, and aligning the co-benefits of climate action with the Sustainable Development Goals (SDGs) are important aspects included in a well-informed LT-LEDS development process. The application of gender and social inclusion lens spotlights the barriers to accessing socio-economic benefits for marginalized groups, and helps identify opportunities for more equitable and inclusive outcomes. Furthermore, the LT-LEDS can bridge planning and implementation by developing a comprehensive investment plan, through the identification of investment needs, available resources, financing gaps, and mechanisms to bridge those gaps. This way, the LT-LEDS becomes actionable as it is readily adopted and implemented. GGGI supports governments in identifying specific projects for support and potential funding sources. A framework for investment is provided and access to international financing is promoted through GGGI's comprehensive networks and partnerships, along with the establishment of a monitoring and evaluation system.

4. Lessons Learned from LT-LEDS Development in Ethiopia and Burkina Faso

This section highlights key lessons learned from LT-LEDS development in Ethiopia and Burkina Faso, particularly in ensuring country ownership of the LT-LEDS and enhancing institutional capacity, building an iterative process of LT-LEDS pathways development, incorporating climate mitigation, adaptation and sustainable development priorities in the LT-LEDS, ensuring inclusion and participation, and finance planning.

4.1 Ensuring Country Ownership of the LT-LEDS and Enhancing Institutional Capacity

In LT-LEDS development, GGGI collaborates closely with in-country, sector-specific experts, research institutions, and international organizations in achieving analytically sound work based on accepted techniques and validated assumptions, models, and scenario analysis through an iterative process. In Ethiopia and Burkina Faso, GGGI, under the guidance of the respective governments, supported the development of the LT-LEDS throughout the whole process, including scoping and institutional set-up, visioning, stakeholder engagement, policy assessment, sectoral and economy-wide scenario analysis and modeling, policy interventions prioritization, climate finance planning, and LT-LEDS document preparation, approval, and submission to the UNFCCC.

It should be noted that despite the challenges that the COVID-19 pandemic posed to the participatory process of planning and strategy development, the LT-LEDS was initiated in Ethiopia in May 2021 and in Burkina Faso in June 2021. The governments' commitment in combination with the smooth coordination with GGGI allowed, despite the challenges, a participatory process that engaged both national and international specialists through hybrid communication methods, virtually and on-site. Following a series of stakeholder engagements and analytical workstreams, the Government of Ethiopia submitted and published its LT-LEDS in June 2023[1]. The Government of Burkina Faso developed and finalized its LT-LEDS at the end of 2022 and is currently going through the political approval process.

4.1.1 Ethiopia

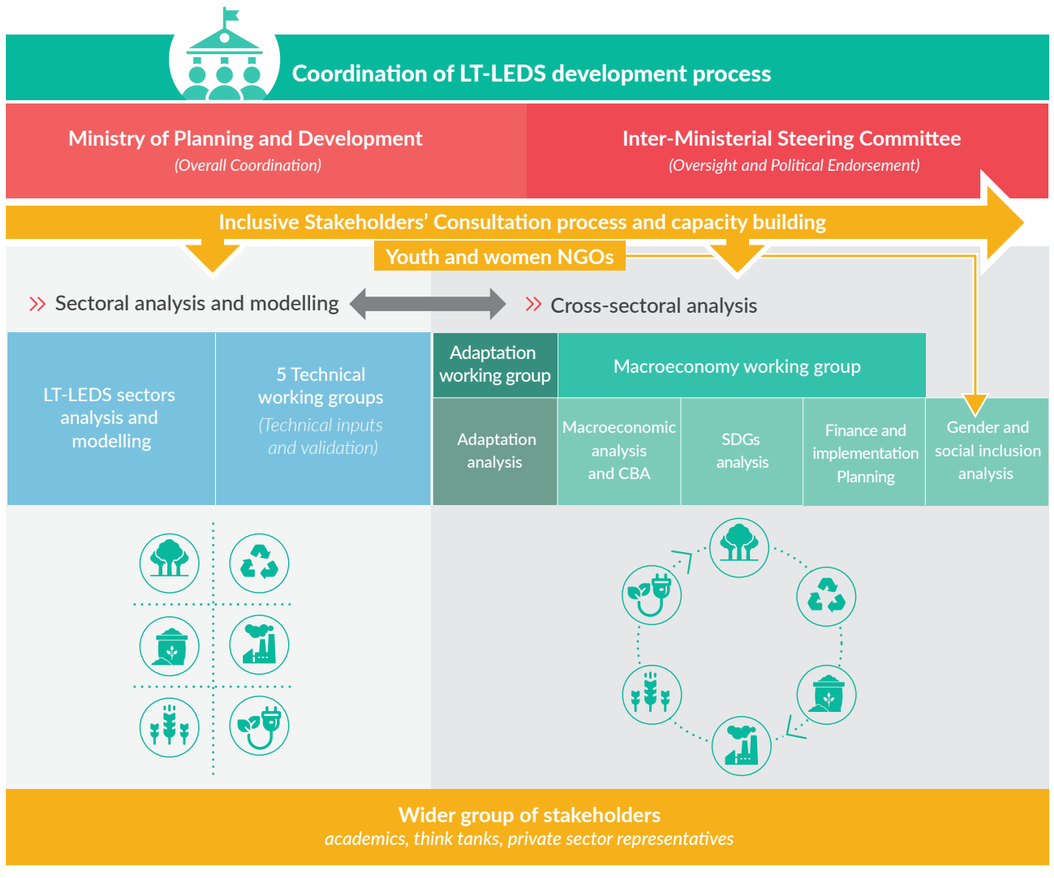
The LT-LEDS development process in Ethiopia was led by the Ministry of Planning and Development (MoPD). In order to enhance ownership of the process across line ministries, three main strategies were adopted, as follows:

1. In March 2021, the MoPD established an **LT-LEDS Steering Committee** to provide overall guidance and endorse the development process of the LT-LEDS. The LT-LEDS Steering Committee comprised of actors from MoPD, Environmental Protection Authority (formerly the Environment, Forest, and Climate Change Commission), AFD, GGGI, and academia, as well as high-level officials from line ministries implementing Ethiopia's Climate Resilient Green Economy (CRGE) Strategy, and other relevant institutions. Chaired by the MoPD, the committee served as a high-level advisory group with the objective of guiding the LT-LEDS development process. By engaging with different ministries, the government ensured higher chances of LT-LEDS endorsement and implementation.
2. The MoPD and GGGI established **five sectoral and two cross-sectoral technical working groups** to conduct the modeling and analysis of the sectoral and economy-wide emission pathways, and provide inputs on the level of ambition of the sectoral interventions and technical validation. A total of 32 technical government experts were nominated from the relevant ministries to work closely with GGGI experts in the seven established working groups. The five sectoral working groups covered energy, waste, forestry, agriculture, and industrial processes and product use (IPPU), and the two cross-sectoral working groups covered the macroeconomy and climate adaptation. There were frequent interactions and exchanges between the seven technical working groups, which resulted in: (i) ownership of the process and the models utilized; (ii) strengthened capacity of experts and institutions involved in the process; (iii) co-creation of the socio-economic development pathways; and (iv) horizontal alignment and integration on long-term climate action.
3. The LT-LEDS development process utilized **existing governance and institutional structures** in the country, namely the CRGE Facility and related functions, for mainstreaming short-, medium-, and long-term climate action into existing processes. In addition, the LT-LEDS foresees the development of an integrated Climate and Development Reporting (CDR) System by utilizing the existing climate MRV system in Ethiopia and developing an M&E system coordinated by the MoPD, EPA and relevant ministries. The external and domestic financing of related climate and development projects are expected to be subjected to the CDR process and system.

A **series of workshops** were organized as key milestones of the LT-LEDS development process to engage with stakeholders and solicit their feedback. With the support of GGGI, the MoPD ensured wide stakeholder engagement – including regional bureaus, academia, women, youth, and civil society organizations – through six national stakeholder consultation and validation workshops and five training and capacity-building events. These multi-stakeholder consultation workshops and processes enabled the incorporation of local contextual factors in the LT-LEDS development process, fostered learning, built partnerships, and integrated diverse perspectives and experiences to enhance coherence and collaborative results.

Lastly, a **wider sectoral stakeholders' "circle"** was established, including academia, think tanks, and other relevant government agencies, where regular meetings and calls provided additional feedback and guidance on the development of the sectoral and economy-wide emission pathways, while enhancing awareness of the LT-LEDS process. Figure 1 illustrates the process of developing the Ethiopia LT-LEDS.

Figure 1. An overview of the LT-LEDS development process in Ethiopia



1 https://unfccc.int/sites/default/files/resource/ETHIOPIA_%20LONG%20TERM%20LOW%20EMISSION%20AND%20CLIMATE%20RESILIENT%20DEVELOPMENT%20STRATEGY.pdf

4.1.2 Burkina Faso

Similarly, GGGI's approach in Burkina Faso was to embed all steps of the LT-LEDS development process within national institutions to ensure ownership and maximize opportunities for capacity building. The approach was reflected in the composition of the team of analysts that included national sectoral experts with previous experience in Burkina Faso's NDC revision, GGGI experts from different units, and international experts on system dynamics modeling for scenario development and analysis.

The experts involved were organized by the five main emitting sectors – agriculture, forestry, and other land use (AFOLU), waste, energy, transport, and IPPU. These sector teams – that always include an international and a national sector expert working in tandem – conducted the modeling of sector business-as-usual (BAU) scenarios, and subsequently, the low-emission development scenarios. The national experts ensured the essential functions of data collection, consultations, and validation with the sector working groups that brought together sector experts from key ministries and other public and private sector stakeholders to support the LT-LEDS development process. These working groups prioritized climate actions for inclusion in the final sectoral and economy-wide scenarios. In addition, gender focal points in climate-related ministries who had previously been engaged in the NDC revision process formed a gender technical group to review all the sectoral climate interventions from a gender and social inclusion perspective.

For the economy-wide scenarios, a focal point and resource person was assigned from the Ministry of Finance, Economy, and Development to systematically participate in the work. The involvement of the resource person from the ministry helped to ensure acceptance of the LT-LEDS within the ministry, enhanced the alignment of the LT-LEDS with existing economic plans and strategies, and importantly, facilitated the communication of the LT-LEDS development process and outcomes among national stakeholders during various workshops, meetings, and capacity building sessions. Mobilizing committed and capable resource persons within different national institutions and departments was a critical success factor in the LT-LEDS development process.

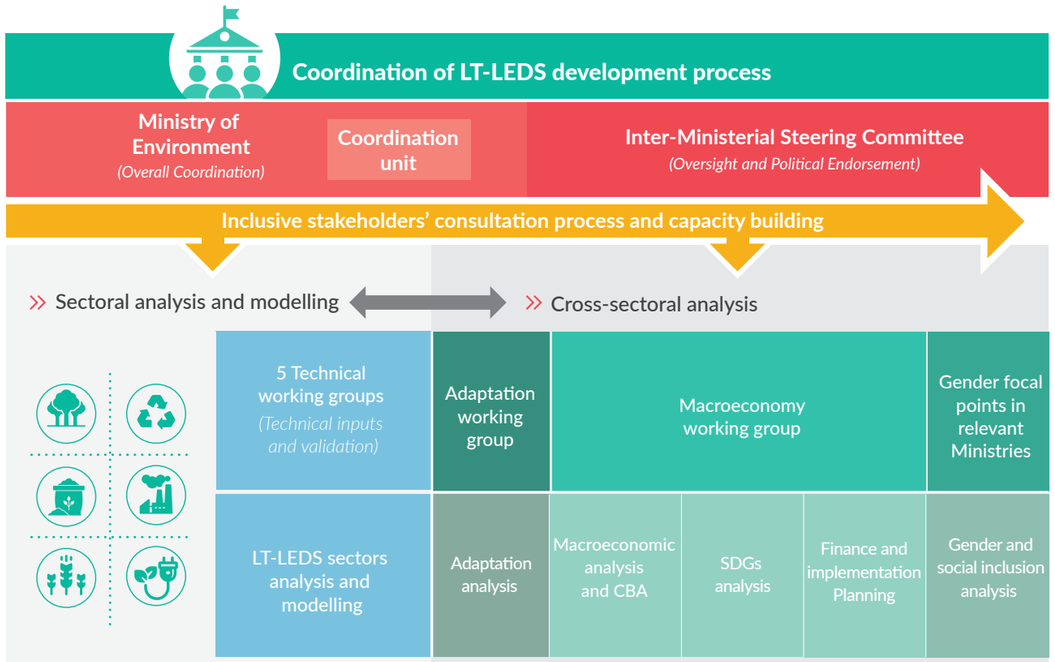
For most national participants, the LT-LEDS development process was the first time they learned about the use of system dynamics models, as well as combining climate and development scenarios. Hence, the LT-LEDS development process in Burkina Faso truly increased national skills and expertise, and the vertical teams formed with national experts can be established as a highly recommendable good practice. However, it is important to recognize that this approach requires additional time and resources, for example, in facilitating collaboration between anglophone and francophone experts and audiences.

Another lesson learned is that, although GGGI invested heavily in capacity building throughout the process, even more hands-on training is needed to truly empower national stakeholders to actively use the LT-LEDS as a planning tool to be updated over time and guide the next NDC revision cycles. The databases, sources, and methodological tools must be well explained and transferred to the government counterparts to allow them to update the scenarios, for example when updated data is available.

The final lesson learned is that LT-LEDS development processes, supported by GGGI, should foresee the mobilization of national resource persons and government champions to support the process from the beginning, until even after the analytical work is completed, to ensure political buy-in, adoption, and implementation of the LT-LEDS.

Visit to the Zagtouli solar power plant, Ouagadougou, Burkina Faso

Figure 2. An overview of the LT-LEDS development process in Burkina Faso

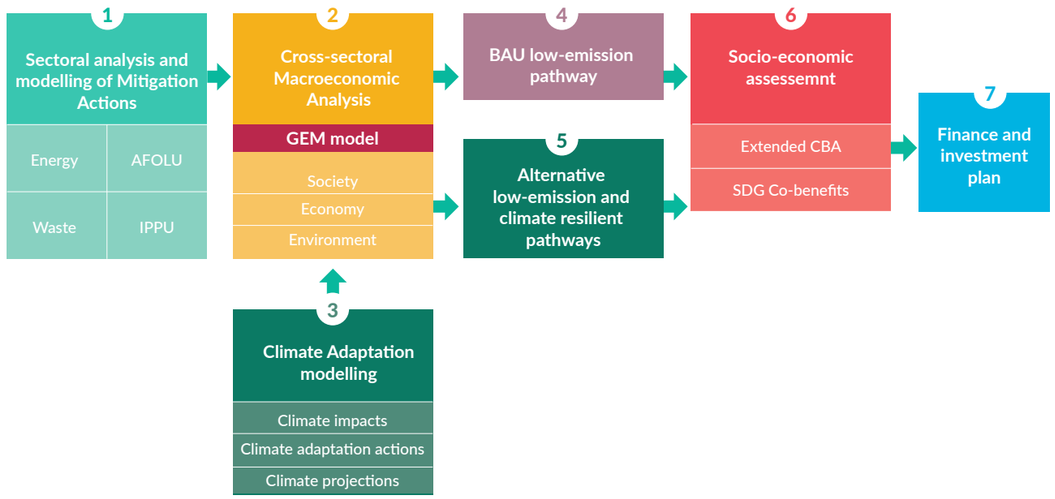


4.2 Building an Iterative Process of LT-LEDS Pathways Development

The modeling approach that was adopted in Ethiopia and Burkina Faso built on existing capacities, models, tools, and experiences within the countries, and therefore, ensured continuity while enhancing ownership of the process. Both the sectoral bottom-up GHG emission analysis and the macroeconomic analysis were conducted to understand and assess the different pathways of low-carbon and climate-resilient development in the two countries. In the process, existing tools and models were improved, which also contributed to enhanced institutional capacity.

For example, in Ethiopia, the Green Economy Model (GEM) was the main modeling tool used to conduct the analysis for the development of the 10-year national development plan and the revised NDC. In addition, experts from the Ministry of Energy were already using with the Low Emissions Analysis Platform (LEAP) for energy planning. Both GEM and LEAP were used to inform the development of Ethiopia's LT-LEDS.

Figure 3. The main elements of the LT-LEDS analytical approach



Similarly in Burkina Faso, all the sectoral tools that were used were simple Microsoft Excel-based tools, whereas for the AFOLU sector, the Ex-Ante Carbon-balance Tool (EX-ACT) was used since the national experts working in the sector were already familiar with the tool. Experts in the Ministry of Finance, Economy, and Development of Burkina Faso were familiar with system dynamics modeling for green economy assessment and therefore, this allowed a relatively smooth process to utilize the GEM for the cross-sectoral integration and the development of the economy-wide socio-economic and emission pathways.

The macroeconomic modeling complemented the sectoral bottom-up GHG emission analysis during the LT-LEDS analytical work. On the one hand, the GEM produced the major estimates of macroeconomic and socio-economic impacts of LT-LEDs. On the other hand, it connected the sectoral workstreams by integrating all scenarios at the sectoral level into one coherent economy-wide scenario at the macroeconomic level. Hence, for both the BAU and the low-emission development scenarios, the combination of the sectoral models with the GEM ensured that the latter incorporated all sectoral information and was well-calibrated to the Ethiopian and Burkina Faso contexts.

The Burkina Faso LT-LEDS, called the "2050 Vision for Low-carbon Emission and Climate Resilient Development", includes three emission scenarios – the high ambition scenario, the moderate ambition scenario, and the late action scenario, achieving net-zero emissions by 2045, 2050, and 2050, respectively. The late action scenario takes into account the security and humanitarian crisis the country faces currently, and builds on the assumption that the mitigation actions can be implemented only after 2023.

The Ethiopia LT-LEDS, called the "Ethiopia's Long-Term Low Emission and Climate Resilient Development Strategy (2020-2050)", explores also three scenarios additional to the BAU scenario, the NDC aligned scenario, the late action scenario and the maximum ambition scenario reaching net-zero emissions by 2050, 2050 and 2035 respectively. The selected LT-LEDS scenario is the NDC aligned scenario with the highest benefit to cost ratio.

The GEM simulated the emission pathways at the aggregated level, including the impacts of long-term low-carbon interventions on gross domestic product (GDP) growth and employment (both generally and for green jobs specifically). Moreover, it produced an extended cost-benefit analysis (CBA), which showed that the implementation of LT-LEDS creates positive net benefits, both in Ethiopia and Burkina Faso. Moreover, GGGI's Green Growth Simulation (GGSim) Tool was used to measure SDG co-benefits of some of the interventions

In the CBA, analysis of the costs includes investment costs, as well as operation and maintenance costs across sectors. The largest shares of total investment arise in the energy and agricultural sectors. Analysis of the benefits distinguishes between avoided costs, such as energy cost savings, and added benefits. The latter consists mainly of additional GDP from LT-LEDS interventions. Depending on scenario specification, annual economic growth is expected to increase between 0.5% and 1.8% compared to the BAU scenario. Furthermore, there are significant benefits in terms of job creation, with green jobs expected to be close to 2% of total employment between 2022 and 2050. In Ethiopia, the analysis reveals that for each US$ invested in climate action, up to US$6 in benefits will result.

Table 1. Impacts, costs, and benefits of the low-emission scenarios 2050 compared to BAU scenario

	Burkina Faso	Ethiopia
GHG emissions avoided in 2050	110 Mt	560 Mt
Annual economic growth	+0.65%	+1.8%
Annual green jobs until 2050	141,260	865,400
Land reforested	2.1 million ha	8 million ha
Energy cost savings		US$ 41 billion
Avoided crop losses	US$ 17 billion	US$ 69 billion
Benefit per US$ invested	1.5	6.1

The analyses in Ethiopia and Burkina Faso reveal several important insights and lessons learned:

- **Information sharing** – Since the sectoral models and the GEM may be structured very differently in some cases, it is important to align the sectoral workstreams with the economy-wide level, from the outset, to enable a constant flow of information from the sectoral to the macro level. For instance, it is important to share essential datasets such as GDP and population (historical and projected data) with all sectoral groups involved to ensure that they use the same datasets and rely on the same assumptions. Moreover, the sectoral workstreams should share their insights from initial sectoral review of policy documents in order to identify potential conflicts between policy goals at the macro level. Regarding data unavailability, assumptions need to be validated with the sectoral working groups.
- **Methodological alignment –** From the start, the sectoral workstreams should be given clear guidance on how to report their analytical results. In particular, the sectors should be provided with the essential policy variables in GEM. This includes providing sectors with the type of variables and units in which they should formulate the ambition levels of the policy interventions such that GEM is able to operationalize them. Hence, the debate on policy interventions should drive the process of pathways development, but then it should be translated into specific variables to shape and match the structure of the models used.
- **Facilitating enhanced policy debate –** The calibration of GEM with the sectoral models takes place by aligning the BAU scenarios and associated assumptions across models. This is a relatively time-consuming activity requiring good planning of the timeline to ensure the technical calibration process is efficient (implementing the lessons learnt above). In this way, sufficient time can be dedicated to discussing the implications of the policy interventions in terms of their ambition levels and CBA estimations.
- **Complementary analysis** – Although the GEM is holistic and a suitable model for simulating economy-wide implications of decarbonization and climate change impacts, there are aspects that it does not include in detail. For instance, a country's current account is covered only marginally. To address this shortcoming, the GEM-based CBA can be complemented by an analysis of the LT-LEDS policy interventions on the countries' trade balance. In both Ethiopia and Burkina Faso, LT-LEDS policy interventions resulted in positive impacts on the trade balance (and balance of payments), given the resulted reduction of imports of petroleum and chemical fertilizers. In future LT-LEDS activities, additional analytical work, for example, on the economic implications of green tax, fossil fuel subsidies removal, or public investment can be conducted or emphasized with more granularity depending on the respective governments' needs.

Table 2. Summary of lessons learned from macroeconomic analysis for future LT-LEDS projects

Information sharing	Alignment of workstreams	Facilitate enhanced policy debate	Complementary analysis based on needs
› Flow of information between sectoral and macroeconomic workstreams › Clear definition of mutual expectations	› Communicating details about policy variables in GEM › Shaping the working group discussions	› Efficient model calibration process › Proper time allocation for policy discussion	› Complementary analysis on selected issues (e.g., trade balance/ balance of payments)

4.3 Incorporating Mitigation, Adaptation, and Sustainable Development Priorities

In the development of the LT-LEDS for Ethiopia and Burkina Faso, the main focus was on climate mitigation, as it serves as a pivotal pathway to curtail GHG emissions. The working groups collectively defined specific mitigation actions and set relevant targets, which were subsequently modeled using sector-specific tools like the LEAP for the energy sector and EX-ACT for the AFOLU sector. The modeling exercise aimed to estimate the potential impacts of the various mitigation actions on reducing emissions, exemplifying a widely adopted practice in the formulation of the LT-LEDS.

A crucial aspect of these LT-LEDS initiatives involved the integration of climate data into the modeling process. Historical data, including spatially disaggregated precipitation and temperature data, were utilized to identify past climate change impacts on sectoral outcomes, serving as a foundation for projecting future impacts within the models. Projections based on several Representative Concentration Pathways (RCP) scenarios were incorporated, ensuring that all proposed projections within the LT-LEDS, such as agricultural production and GDP growth, accounted for the potential effects of climate change. Notably, these projections revealed critical insights, indicating that in the absence of climate adaptation actions, agriculture production would decrease by 10% in Ethiopia and 13% in Burkina Faso, leading to a significant 1.6% and 2.7% reduction in GDP by 2050, respectively.

The incorporation of these climate data-driven insights into the LT-LEDS not only enhanced the accuracy and reliability of future projections, but also emphasized the imperative need for integrating climate adaptation measures alongside mitigation strategies. By recognizing the profound impact of climate change on key economic sectors, such as agriculture and energy, and its cascading effect on overall national economies, the LT-LEDS for Ethiopia and Burkina Faso underscore the significance of adopting a comprehensive and integrated approach that addresses both mitigation and adaptation in tandem, ensuring a sustainable and resilient developmental trajectory for the countries.

An assessment of the synergies and co-benefits of mitigation and adaptation measures under the LT-LEDS provided important insights into the intricate interplay between these two important components of climate action. The analysis highlighted the potential risks associated with inappropriate actions and underscored the increased vulnerability to negative climate-related impacts that could result from poorly coordinated or misaligned strategies. By proactively considering the context, it became clear that synergies between mitigation and adaptation can be significantly increased while minimizing potential trade-offs. This comprehensive approach enabled the identification of adaptation co-benefits associated with different mitigation actions and underlined the importance of integrating this valuable information into the prioritization process. By highlighting co-benefits, such as adaptation co-benefits, the LT-LEDS in Ethiopia and Burkina Faso can leverage different sources of funding, maximizing the prospects for successful implementation of these measures, and promoting a resilient and sustainable pathway in both countries. The assessment of SDG co-benefits complemented the co-benefits of mitigation and adaptation measures. The assumptions and policy interventions, were aligned across the different modeling tools utilized to ensure consistency of SDG co-benefits with the impacts on climate mitigation and adaptation actions. The SDG co-benefits assessments in Burkina Faso and Ethiopia highlighted that the gain in achieving SDG targets in some indicators could result in a reduction in performance in another indicator, underscoring the need to evaluate synergies and trade-offs of policy measures across sectors.

Ensuring seamless alignment and adjustment, when necessary, between the LT-LEDS, NDC, and other key development strategies in each country was a cornerstone of the process. In Ethiopia, full alignment was achieved through careful synchronization of data, assumptions, and targets from the enhanced NDC and the 10-year national development plan. Remarkably, identical tools were used to create LT-LEDS scenarios, which promoted a coherent and harmonized approach across different strategic frameworks.

In Burkina Faso, the involvement of local stakeholders, who were instrumental in the design of the NDC and the national adaptation plan (NAP), as active members of the LT-LEDS working groups enabled the seamless integration of their valuable knowledge and experience into the LT-LEDS development process. In addition, the integration of climate data from the Third National Communication played a crucial role in ensuring comparability and consistency of all analytical efforts.

Recognizing the dynamic nature of development plans, conscious efforts were made to improve and refine the process wherever possible. In Ethiopia the LT-LEDS used the latest data and improved methodologies (e.g. in the forestry sector) to complement the results and scenarios of the extended NDC. This proactive approach to continuous improvement underscores the commitment to adaptability and responsiveness within the overarching development framework.

Several valuable lessons have emerged from the development of LT-LEDS for Ethiopia and Burkina Faso that underscore the critical importance of a holistic and integrated approach to climate change mitigation, adaptation, and sustainable development. The development of LT-LEDS requires a nuanced understanding of the linkages between different objectives of the national process, and climate mitigation and adaptation measures. This requires a balanced and context-specific approach that takes into account the unique challenges and opportunities of each country. Coordination of the LT-LEDS with national development planning is imperative, and underscores the importance of integrating climate considerations into broader development planning and policy-making processes to achieve a harmonized and inclusive approach to sustainable development. Similarly, vertical integration is key for a wider acceptance and successful implementation of the LT-LEDS at the sub-national level, as was illustrated in Ethiopia by the active engagement of representatives from all Ethiopian regional states.

Table 3. The benefits of adopting a holistic and integrated approach that incorporates climate change mitigation, adaptation, and sustainable development

Align data and assumptions with other national processes (NDC, NAP, development plans)	Incorporate climate projections into scenario development	Assess synergies and co-benefits of mitigation and adaptation actions	Include diverse stakeholders and promote cross-sectoral collaboration
› Ensures consistency and efficient use of resources based on stakeholders' mandates › Mainstreams climate change into development plans	› Enables the CBA of climate adaptation actions › Creates robust and realistic scenarios to facilitate better planning	› Allows for the identification of unintended outcomes that can be mitigated › Increases the chances of mobilizing multiple funding sources for implementation	› Fosters ownership among all relevant stakeholders and builds consensus › Maximizes the chances of effective implementation of climate actions

4.4 Ensuring Multi-stakeholder Participation and Gender and Social Inclusion

The LT-LEDS pathways propose changes to the economic development of Ethiopia and Burkina Faso, which will have significant social outcomes. This includes changes to the labor market as some sectors will shrink, while sustainable and green sectors will expand and create new employment and entrepreneurship opportunities. Furthermore, the LT-LEDS pathways intend to expand access to food and energy security, as well other sustainable services. The principles of "leaving no one behind" is firmly rooted in just transitions, and the LT-LEDS development process in Ethiopia and Burkina Faso were designed to ensure both cross-sector and multi-stakeholder participation, including both men and women.

The estimated socio-economic benefits from LT-LEDS implementation will not be distributed equally among men and women, different age groups and different socio-economic groups. This is why the LT-LEDS development process includes a gender-differentiated analysis to understand the positioning of men and women in the sectors and the barriers they face in accessing the socio-economic benefits, particularly for women and youth. In Ethiopia and Burkina Faso, stakeholders chose to focus on the economic impacts of the LT-LEDS on men and women, and their access to green jobs and entrepreneurship opportunities.

The process of incorporating gender and social inclusion in LT-LEDS development in Ethiopia and Burkina Faso involved the following four steps:

1. **Mapping of gender governance infrastructure and gender assessments.** The stakeholder assessments in the two countries identified the stakeholders that can bring women and youth perspectives into the LT-LEDS development process. Particularly in Burkina Faso, GGGI had already established collaborations with gender focal points in climate-related ministries who had previously been engaged in the NDC revision process. The focal points formed a gender technical group. Workshops were held to conduct rapid assessments of risks and opportunities across the low-emission measures proposed with a focus on gender and social inclusion. Detailed gender assessments in relevant sectors were available, such as the situational analysis for the NAPs. In the absence of such assessments, the process would start with conducting detailed gender and social assessments.

2. **Calculation of employment impacts.** While the GEM model estimated the number of green jobs created through potential LT-LEDS implementation, the lack of gender-specific data at sub-sector level required further analysis of the potential of men and women in the different sectors, in order to understand the positioning of men and women in accessing green jobs. Analytical work was conducted in Burkina Faso, with support from UN Women, making use of available employment data. This helped understand the distribution of jobs in the various sectors in the BAU scenario.

3. **Qualitative analysis of gender impacts.** To understand how jobs are distributed between men and women in different sectors, a qualitative analysis was conducted in both Ethiopia and Burkina Faso. The analysis included consultation with stakeholders and a review of available sector assessments to understand potential negative impacts and mitigating actions associated with the proposed measures of the LT-LEDS. In-depth discussions were held on the challenges and opportunities for women and youth's access to jobs in climate-related sectors. In Burkina Faso, a stakeholders' workshop was co-organized with UN Women to engage the stakeholders on the qualitative analysis in a structured way.

4. **LT-LEDS governance and financing analysis and recommendations.** In the process of integrating the identified gender and social assessments and recommended actions into the LT-LEDS, further discussions were held with key stakeholders on how to build gender and social inclusion into the governance structure of the LT-LEDS. This included the identification of key policy alignments and agencies with gender and social mandates to include in the governance structure of the LT-LEDS, and indicators to be integrated into the LT-LEDS monitoring and evaluation mechanisms. Consequently, the LT-LEDS in Ethiopia and Burkina Faso call for the implementation of a program for women and youth's access to green jobs, and the linking of the LT-LEDS implementation to gender-responsive climate budgeting to ensure the financing of specific gender-related actions in the implementation of the LT-LEDS.

The LT-LEDS development in Ethiopia and Burkina Faso stressed the importance of integrating gender, diversity, and social inclusion dimensions in the LT-LEDS development process from the outset. This should start with the mapping of social and gender infrastructure in government and an understanding of the social context. If relevant gender-differentiated assessments are not available, the process should include this assessment.

The lack of gender-disaggregated data at sector, sub-sector, and occupation type levels is a common challenge to the macroeconomic and employment assessment processes. This data is essential to the understanding of how LT-LEDS implementation will produce and distribute benefits. Participatory, qualitative analytical process will help understand the opportunities and risks, and the articulation of actions that can ensure more inclusive outcomes in terms of employment, macroeconomic impacts such as GDP growth, income gap, gender and age employment gaps, and other social dimensions that enable specific groups' access to the benefits of green transitions. This is fundamentally linked to achieving just transitions.

Further research is required to understand the barriers and opportunities facing men and women, youth and marginalized groups in green transitions. It has been particularly challenging to capture the impacts of the green transitions through LT-LEDS implementation on the informal sector, which often in developing countries constitute the majority of jobs. The risk is that these data gaps, if not closed or proactively addressed through alternative, qualitive methodologies in the formulation of instruments such as the LT-LEDS, will lead to inadequate attention to women, youth, and informal sector actors in transitions to low-carbon, resilient economies.

4.5 Catalyzing Climate Action Implementation through Finance Planning

The LT-LEDS finance plan for both Ethiopia and Burkina Faso achieved four objectives. First, it assessed the direct investment requirements for achieving net zero by mid-century under different scenarios. Second, it provided long-term financing options by assessing the role of innovative financing mechanisms, such as carbon pricing. Third, it identified medium- to long-term opportunities for a more strategic deployment of public financial resources, for adaptation and mitigation measures, that can scale up private finance. Finally, and potentially the most important objective, it helped develop a financial ecosystem conducive to the achievement of net-zero targets. Through the accomplishment of the four objectives above, the LT-LEDS finance plan provided a data-driven blueprint for financing, and consequently, operationalizing the transition to a low-emission pathway and reaching net-zero emissions by mid-century.

The development of the LT-LEDS finance plan for both countries was a participatory exercise, structured in four stages and two cross-cutting activities. The four stages involved:

1. Estimating the investment requirements for both mitigation and adaptation actions, per scenario, by utilizing primary data from the LT-LEDS modeling exercise. This stage also assessed the alignment with and complementarity to existing climate finance policies and strategies of the country, such as the NDC and NAP financing strategies

2. Estimating the financing gap, considering the historical and projected climate finance flows, as well as the current and potential changes to the country's financing ecosystem that may affect financial flows.

3. Stocktaking the current and potential financing barriers, financing sources, and instruments per sector and technology. This stage paid particular attention to assessing innovative financing mechanisms, as well as to identifying opportunities for a more strategic deployment of public financial resources that can scale up private finance.

4. Aligning climate finance tools and instruments to specific prioritized sectors.

The cross-cutting activities comprised of stakeholder engagement activities and the development of actionable recommendations, including the proposal of immediate next steps. The process involved continuous consultation with relevant stakeholders through virtual and on-site meetings, and the validation of all the data utilized, statements, and potential actions proposed in the LT-LEDS with government stakeholders from the corresponding ministries of finance and planning.

In Ethiopia and Burkina Faso, an inception meeting kicked-off the stakeholder engagement process, and it was closed with a final recommendations meeting at the end of the LT-LEDS finance plan development process. At the same time, informal engagements with stakeholders, including green finance practitioners from the private and international development sectors, were regularly organized.

Despite both countries following the same development process, differences in specific tasks occurred due to the quantity and quality of information available, the country's financing ecosystem, the country's capacity to implement the finance plan, and the level of engagement with stakeholders. Multiple lessons learned can be applied to other developing countries, as follows:

Lessons learned from the four stages of finance planning

Stage 1 – Estimating the investment requirements

- **Build upon existing NDC and NAP costing exercises in the countries,** when possible, by considering the same specific objectives and principles. For example, in Ethiopia, the estimated cost of implementing the NAP and NDC was considered as a baseline (i.e., US$6 billion per year over the next 15 years and US$40 billion per year over the next 8 years, respectively). Moreover, the proposed financing levers were re-assessed. As a result, all three strategy documents – the LT-LED, NDC, and NAP finance plans in Ethiopia – aim to enhance the mobilization of domestic financial resources from the public and private sectors in a sustainable manner that will not negatively impede national economic growth and negatively affect livelihoods. The three strategy documents also aim to mobilize additional finance from international funding sources, such as multilateral and bilateral organizations, and development partners, to close existing financing gaps, as well as implement innovative financing instruments and raise revenue domestically through them (e.g., thematic bonds, payments for ecosystem services, and carbon market instruments). In the absence of previous costing exercises, such as in Burkina Faso, studies on the landscape of sustainable finance developed by international organizations could be considered as a baseline.

Stage 2 – Estimating the financing gap

- **Validate public information on climate finance flows with government stakeholders.** For example, the financing gap assessment for both Ethiopia and Burkina Faso relied heavily on the financial flow dataset of the Organisation for Economic Co-operation and Development (OECD) and on independent research publications on financial flows. However, these sources have limitations on the accuracy of private sector flows, which may lead to an overestimation of the financing gap. Therefore, it is important to cross-check with government datasets, when possible.

Stage 3 – Stocktaking the current and potential financing barriers, financing sources, and instruments

- **Keep a long-term vision and account for future changes in the financing ecosystem.** For example, Burkina Faso's LT-LEDS finance plan considered a potential increase in the government's capacity to identify and develop climate-related bankable projects in coordination with the private sector, as well as the

implementation of new regulations such as a financial taxonomy or environmental, social, and governance (ESG) transparency requirements, that may help increase climate finance flows.

- **Prioritize the assessment of innovative financial mechanisms** that the country has already expressed interest in or has explicitly stated as future actions in other climate finance strategies. For example, Ethiopia's LT-LEDS finance plan provided an assessment of the barriers, potential advantages, and requirements for developing domestic carbon pricing instruments and allowing carbon offsets through Article 6 cooperation.

Stage 4 – Aligning financial tools and instruments to specific prioritized sectors

- **Assess both the barriers and successes of financing instruments** currently being used or planned to be used on the country's pipeline of bankable climate projects and/or the Green Climate Fund country planning framework. Assessing the effectiveness of ongoing climate finance measures and instruments will ease the alignment of instruments to specific sectors.

Lessons learned from stakeholder engagement:

- Engage stakeholders along all the stages of the development process to ensure ownership. Avoid just performing validation meetings at the end.
- Pay particular attention to engaging the private sector and new stakeholders, such as digital platforms for crowdfunding and crowdlending, insurance companies, pension funds, and small banks that direct their efforts at small and medium-sized enterprises, which are often overlooked, despite their importance in leveraging finance.
- Strengthen communication and overall interaction between government stakeholders, e.g., MoPD, Ministry of Finance, and Ministry of Environment, to facilitate the development of future financing proposals for specific projects.
- Develop stakeholders' capacity to update the LT-LEDS financing estimates and the different scenarios.

Lessons learned from providing actionable long-term recommendations:

- Focus on recommendations that strengthen the country's future capacity to implement innovative financing mechanisms. For example, recommendations for improving the current regulations.
- Provide actionable and targeted steps to mobilize additional financial assistance from international funding sources, such as multilateral and bilateral organizations, and development partners, particularly in the context of developing countries.
- Follow-up on the adoption of the financing strategy and its continued improvement.

Coffee Seedling, Kochere District, South Ethiopia

5. Conclusions

This insight brief presents the key lessons learned from the LT-LEDS development process in Ethiopia and Burkina Faso to help fast-track the development and update of LT-LEDS in LDCs and developing countries, and ensure that the LT-LEDS is country-owned, robust, inclusive, and implementable. The lessons learned are focused on the following five aspects of the LT-LEDS development process: (i) ensuring ownership and institutional enhancement; (ii) building an iterative process of pathways development; (iii) incorporating mitigation, adaptation, and sustainable development priorities; (iv) ensuring multi-stakeholder participation and gender and social inclusion; and (v) catalyzing climate action implementation through finance planning.

Given the complex and multi-sectoral nature of the LT-LEDS, multi-sector and multi-stakeholder participation and partnerships are critical, particularly in fostering ownership of the LT-LEDS and maximizing opportunities for capacity building. Multi-sector and multi-stakeholder participation and partnerships also help to ensure policy harmonization and alignment across sectors, promote synergies, and minimize trade-offs. The mobilization of committed and capable national resource persons and government champions in various national institutions and departments is a critical success factor for LT-LEDS development, and investment in capacity building is crucial for empowering national stakeholders to actively use LT-LEDS as a planning tool.

The establishment of LT-LEDS steering committees, as well as sectoral and cross-sectoral technical working groups, and the frequent interactions and exchanges between them are important for enhancing ownership of the LT-LEDS process, and harmonizing the tools, models, and datasets used for the development and analysis of scenarios. Where possible, leveraging existing governance and institutional structures for LT-LEDS development is recommended. It includes building on existing capacities, models, tools, and experiences within the country, and focusing on aligning the sectoral workstreams with economy-wide analyses. This could be achieved by promoting information sharing between different workstreams or working groups, ensuring methodological alignment, facilitating enhanced policy debate, and identifying complementary analysis based on needs.

The experience of developing the LT-LEDS in Ethiopia and Burkina Faso underscored the need to adopt a holistic and integrated approach to LT-LEDS development that encompasses climate mitigation and adaptation, and sustainable socio-economic development. This involves ensuring seamless alignment and adjustment, when necessary, between the LT-LEDS, NDC, and other key development strategies. Good practices include aligning LT-LEDS data and assumptions with other national processes (e.g., NDC, NAP, national development plans), incorporating climate projections into scenario development, assessing synergies and co-benefits of mitigation and adaptation actions, and engaging diverse stakeholders and promoting cross-sectoral collaboration.

The incorporation of gender, diversity, and social inclusion dimensions in the LT-LEDS development process is critical. This could start with a gender-differentiated analysis and the mapping of social and gender infrastructure in government to understand the positioning of men and women in the relevant sectors and the barriers they face in accessing socio-economic benefits. Other good practices include the calculation of gender-disaggregated employment impacts, qualitative analysis of gender impacts, and the integration of gender and social inclusion into the governance structure of the LT-LEDS, to ensure more inclusive LT-LEDS outcomes.

The LT-LEDS finance plan provides a data-driven blueprint for financing, and consequently, operationalizing the transition to a low-emission pathway and reaching net-zero emissions by mid-century. The development of the LT-LEDS finance plan is a participatory exercise and involves estimating the investment requirements and financing gaps. Good practices include building upon existing NDC and NAP costing exercises, when possible, by considering the same specific objectives and principles, and validating public information on climate finance flows with government stakeholders. The development of the LT-LEDS finance plan also involves stocktaking of current and potential financing barriers, financing sources, and instruments, and aligning financial tools and instruments to specific prioritized sectors. Good practices include keeping a long-term vision and account for future changes in the financing ecosystem, prioritizing the assessment of innovative financial mechanisms, and assessing both the barriers and successes of existing and planned financing instruments.

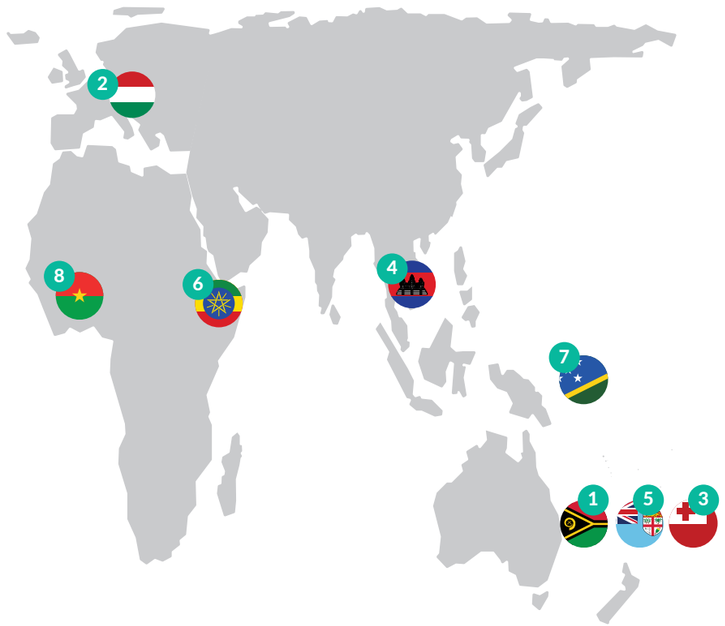
GGGI hopes that this insight brief will help LDCs and developing countries embark on a low-carbon and climate-resilient pathway toward transformative climate action, and accelerate the LT-LEDS development process.

6. Annexes

Annex I: Map of Countries that GGGI has Supported to Develop LT-LEDS

LT-LEDS supported and submitted to the UNFCCC

1. Fiji LT-LEDS: Submitted in 2018
2. Hungary LTS: Submitted in 2021
3. Tonga LT-LEDS: Submitted in 2021
4. Cambodia LT-LEDS: Submitted in 2021
5. Vanuatu LT-LEDS: Submitted in 2022
6. Ethiopia LT-LEDS: Submitted in 2023
7. Solomon Islands LT-LEDS: Submitted in 2023
8. Burkina Faso LT-LEDS: Under approval process



Annex II: Targets of Burkina Faso and Ethiopia LT-LEDS under different scenarios

		Burkina Faso			Ethiopia		
LT-LEDS scenarios		High ambition	Moderate ambition	Late action	Maximum ambition	NDC-aligned	Late action
Emission targets in Mt per year (change relative to BAU in brackets)	2030	51.08 (-42.7%)	52.12 (-41.6%)	73.03 (-18.1%)	26.00 (-93.3%)	119.86 (-69.0%)	196.42 (-49.2%)
	2050	-6.93 (-106.8%)	-3.01 (-102.9%)	-0.12 (-100.1%)	-0.86 (-100.2%)	-0.52 (-100.1%)	-0.79 (-100.1%)
Selected key interventions							
Annual deforestation	2030	Reducing deforestation by 33%			Reducing deforestation by 25%		
	2050	Reducing deforestation by 66%			Reducing deforestation by 50%		
Afforestation and restoration	2050	2.03 million ha/year	2.03 million ha/year	1.11 million ha/year	0.94 million ha/year	0.81 million ha/year	0.81 million ha/year
Share of renewable energy in total	2030	33%	33%	33%	86%	86%	86%
	2050	75%	75%	75%	100%	100%	100%
Sustainable agriculture area	2050	100%	100%	50%	25%	25%	25%
Solid waste collected	2050	85%	70%	65%	90%	90%	90%

GGGI Team and IPs visiting nursery site, South Ethiopia

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