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Final NDC Financing Strategy and Investment Plan

Technical Report

Georgia

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Table of content

List of Tables

List of Figures

Exchange Rate

All financial figures are provided in Georgian Lari (GEL). In instances when data was obtained in foreign currencies, these were converted to GEL according to the National Bank of Georgia's 2021 yearly average exchange rate of 3.8153 EUR/GEL and 3.2216 USD/GEL.[1]

[1] https://nbg.gov.ge/en/statistics/statistics-data

Abbreviations

ADA	Austrian Development Agency
ADB	Asian Development Bank
AF	Adaptation Fund
AFD	French Development Agency
BDD	Basic Data and Directions Document
BMU	Federal Ministry of the Environment, Nature Conservation and Nuclear Safety of Germany
BMZ	Federal Ministry of Economic Cooperation and Development of Germany
BSTDB	Black Sea Trade and Development Bank
CBT	Climate Budget Tagging
CBIT	Capacity-Building Initiative for Transparency
CCBA	Climate Change Benefit Analysis
CCC	Climate Change Council
CCIA	Climate Change Impact Appraisal
CCSA	Climate Change Screening and Appraisal
CDM	Clean Development Mechanisms
CEB	Council of Europe Development Bank
COP	Conference of the Parties
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalents
C-PIMA	Climate-Public Investment Management Assessment
CSA	Climate- Smart Agriculture
CSO	Civil Society Organisation
CzechAid	Czech Development Agency
DAC	Development Assistance Committee
DCFTA	Deep and Comprehensive Free Trade Area
eAIMS	electronic Aid Information Management System
EBRD	European Bank for Reconstruction and Development
EFSD	European Fund for Sustainable Development
EIB	European Investment Bank
EU	European Union
E5P	Eastern Europe Energy Efficiency and Environment Partnership Fund
FAO	Food and Agriculture Organization
FMO	Dutch Entrepreneurial Development Bank
GCF	Green Climate Fund
GCPF	Global Climate Partnership Fund
GDP	Gross Domestic Product
GEDP	Georgian Energy Development Fund
GEF	Global Environment Facility
GEL	Georgian Lari
GeoStat	National Statistics Office of Georgia
Gg	Gigagram
GGF	Green for Growth Fund

GHG	Greenhouse Gas
GIZ	German Society for International Cooperation
GNI	Gross National Income
GOGC	Georgian Oil and Gas Corporation
GRB	Gender-Responsive Budgeting
GRDF	Georgia Regional Development Fund
ha	Hectare
HP	Hydropower
IBRD	International Bank for Reconstruction and Development
ICSID	International Centre for Settlement of Investment Disputes
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFU	Investment Fund for Developing Countries
IKI	Germany's International Climate Initiative
IMF	International Monetary Fund
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
KfW	German Reconstruction Credit Bank
KPI	Key Performance Indicator
kt	kiloton
LDC	Least Developed Country
LDCF	Least Developed Countries Fund
LULUCF	Land Use, Land Use Change and Forestry
L-SLM	Landscape and Sustainable Land Management
MCG	Millennium Challenge Georgia
MDF	Municipal Development Fund
MEPA	Ministry of Environmental Protection and Agriculture
MFA	Finland´s Ministry for Foreign Affairs
MIGA	Multilateral Investment Guarantee Agency
MPLs	Maximum Permissible Limits
MoF	Ministry of Finance
MRV	Monitoring, Reporting, and Verification
MTBF	Medium-term Budgetary Framework
MTEF	Medium-Term Expenditure Framework
MTPF	Medium-Term Performance Framework
MW	Mega-watt
mWAE	multifunctional Windbreak & Agroforestry Ecosystem
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NCCF	National Climate Change Fund
NDC	Nationally Determined Contribution
NEFCO	Nordic Environment Finance Corporation
NIB	Nordic Investment Bank
NIS	Newly Independent States
NORAD	Norwegian Agency for Development Cooperation
N_2O	Nitrous oxide

ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
OOF	Other Official Flows
PCCB	Paris Committee on Capacity Building
PFM	Public Finance Management
PPA	Power Purchase Agreement
PPP	Public-Private Partnership
REDD	Reducing Emissions from Deforestation and Forest Degradation
SCA	Special Conservation Areas
SCCF	Special Climate Change Fund
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
SEAF	Small Enterprise Assistance Funds
SMEs	Small and Medium sized Enterprises
SIDA	Swedish International Development Agency
SP	Solar Power
SUMP	Sustainable Urban Mobility Plan
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Programme
USAID	United States Agency for International Development
USD	United States Dollar
USDA	United States Department of Agriculture
WG	Working Group
WMO	World Meteorological Organization
WP	Wind Power
WPP	Wind Power Plants
WWF	World Wildlife Fund

Summary for Policymakers

As a signatory to the Paris Agreement under the United Nations Convention on Climate Change (UNFCCC), Georgia commits to continuous efforts to implement climate change actions. As part of these international obligations for climate action, Georgia updated its Nationally Determined Contributions (NDC) in 2021. The NDC comprises a range of mitigation and adaptation actions Georgia pledges to fulfil unconditionally, as well as it incorporates actions conditional upon international support. Key to the fulfilment of the mitigation targets is thus an appropriate financing framework. To that end, guidelines and strategies are developed aimed at identifying and resolving gaps and barriers hindering effective climate financing.

Georgia's NDC Financing Strategy and Investment Plan is structured along six principal components. First, the Climate finance framework in Georgia is elicited, followed second by the identification of barriers hampering adequate climate financing. Third, guidelines for resource mobilization are presented, involving the strengthening of national capacities, assessment of the climate finance needs and identification of potential funding sources. Fourth, an approach is presented to increase the prioritisation and mainstreaming of climate change relevant budget programmes during budget formulation. Fifth, the strategy and investment plan setting out the programmes of investments required to implement each of the priority actions in the updated NDC is provided, and finally the implementation roadmap is presented to ensure the sustainable implementation of the NDC Financing Strategy and Investment Plan.

Climate Finance Framework in Georgia

As climate finance is fundamental for Georgia´s climate change actions, the financing landscape and current framework conditions on climate financing are scrutinized. This entails developing an accurate estimate of financial needs for both mitigation and adaptation vis a vis the commitments of the country´s NDC.

Georgia has received 5.17 billion Georgian Lari (GEL) between 2010 and 2019 in bilateral climate finance of which Germany contributed more than half (2.98 billion GEL). Other major contributors amongst others are the European Commission, France, the United States, Switzerland, Austria, and Sweden. The main target sectors for the climate change support are energy infrastructure projects (45%), water resources (17%), rural development (12%) and agriculture (7%). Regarding the financial instruments, the major part with 93% of projects between 2010 and 2019 were covered by grants, while 6% were supported by concessional loans and about 1% by equity investments.

Multilateral financing contributed 2.19 billion GEL in the 2010-2019 period. In terms of project size, the biggest projects are those under the Green Climate Fund (GCF) (56%), followed by the Global Environmental Facility (GEF) (16%), the Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P) (13%) and the European Fund for Sustainable Development (EFSD) (13%), with the remaining 2% distributed by the

Adaptation Fund (AF) and Green for Growth Fund (GGF). Of these projects, most funding went towards the forestry sector and the energy sector, yet other sectors such as transport, business development and urban infrastructure among others have also received substantial funding.

International financial institutions such as for instance the European Investment Bank (EIB), the European bank for Reconstruction and Development (EBRD), the Asian Development Bank (ADB), the International Bank for Reconstruction and Development (IBRD) or the World Bank Group, among others, have contributed 28.35 billion GEL from 2010-2022. Concerning the types of financial instruments, over 97% of funding committed towards climate-related projects between 2010 and 2022 takes the form of loans, with the remaining 3% corresponding to guarantees, equity and technical assistance.

Domestic funding is mostly realized through the state budget, also involving local and the autonomous republics' budgets, and coordinated by the Ministry of Finance. Georgia´s state budget sets out a concrete plan for how the government will seek funding, as well as the type and quantity of resources that will be mobilized to meet its commitments. Climate change is not included as an explicit priority or line of action within Georgia´s current state budget, with priority areas 10 agriculture and 12 environment protection and management of natural resources involving the most notable links to climate change. However, as of 2022, there is therefore no specific disaggregation on climate change budget formulation, and no information is available on the specific climate change expenditures.

Private investments play a crucial role for climate financing. Indeed, private capital stocks are growing much faster than national stocks and clearly surpass them in volume. However, as there is currently no centralised system in place in Georgia for identifying non-Official Development Assistance (non-ODA) projects in the country, the share of such private investment into climate change initiatives is not easily quantifiable.

However, trends indicate a progressively more favourable market for private investments, providing an excellent opportunity for leveraging private finance towards climate action investment in Georgia. To realize and further enhance such potential however, several barriers regarding financing climate change action need to be overcome.

Barriers to Financing Climate Change Actions

- **Lack of coherent national climate change policy framework to mobilise finance for climate action:** Georgia does not consistently include climate change as a distinct policy area in its policy documents. To that end, climate change should be integrated into the national policy framework through an overarching strategy defining the country's direction it envisions to follow, and against which shorter-term documents containing the specific actions can be linked.
- **Inconsistent stocktaking of investment needs for climate action:** Accurate stocktaking of the financial investment needed to achieve Georgia´s mitigation and adaptation targets is a major enabler for mainstreaming climate change in the state budget. Precise figures for cost estimates of the strategies remain scarce, especially

for the adaptation counterpart. Thus, for future policy it is important to include specific and justified financial requirements for climate action that can subsequently be linked to budget programmes.

- **Lack of private sector investments:** Limited availability of low-cost, long-term capital in the Georgian private sector continues to be a mayor barrier to promote investments in climate-related projects. Private finance mechanisms in Georgia for climate change mitigation and adaptation projects typically require high up-front capital costs, long payback periods and a high reliance on government incentives. According to the Organisation for Economic Co-operation and Development (OECD) several private finance mechanisms in Georgia, such as corporate bonds, project bonds, direct lending from microfinance institutions, fund seeding and more, are already available but remain unused.
- **Decreasing revenues, increasing expenditure and a growing public debt:** At a national level, decreasing revenue growth, increasing expenditure and a growing public debt present severe financial constraints and limit state expenditure in climate related activities. In 2021, revenue recovered to 12.8 billion GEL, yet expenditures reached 14.2 billion GEL, presenting a net operating balance of -1.4 billion gel. These severe financial constraints are also reflected in Georgia's growing debt, with the country's public debt to gross domestic product (GDP) at 52% in 2021 and government dept to GDP at 54% in that year.
- **High dependence on foreign financing:** While Georgia´s high dependence on foreign financing since 1991 was drastically spurred by the August 2008 war, it has not decreased sufficiently since and yearly official development assistance (ODA) figures remain high at 2.89% of the gross national income (GNI) in 2019. This adds a risk of being too heavily reliable on unpredictable aid and donor-driven aid programmes.
- **Currency depreciation:** The national currency in Georgia, the GEL, has depreciated in recent years, further accelerated by the Covid-19 pandemic. Whereas in 2010, the official rate was 1.78 GEL to 1 USD, this has fallen to 3.22 GEL to 1 United States dollar (USD) in 2021. Moreover, the high degree of dollarisation creates a jeopardizing dynamic as with the GEL depreciating, the foreign debt burden increases in direct proportion with the depreciation, with debtors not being able to pay off the loans in USD as their income is in GEL. Georgia´s vulnerability to exchange rate risk negatively affects the country's macroeconomic environment and hinders the inflow of international investments.
- **Lack of climate finance tracking:** The lack of mechanisms for climate change reporting means that as of 2022 there is no specific disaggregation on climate change budget formulation, and no information is available on the specific climate change expenditures. This results in significant limitations pertaining to the extent and quality of information concerning climate finance presented by the country, both at the national and international levels. Thus, Georgia should further develop the system for calculating climate related expenditure to accurately determine the finance flows mobilised in the country through national expenditure as well as international support.

Guidelines for Resource Mobilisation

Overcoming these barriers is not an easy task and substantial efforts in resource mobilisation are needed. Resource mobilisation is essential for countries to successfully implement and deliver climate change actions and programmes. The three main building blocks of the guidelines for resource mobilisation are ensuring national institutional capacity, assessing the climate change financial needs, and identifying climate change funding sources. Each step contains several actions that Georgia should follow to ensure adequate resource mobilisation.

Ensuring national institutional capacity means that institutions seeking to secure funding have capacities to identify and engage most suitable partners. The core functions of institutions involved in securing financing for climate change thus are creating frameworks for fund flows, identifying the contribution of various stakeholders respectively and enhancing public engagement as well as reporting. This can be achieved by firstly defining the institutional needs, and subsequently evaluating the institutional capacities and identify the necessary areas to strengthen according to the defined institutional needs.

Accurate information of climate finance flows will allow Georgia to make more informed decisions about planning, prioritization, and allocation of resources for climate change, and to measure and evaluate progress. Each institution is required to communicate their financial needs for priority actions and the posing gaps that require further funding, including costs associated with research, monitoring, capacity building, and increased/changed regular expenditure. The financial needs should be linked to the relevant climate change area defined in the country's updated NDC.

The country will require to conduct a financial landscaping exercise to select the type of investor that best matches the actions in its NDC, shortlist and engage those candidates that strongly align with the vision and objectives of the activity and with the funding criteria.

Prioritising and Mainstreaming Climate Change Budget Programmes

To further enhance climate financing action, countries have moved to include and prioritise climate change in their budget programs, thereby maximising the impact of public finance management. It is essential for Georgia to increase its efforts to integrate climate change as early as during pre-budget preparations to deliver certainty and predictability to ministries, departments, and agencies regarding their climate expenditure planning, and support them to streamline climate change policy integration into their budget submissions. To that end, the recently established Climate Change Council (CCC) should ensure that each ministry within the Council sets clear policy targets for climate change relevant initiatives. During medium-term and annual budget preparation, spending institutions must actively participate to ensure that the expenditure policy proposals are aligned with the policy objectives set out in approved and costed strategic plans. Coordination and higher-level

support should be provided by the Ministry of Finance, supported by the CCC through guidelines and capacity building.

To increase accountability and visibility at a national scale, Georgia could integrate climate change into Parliamentary budget hearings. Next to climate change prioritisation, budgeting needs to incorporate gender-responsive budgeting (GRB) processes. As of 2022, the budgetary framework of Georgia does not envisage any specific methodology/requirements for the analysis regarding gender budgeting and it does not include a direct obligation of applying GRB procedures. By 2023 it will provide, though not directly a gender-climate tag, an indication of a potential link between gender and climate change when programs are tagged for both.

Strategy and Investment Plan

The strategy and investment plan sets out the programme of investments required to implement each of the priority actions in the updated NDC, both unconditional and conditional, and the strategy for meeting these financing needs. It identifies the required costs of the priority mitigation and adaptation actions of Georgia's updated NDC, assesses the funding status of these actions, and provides funding options needed to address each funding gap.

Regarding mitigation, approximately 13 billion GEL, split between 8 billion GEL for reaching Georgia´s unconditional NDC targets and 5 billion GEL for the conditional NDC targets, are required to fulfil the obligations under the NDC. Concerning adaptation, the first NDC from 2017 reports financial need between 4.8-6.4 billion GEL. However, the updated NDC from 2021 sets more ambitious targets for both mitigation and adaptation, suggesting the approximate need of financing might in fact be much higher, which in turn underlines the importance of creating an adequate financial strategy for Georgia.

Total estimates of the funding gaps are 208 million GEL for unconditional mitigation activities and an additional 5 billion GEL for the conditional mitigation actions. For adaptation the gap is between 4.8 – 6.4 billion GEL, yet this figure was developed based on expert judgement, with no explanation or reference of the calculation methodology applied. Reflecting these initial estimates, the strategy and investment plan distinguishes in its analysis of funding gaps per priority mitigation action between unconditional and conditional action as well as between sectors.

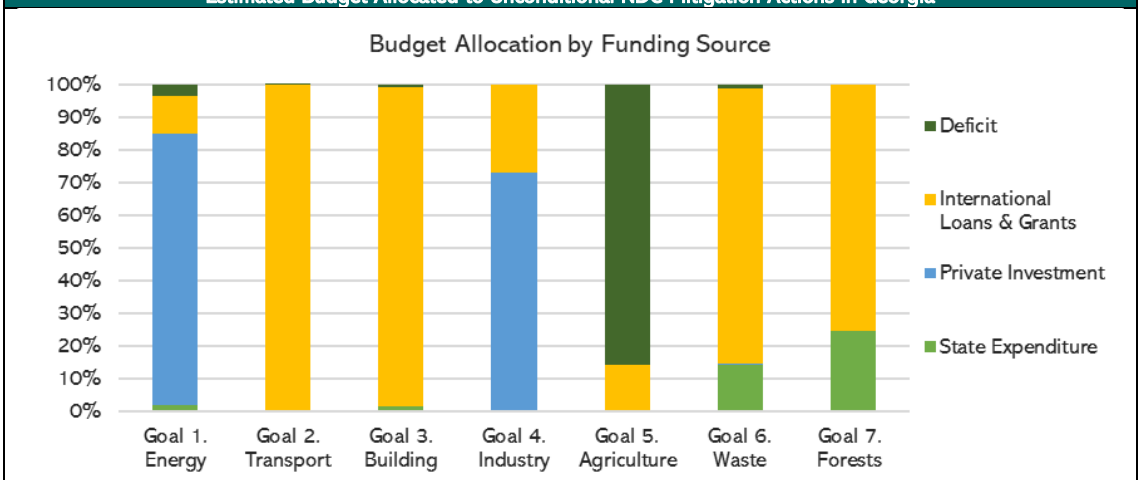
The funding gap of over 208 million GEL for the unconditional targets, accrues mostly to the energy sector (95% of the total funding gap). The remaining 5% of the total funding gap is distributed among the transport (1.3%), building (0.8%), agriculture (1.5%), and waste (1.4%) sectors. There is no funding gap for the industry and forest sectors.

Unconditional priority mitigation actions

Georgia's 2030 Climate Change Strategy and Action Plan identifies the ways for reaching Georgia's 2030 GHG emissions reduction targets for climate change mitigation, as set in Georgia's updated NDC. The 2021-2023 Action Plan lists the priority actions that are required to be implemented to reach Georgia's unconditional target.

There is currently a funding gap of over 208 million GEL, predominantly for the energy sector (95% of the total funding gap). The remaining 5% of the total funding gap is distributed among the transport (1.3%), building (0.8%), agriculture (1.5%), and waste (1.4%) sectors. There is no funding gap for the industry and forest sectors.

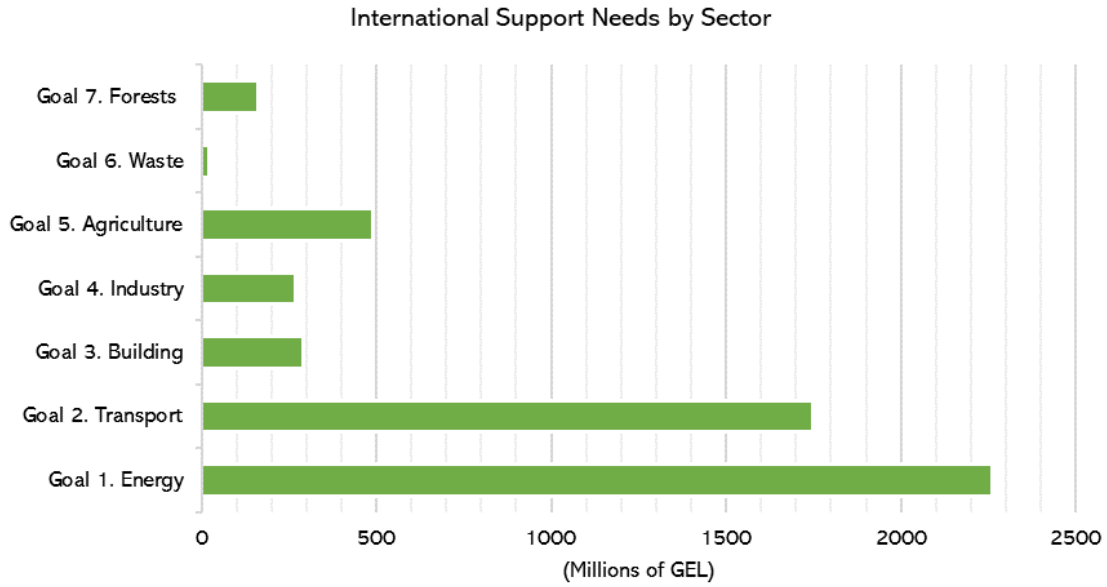
Estimated Budget Allocated to Unconditional NDC Mitigation Actions in Georgia



Goal		Budget Distribution (GEL)				
#	Sector	State Expenditure	Private Investment	International Loans and Grants	Deficit	Total Budget
1	Energy	109,692,000	4,699,880,000	662,310,000	199,200,000	5,671,082,000
2	Transport	120,000	0	1,771,213,840	2,523,600	1,773,857,440
3	Building	2,623,896	0	164,157,840	1,429,560	168,211,296
4	Industry	0	24,597,936	9,009,600	0	33,607,536
5	Agriculture	0	0	498,000	2,995,800	3,493,800
6	Waste	36,734,344	56,000	213,795,574	2,800,000	253,385,918
7	Forests	6,445,845	0	19,512,743	0	25,958,588
	Total	155,616,085	4,724,533,936	2,840,497,597	208,948,960	7,929,596,578

Conditional priority mitigation actions

Approximate 5 billion GEL will be needed to fund the implementation of the conditional NDC mitigation actions in Georgia, predominantly for the energy sector (43% of the additional funding needs), followed by the transport sector (33% of the additional funding needs). The remaining 24% is distributed among the agriculture (9.4%), building (5.5%), industry (5.1%), forest (3.1%) and waste (0.5%) sectors. These costing estimates are estimated ballpark values from previous similar projects implemented in Georgia, ongoing similar projects in the Region, and pipeline project proposals for Georgia.



Priority adaptation mitigation actions

Georgia's updated NDC acknowledges the need for adaptation to adverse effects of climate change, and Georgia is committed to continue studying its adaptive capacity of different economic sectors. The NDC covers the most vulnerable sectors of the economy, ecosystems, and other natural resources, namely, coastal zone, tourism, agriculture, water resources, biodiversity, forest lands, and human health. The key document for adaptation is the NDC counterpart National Adaptation Plan (NAP). However, as of March 2022 work on the elaboration of Georgia's NAP has not yet commenced. Recommendation therefore is to initiate the formulation using the initial guidelines for the formulation of NAPs by least developed country (LDC) Parties. The four key elements of the guideline comprise first laying the groundwork and addressing gaps through vulnerability and policy assessments, second designing preparatory elements such as policies and needs assessments, third implementation strategies to strengthen institutions and to prioritize needs, and finally reporting monitoring and review on a regular and institutionalized basis.

Implementation Roadmap

The implementation roadmap serves as the key pillar for the sustainable implementation of the NDC climate finance strategy. It addresses the barriers and gaps identified in Georgia's climate finance framework and is conceptualized as a living document that can be periodically updated and improved to ensure validity.

Policy recommendations

To further strengthen the policy framework in Georgia according to international best practise and address the main barriers identified, the country should:

- Integrate NDC implementation and the corresponding required financial flows into the national development policy cycle. For instance, if there is a regular cycle of five-

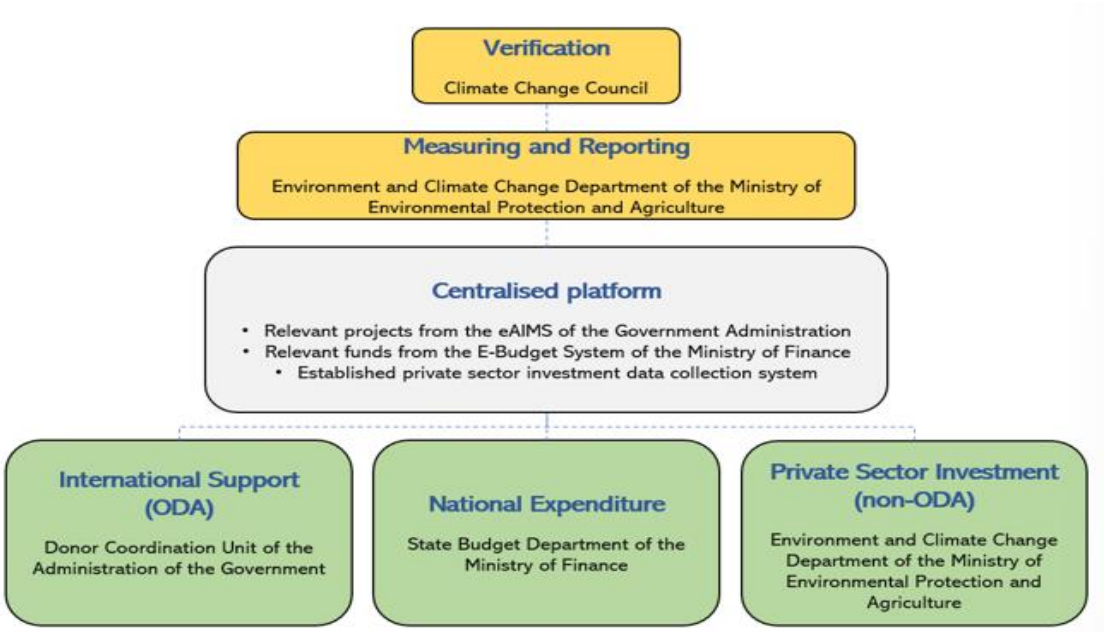
year national development plans, this corresponds with the requirement to submit an updated NDC every five years to the UNFCCC Secretariat.

- Link NDC implementation with policy processes in place for SDG implementation such as the SDG electronic tracker system, which is coordinated and monitored by the Planning & Innovations Unit of the Administration of the Government of Georgia. This will facilitate identifying and monitoring activities related to climate change and their corresponding provided funding or financial needs and linking it to the envisioned targets of Georgia's updated NDC
- Ensure that government ministries, departments, and agencies responsible for policy development contain a team of experts or a department with a specific mandate to develop and coordinate climate action for their policy area and the corresponding link to the updated NDC sectors and actions. These teams can be further enhanced by assigning the mandate to coordinate SDG implementation and ensuring gender equality in their policy area.
- Georgia should further develop national policies for carbon taxes, policies for public-private partnerships, and policy incentives for private investments to facilitate the financial framework in the country.

Stakeholder Mapping and Institutional Arrangement Recommendations

The leading entities and partner institutions as stakeholders are responsible for evaluating the financial status of the actions throughout the implementation period of Georgia's updated NDC–from 2020 to 2030, are identified for each mitigation or adaptation action and disaggregated by sector of the action. For mitigation, in total roles and responsibilities for 66 unconditional and 35 conditional NDC mitigation actions are distributed accordance with Georgia´s 2030 Climate Strategy and the 2021-2023 Action Plan of Georgia´s 2030 Climate Strategy. While Georgia acknowledges the need for adaptation to adverse effects of climate change, as of March 2022 work on the NAP has not yet commenced and concrete adaptation actions are missing, making it unfeasible to precisely assign leading entities and partner institutions beyond mapping out potential stakeholders or planning and implementation of the NAP.

Regarding the institutional arrangements for NDC finance, management is dispersed among different entities, making coordination difficult. In the context of NDC finance, the three main avenues requiring strong institutional arrangements relate to national expenditure, international support, and private sector investments. The proposed institutional architecture defines the entities involved in monitoring climate financial flows from different sources that are directed to NDC implementation, and the relationships between each architectural entity and institution. The entities coloured green concern the supportive role of the initial measurement of both domestic and international climate finance flows of climate change activities. The key entities related to the MRV system (the centralised data compilation, final reporting, and verification) are coloured yellow.



Capacity Building Programme

Capacity building is crucial to the enablement of stakeholders, as it ensures financial and human resources for the implementation of the NDC Financing Strategy and Investment Plan are mobilised. To deliver effective capacity building, first capacity gaps and barriers are identified on based on which recommendations for raising awareness and engagement and learning-by-doing approach through trainings on financing for actions are provided. Capacity building measures can target the gaps at the individual, the institutional and the system level, depending on where shortcomings are identified. The Capacity Building Programme for Georgia involves capacity needs assessments, train the trainer programmes, coaching and mentoring, national programme of climate change education, learning exchanges, stakeholder workshops, and support for policymakers in effective decision making. Progress on these activities can be tracked via a traffic light system aiming to quickly identify the capacity building activities that have been completed or that have not yet been commenced.

Implementation Timeline

The implementation period of the updated NDC of Georgia covers a time span of 10 years from 2020 to 2030. For each of the 66 unconditional NDC mitigation actions and 35 conditional NDC mitigation actions a timeline is developed to ensure the implementation of priority actions according to realistic timeframes. The timeline focuses on higher priority actions in the short-term, and less significant actions in the medium-term to long-term and is developed in accordance with Georgia´s 2030 Climate Strategy and the 2021-2023 Action Plan of Georgia´s 2030 Climate Strategy. Since no concrete actions for adaptation are lined out yet, the implementation timeframe for the adaptation component of the NDC is limited to timeline estimates for planning and implementation activities between 2020-2030.

Tracking NDC Finance

NDC-aligned finance tracking is fundamental for understanding the efficiency and effectiveness of financial flows towards the attainment of the NDC mitigation and adaptation targets. The introduction, harmonization and mainstreaming NDC-aligned finance tracking can kick-start a virtuous cycle for the implementation and continuous update of the NDC Financial Strategy and Investment Plan. Moreover, the establishment of a robust monitoring, reporting and verification (MRV) system for NDC financial flows is crucial to support the effective implementation of the updated NDC of Georgia. To align the national MRV System with NDC climate finance tracking, a five-pronged approach is proposed, aimed at evaluating and updating the NDC Financial Strategy and Investment Plan on a continuous basis and producing accurate and up-to-date information to key audience groups both on a national and international level. The five key points include estimating NDC implementation costs, scanning domestic budget, international and private investment for NDC implementation and based on the results identifying NDC finance gaps and support needed.

Furthermore, it is advised to assign a set of performance indicators to monitor the evolution of the NDC Financial Strategy and Investment Plan. These indicators are based on a two-step traffic light system that enables to track the progression over time in closing the finance gaps for all NDC actions in a simplified and visual manner. The first step involves tracking the status as either financed, partially financed or unfinanced, while the second step serves as the "Gap Closure Indicator." The overall aim is to progressively secure the necessary funding for all NDC actions following the Guidelines for Resource Mobilization and Mainstreaming Climate Change Budgets.

It is essential Georgia reports information on NDC implementation to a multitude of national and international stakeholders. These include the UNFCCC to which Georgia should report information on the support needed and received for climate action in the country under the Enhanced Transparency Framework (ETF), and the national government to enable assessments and effectiveness of climate finance channelling. In addition, domestic and international donor and investors should be informed on NDC climate finance, as doing so enhances accountability and donor confidence. Lastly, the public needs to be updated regularly to raise awareness and transparency on climate action.

Introduction

This document contains the Final NDC Financial Strategy and Investment Plan for Georgia for the *Consultancy to Provide Technical Support to Georgia for the Development of a NDC Financing Strategy and Investment Plan and Climate Budget Tagging* framed within the overall "NDC Financing Strategy and Investment Plan & Climate Budget Tagging" project.

Background

In 2015, at the Conference of the Parties (COP) 21, all 195 United Nations Framework Convention on Climate Change (UNFCCC) participating countries and the European Union (EU) adopted the Paris Agreement under the UNFCCC. The Paris Agreement aims to further strengthen the global response to the threat of climate change and, in particular, the goal of holding the global average temperature increase to well below 2°C above pre-industrial levels (1850-1900) and pursuing to limit the temperature increase to 1.5°C above pre-industrial levels. The goals embedded in the Paris Agreement also aim to increase countries' abilities to adapt to the adverse impacts of climate change and promote low greenhouse gas (GHG) emission development pathways and calls on countries to communicate their efforts to both mitigate and adapt to climate change.

Central to the success of COP21 are the nationally determined contributions (NDCs) to achieve the long-term goals of the Paris Agreement. These set out each country's efforts to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement requires each Party to prepare, communicate and maintain successive NDCs that it intends to achieve, pursue domestic mitigation and adaptation measures with the aim of achieving the objectives of such NDCs, and regularly provide information necessary to track progress made in implementing and achieving the provisions in the NDC.

Finance is critical to reach the mitigation and adaptation targets set out in countries' NDCs, which has resulted in many countries developing country climate finance strategies and investment plans. These set out the programme of investments required to implement their NDC, include a strategy for meeting those financing needs, and provide a framework for directing financial flows towards NDC implementation through national budgeting, support mapping, and providing a pathway for private sector engagement.

Georgia's Updated NDC

Georgia updated and submitted its updated NDC in 2021, setting out the targets for the 2021-2030 period for both mitigation and adaptation.

Regarding mitigation, in its updated NDC, Georgia is fully committed to unconditionally limiting national GHG emissions by 35% in 2030 below the emission levels in 1990,

excluding emissions from land use, land use change and forestry (LULUCF). This is equivalent to national GHG emissions being limited to a maximum of 29.25 $MtCO_2$ in 2030. Georgia is also committed to conditionally reduce national GHG emissions by 50-57% in 2030 compared to emission levels in 1990, in case of international support.

More specifically, Georgia has set a range of sector-specific targets in its updated NDC to reach its overall national mitigation target by 2030. These sector-specific targets are to be adopted as goals in the country's 2030 Climate Change Strategy and 2021-2023 Action Plan. The following targets are intended in each of the sectors:

- Georgia intends to limit GHG emissions by 15% below the reference level by 2030 in the transport sector.
- Georgia intends to limit GHG emissions by 15% below the reference level by 2030 in the energy generation and transmission sector.
- No quantitative target is provided for the building sector. However, Georgia supports the low carbon development of the building sector through encouraging the climate-goals oriented energy efficient technologies and services.
- No quantitative target is provided for the agriculture sector. However, Georgia supports the low carbon development of the agriculture sector through encouraging the climate smart agriculture technologies and services.
- Georgia intends to limit GHG emissions by 5% below the reference level by 2030 in the industry sector. The country supports the low carbon development of the industry sector through encouraging the climate friendly innovative technologies and services.
- No quantitative target is provided for the waste sector. However, Georgia supports the low carbon development of the waste sector through encouraging the climate-friendly innovative technologies and services and through effective implementation of separation practice and principles of circular economy
- Georgia intends to increase the carbon capturing capacity of forests by 10% by 2030 compared to the 2015 level.

Both the unconditional and conditional targets in Georgia's updated NDC concern the country's transportation, building, energy generation and transmission, agriculture, industry, and waste sector. The updated NDC of Georgia sets the country's 2030 Climate Change Strategy and 2021-2023 Action Plan for determining the required mitigation measures to meet the unconditional and conditional mitigation targets it has set out to achieve.

Georgia's updated NDC equally acknowledges the need for adaptation to adverse effects of climate change, and Georgia is committed to continue studying its adaptive capacity of different economic sectors. The NDC covers the most vulnerable sectors of the economy, ecosystems, and other natural resources, namely, coastal zone, tourism, agriculture, water resources, biodiversity, forest lands, and human health. It plans to implement the following adaptation measures in these particularly vulnerable sectors, which are to be adopted as part of the National Adaptation Plan to achieve the goal set out in the NDC:

- Georgia intends to assess the impact of climate change on coastal zone, mountain ecosystems and ecosystem services. In addition, Georgia intends to study the impact of climate change on glaciers, economic situation of the mountainous and coastal regions and livelihoods of the local population for the sustainable management of these regions.
- Georgia intends to develop adaptive capacity of the most vulnerable winter and coastal resorts.
- Georgia intends to assess and develop adaptive capacities for the agricultural productions that have the largest share in national gross domestic product (GDP) and/or for domestic unique products.
- Georgia intends to assess the impact of climate change on the availability of groundwater and surface water resources for sustainable use in agricultural (irrigation), energy production and dwelling purposes in a long-term perspective.
- Georgia intends to encourage the conservation of the species that are endemic, protected under the Red List, as well as indigenous species with a significant importance for food and agriculture.
- Georgia intends to study the most vulnerable areas of forest lands at the preselected territories.
- Georgia intends to assess the effects of climate change on human health through the interdisciplinary study of the relationships between social, economic, biological, ecological, and physical systems.
- Georgia intends to facilitate the measures supporting the reduction of losses and damages caused by extreme weather events.

Structure of the Report

The report is structured in the following sections:

Chapter 1. Climate Finance Framework in Georgia

This section presents the climate finance landscape in Georgia, serving as the foundation upon which the NDC Financing Strategy and Investment Plan is being developed. This section provides an overview of the existing sources of climate finance in the country (including international, national, and private sources) and the current climate finance strategies aiming to consolidate these sources and close persistent funding gaps.

Chapter 2. Barriers to Financing Climate Change Actions

This section summarizes the principal gaps identified in Georgia´s climate finance framework, addressed in the NDC Financing Strategy and Investment Plan.

Chapter 3. Guidelines for Resource Mobilisation

This section presents the resource mobilisation guidelines, serving as a general orientation for identifying funding needs, selecting the most appropriate funding sources, and ensuring the necessary national capacity is in place for NDC implementation. The guidelines comprise

three principal steps, namely i) assessing the financial needs, ii) ensuring national institutional capacity, and iii) identifying funding sources.

Chapter 4. Prioritising and Mainstreaming Climate Change Budget Programmes

This section provides general guidelines for integrating climate change into pre-budget documents, medium term and annual budget preparation, budget approval process and accountability, and gender-responsive budgeting.

Chapter 5. Strategy Investment Plan

This section identifies the funding needs, status, gaps, and alternative funding options for each priority NDC action, providing a general strategy for closing identified funding gaps for NDC implementation.

Chapter 6. Implementation Roadmap

This section presents all the essential components for the sustainable implementation of the NDC Climate Finance Strategy and Investment Plan, aiming to address the barriers and close the gaps identified in Georgia´s current climate finance framework.

1. Climate Finance Framework in Georgia

A favourable financial landscape is a crucial enabler for securing the necessary funding for implementing Georgia´s mitigation and adaptation objectives. The aim is to ensure that the necessary funds are identified, secured, mobilized, and monitored for successful climate action implementation and attainment of climate change mitigation and adaptation goals and commitments. This is particularly important as Georgia's updated NDC includes mitigation targets conditional to international financial, technical, and capacity building support, but does not quantify international support it will require.

One of the first steps for creating the necessary climate finance landscape is therefore to develop an accurate estimate of the financial needs towards meeting the committed NDC targets in order to identify both funding availability and gaps to be closed. The Government of Georgia and its development cooperation partners have estimated such climate finance needs. As with many other countries, this task has proven challenging for Georgia, as information is often incomplete, outdated and fragmented in different policy documents.

Concerning mitigation, it is estimated that approximately 8 billion GEL will be needed to fund Georgia´s unconditional NDC mitigation actions with up to an additional 5 billion GEL of finance expected to be needed for the implementation of conditional NDC mitigation actions, as an upper-bound ballpark estimate. Concerning adaptation, Georgia´s first NDC submitted to the UNFCCC in 2017 shows that adaptation would require about 4.8 – 6.4 billion GEL of finance from 2021 to 2030. However, this figure was developed based on expert judgement, with no explanation or reference of the calculation methodology applied. It should be highlighted that Georgia has since then submitted an updated NDC in 2021, showing a higher level of ambition for both mitigation and adaptation commitments. As such, it is probable that the climate finance needs to 2030 may be significantly higher than the above estimates.

As climate action is multidimensional in nature, the acquisition and deployment of the necessary means of implementation requires the mobilization of a multitude of stakeholders from diverse domestic, national, public, and private funding channels. It is widely recognised in Georgia that climate finance should aim to enhance business opportunities, technology transfer, and job creation, in line with the nation´s inclusive green economic growth agenda.

During the past 15 years, Georgia has undertaken a range of profound structural and market reforms to modernise and revitalise its economy. These reforms included restructuring the public sector, deregulating businesses, diminishing corruption, and streamlining tax and trade incentives and procedures. Formerly considered a lower middle-income economy by the World Bank, Georgia has upgraded its status to an upper middle-

income country since 2015.[2] This shift has created the economic appeal and profitability for public and private investments in climate efforts throughout the country.

Finance for climate action in Georgia is already available, provided through i) private funding channels, ii) domestic budgets, domestic funds, and incentive mechanisms, and iii) international bilateral and multilateral cooperation and investments dedicated to climate change efforts. National and municipal governments, state-owned enterprises, and international development financial institutions are currently the major financial source for climate action in Georgia, and are likely to remain so in the future.

While finance for climate action in Georgia is already available, it varies among different sectors, and it is unlikely to be sufficient to achieve the country's overall climate goals. Further investment is already planned under the state´s budget, private investment mechanisms, and international funding frameworks, but are deemed insufficient to meet the targets set under Georgia's updated NDC. Indeed, there is currently a funding gap of over 208 million GEL to implement Georgia´s unconditional NDC mitigation actions, while an additional 5 billion GEL of international support will need to be secured for implementing the conditional NDC mitigation actions, as an upper-bound initial ballpark estimate.

The availability of a climate finance strategy is therefore of fundamental importance for securing and mobilizing adequate channels to close the existing funding gaps for NDC implementation. Georgia does not currently possess a comprehensive Climate Finance Strategy for securing the sufficient funds from distinct domestic and international public and private sources for the complete implementation of envisioned climate change mitigation and adaptation actions towards the attainment of the national 2030 climate change targets and commitments, as set out in its updated NDC. Recent efforts have been conducted for laying the foundation for the development of such strategy, focused primarily on climate change mitigation:

- Developed in 2021, Georgia´s 2030 Climate Change Strategy and Action Plan establishes a short-term budget for implementing climate change mitigation actions in the 2021-2023 time period. The document identifies the responsible entities, implementation period, estimated budget, and funding sources for each mitigation activity envisioned within the time period.
- Developed in 2017, the LEDS Climate Finance Strategic Roadmap of Georgia provides strategic directions and critical success factors for attracting public and private sector financing for full scale implementation of long-term mitigation actions in the country.

Both documents demonstrate the critical role of both private investment as well as international support for climate change mitigation in Georgia. It is thus a priority to position Georgia as an attractive investment destination private international and domestic climate

[2] World Bank. The World by Income and Region. Available at: https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html

finance sources, as well as a transparent and reliable candidate for international bilateral and multilateral public support.

As a result, Georgia requires to fortify its climate finance strategies to ensure climate change goals are attained while promoting inclusive green economic growth, including the development of an NDC Financing Strategy and Investment Plan.

The following sections provide further details on the current sources of climate finance in Georgia. The NDC Financing Strategy and Investment Plan proposed in this document provides an assessment of the climate finance sources already active in Georgia in order to consolidate existing channels and address persistent barriers.

1.1 International Climate Finance

International climate finance is an important pillar for funding climate change mitigation and adaptation actions in Georgia through monetary support, technology transfer, and capacity building programmes. Georgia has been receiving international official development assistance (ODA)[3] support for climate action projects through a variety of bilateral co-financing country-agency mechanisms, multilateral development banks, and multilateral climate funds.

ODA projects in Georgia financed by international development partners are identified through the electronic Aid Information Management System (eAIMS). It allows bilateral and multilateral donors to voluntarily report information on projects to the online database. This is a very comprehensive information collection, analysis and reporting tool aimed at improving transparency, accountability, and effectiveness of international aid flows (development assistance) to Georgia. It consists of an online database containing all the information on ODA projects in the country which are financed by international development partners. The eAIMS system follows the Organisation for Economic Co-operation and Development (OECD) classifications to designate projects to a certain sector. It does however not include a specific classification for climate change related projects. These projects will be designated to the OECD sector "Sustainable Use of Natural Resources" as this is the thematic group that covers climate change as well. However, it does include a filter on the relevant sustainable development goal (SDG) the project is related to, including SDG 13 related to climate change. Donors are either aware of the eAIMS and report information or are contacted to request them to provide information on projects to the eAIMS. This reporting period runs from April to the end of May, and in some cases continues into June. It is however not attainable to make it obligatory for these donor partners to report information on ODA projects.

[3] Official development assistance (ODA) is defined by OECD Development Assistance Committee (DAC) as government aid that promotes and specifically targets the economic development and welfare of developing countries.

Bilateral Climate Finance

A bilateral finance mechanism is defined as the transfer of resources from an entity of a single country channelled directly to the recipient country. The OECD measures and monitors bilateral development finance targeting climate change objectives, either directly or indirectly, using Rio Markers. According to the OECD climate finance statistical database[4], several climate change projects in Georgia are benefitting from bilateral support provided by a total of 19 country members to the Development Assistance Committee (DAC), across diverse economic sectors as detailed in table 1.

As shown in table 2, Georgia has received cumulative total of 5.17 billion GEL in climate change financial support over the period of 2010 to 2019, with the biggest contributor being Germany (2.98 billion GEL), followed by the European Commission (1.37 billion GEL). The next five biggest contributors are France (266 million GEL), the United States of America (191 million GEL), Switzerland (91 million GEL), Austria (90 million GEL), and Sweden (70 million GEL). Although at a much smaller scale, Denmark, Norway, Japan, Poland, Finland, Czech Republic, Slovak Republic, Slovenia, Greece, Korea, Italy, and Spain have also made significant contributions over the time period. Most of this support has been channelled towards climate change infrastructure projects regarding energy (45%), water resources (17%), rural development (12%) and agriculture (7%).

Table 3 provides statistics concerning development over time, whereby the total annual support received by Georgia has oscillated between 189 million GEL/year and 621 million GEL/year, with a mean of 403 million GEL/year. An unprecedented increase is observed in the year 2019, whereby a total of 1,536 million GEL was committed for supporting climate action in Georgia. This significant increase is primarily attributed to the concession of loans in 2019 by Germany for renewable energy generation and transmission projects.

Concerning the types of financial instruments, over 93% of projects between 2010 and 2019 have been supported by grants, with the remaining 6% by concessional loans and 1% by equity investments. However, loans are typically much higher in magnitude, representing 59% of the total bilateral funds committed for climate change support in Georgia in the time period, as shown in the following figure.

[4] Climate Change: OECD DAC External Development Finance Statistics. Available at: https://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm

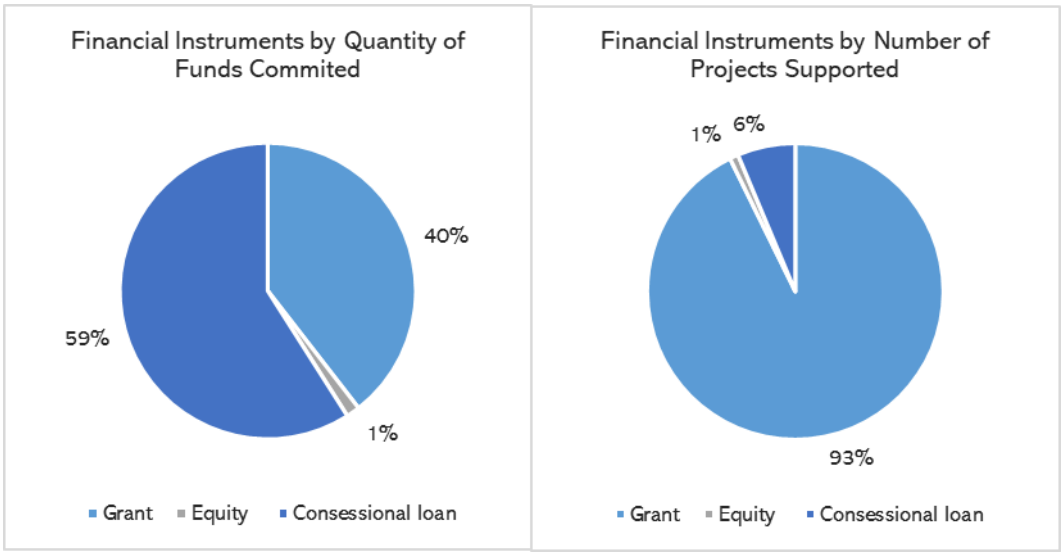


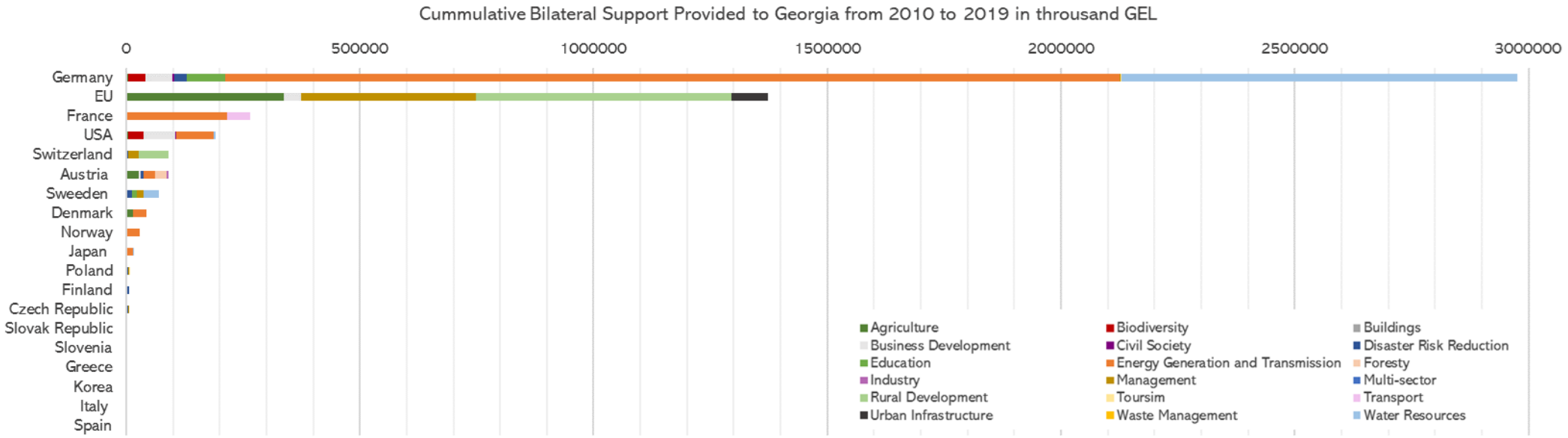
Figure 1. Types of Facial Instruments by Quantity of Funds Committed and Number of Climate Change Projects Supported in Georgia Between 2010 and 2019.

Table 1. DAC Countries Providing ODA Support to Georgia for Climate Action.

Country	Extending Agencies	Principal Sectors Supported																		Financial Instruments
		Agriculture	Biodiversity	Buildings	Business Development	Civil Society	Disaster Risk Reduction	Education	Energy	Forestry	Industry	Management	Multi-sector	Rural Development	Tourism	Transport	Urban Infrastructure	Waste Management	Water Resources	
Germany	German Reconstruction Credit Bank (KfW), Germany's Federal Ministry of the Environment, Nature Conservation and Nuclear Safety of Germany (BMU), the German Society for International Cooperation (GIZ), and the Federal Ministry of Economic Cooperation and Development of Germany (BMZ).	x	x		x	x	x	x	x	x	x	x			x				x	Grants, concessional loans, equity
European Union	European Commission	x			x							x		x			x			Grants
France	French Development Agency (AFA), Ministry of Economy Finance and Industry, Ministry of Foreign Affairs, Ministry of Agriculture	x						x	x				x			x				Grants, concessional loans
United States	United States Agency for International Development (USAID)	x	x		x	x			x				x						x	Grants
Switzerland	Swiss Agency for Development and Co-operation (SDC)						x					x		x						Grants
Austria	Austrian Development Agency (ADA), Ministry of Sustainability and Tourism, Ministry of Finance	x			x		x	x	x	x	x									Grants, equity
Sweden	Swedish International Development Authority (SIDA)					x	x	x				x							x	Grants
Denmark	Ministry of Foreign Affairs	x							x											Grants
Norway	Ministry of Foreign Affairs, Norwegian Agency for Development Cooperation (NORAD)								x											Grants
Japan	Japanese International Cooperation Agency (JICA), Ministry of Foreign Affairs						x		x			x							x	Grants
Poland	Ministry of Foreign Affairs, Ministry of Interior and Administration	x		x		x	x	x				x		x	x					Grants
Finland	Ministry of Foreign Affairs						x													Grants
Czech Republic	Czech Development Agency (CzechAid)						x	x	x			x								Grants
Slovak Republic	Slovak Agency for International Deve (SAMRS), Ministry of Finance	x						x	x									x	x	Grants
Slovenia	Ministry of Finance									x										Grants
Greece	Ministry of Health and Social Solidarity							x												Grants
Korea	International Cooperation Agency																		x	Grants
Italy	Government of Italy						x													Grants
Spain	Ministry of Industry and Energy														x					Grants

Table 2. Cumulative Bilateral Support Provided to Georgia from 2010 to 2019 by Sector and Country Provider in thousand GEL.

Cumulative Bilateral Support Provided to Georgia from 2010 to 2019 by Sector and Country Provider in thousand GEL

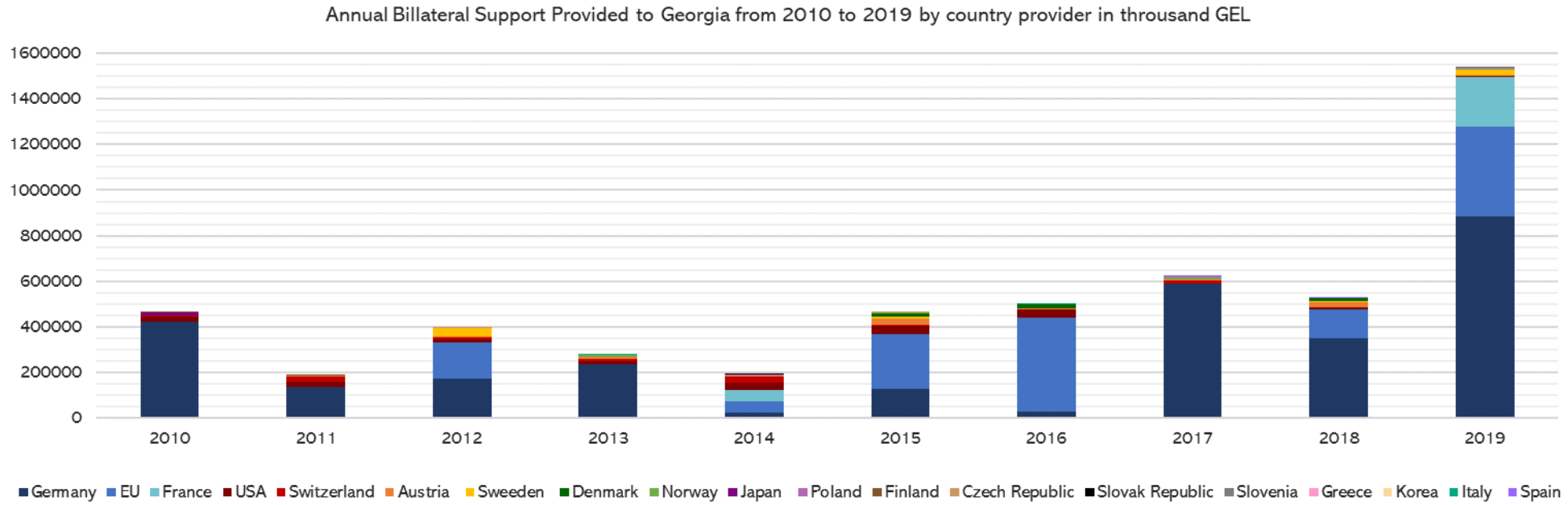


Country	Agriculture	Biodiversity	Buildings	Business Development	Civil Society	Disaster Risk Reduction	Education	Energy	Forestry	Industry	Management	Multi-sector	Rural Development	Tourism	Transport	Urban Infrastructure	Waste Management	Water Resources	Total
Germany	3,460.75	38,633.25	0.00	56,242.17	4,030.63	26,584.67	83,548.09	1,911,830.38	1,530.27	427.25	957.96	0.00	0.00	1,991.93	0.00	0.00	0.00	846,055.76	2,975,293.11
EU	336,220.32	0.00	0.00	38,949.15	0.00	0.00	0.00	0.00	0.00	0.00	374,063.64	0.00	546,255.97	0.00	0.00	77,905.63	0.00	0.00	1,373,394.70
France	18.25	0.00	0.00	0.00	0.00	0.00	2.89	216,384.19	0.00	0.00	0.00	37.28	0.00	0.00	49,716.58	0.00	0.00	0.00	266,159.19
United States	4,516.07	32,493.68	0.00	67,102.69	2,965.95	0.00	0.00	80,018.08	0.00	0.00	0.00	100.05	0.00	0.00	0.00	0.00	0.00	3,631.38	190,827.90
Switzerland	0.00	0.00	0.00	0.00	0.00	5,211.84	0.00	0.00	0.00	0.00	21,547.36	0.00	64,736.25	0.00	0.00	0.00	0.00	0.00	91,495.45
Austria	27,343.01	0.00	0.00	3,667.42	0.00	5,190.00	1,300.32	24,938.44	24,383.10	3,384.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90,206.63
Sweden	0.00	0.00	0.00	0.00	175.35	11,924.41	10,220.92	0.00	0.00	0.00	14,208.51	0.00	0.00	0.00	0.00	0.00	0.00	33,752.58	70,281.76
Denmark	14,858.20	0.00	0.00	0.00	0.00	0.00	0.00	29,495.02	0.00	0.00	0.00	000	0.00	0.00	0.00	0.00	0.00	0.00	44,353.21
Norway	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28,314.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28,314.81
Japan	0.00	0.00	0.00	0.00	0.00	320.17	0.00	14,567.53	0.00	0.00	118.02	0.00	0.00	0.00	0.00	0.00	0.00	68.34	15,074.06

Country	Agriculture	Biodiversity	Buildings	Business Development	Civil Society	Disaster Risk Reduction	Education	Energy	Forestry	Industry	Management	Multi-sector	Rural Development	Tourism	Transport	Urban Infrastructure	Waste Management	Water Resources	Total
Poland	16.78	0.00	165.19	0.00	16.93	3,596.42	1,340.61	0.00	0.00	0.00	1,094.84	0.00	243.25	241.52	0.00	0.00.	0.00	0.00	6,715.54
Finland	0.00	0.00	0.00	0.00	0.00	6,252.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,252.86
Czech Republic	0.00	0.00	0.00	0.00	0.00	3,959.67	67.11	681.83	0.00	0.00	209.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,918.00
Slovak Republic	392.90	0.00	0.00	0.00	0.00	0.00	22.66	203.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	338.89	1,147.06	2,105.48
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	721.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	721.28
Greece	0.00	0.00	0.00	0.00	0.00	0.00	31.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31.17
Korea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.51	22.51
Italy	0.00	0.00	0.00	0.00	0.00	20.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.61
Spain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.35	0.00	0.00	0.00	0.00	1.35
Total	386,826.28	71,126.93	165.19	165,961.44	7,188.86	63,060.64	96,533.76	2,306,434.24	26,634.65	3,811.60	412,199.69	137.33	611,235.47	2,234.80	49,716.58	77,905.63	338.89	884,677.63	5,166,189.63

Table 3. Annual Bilateral Support Provided to Georgia from 2010 to 2019 by Country Provider in thousand GEL.

Annual Bilateral Support Provided to Georgia from 2010 to 2019 by Country Provider in thousand GEL



Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Germany	423,507.32	138,230.97	172,335.62	236,711.84	25,163.74	12,5448.74	27,011.92	588,845.61	351,483.77	886,553.56	2,975,293.11
European Union	0.00	0.00	157,155.84	0.00	46,134.29	242,754.20	411,409.60	0.00	122,842.81	393,097.95	1,373,394.70
France	0.00	0.00	0.00	0.00	49,716.58	0.00	0.00	20.20	35.34	216,387.08	266,159.19
United States	2,2576.75	19,894.81	15,099.82	10,979.81	33,353.31	34,141.87	35,966.09	1,997.92	13,187.07	3,630.43	190,827.90
Switzerland	1,801.54	21,612.19	11,728.20	9,646.45	26,753.29	8,078.80	0.00	11,874.99	0.00	0.00	91,495.45
Austria	0.00	6,251.04	4,500.46	9,102.21	7,049.76	26,386.39	5,008.72	4,102.08	22,500.95	5,305.02	90,206.63
Sweden	1,818.97	0.00	31,933.60	3,242.21	0.00	6,276.42	3,290.51	0.00	1,574.72	22,145.33	70,281.76
Denmark	0.00	0.00	0.00	0.00	0.00	1,489.71	14,858.20	0.00	14,600.30	0.00	44,353.21

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Norway	287.04	0.00	0.00	5,342.52	0.00	4,146.56	0.00	11,988.10	0.00	6,550.58	28,314.81
Japan	14,408.54	6.21	16.05	0.00	225.86	34.99	28.91	186.50	121.93	45.06	15,074.06
Poland	0.00	0.00	0.00	1,109.90	578.42	1,252.33	902.74	624.23	809.68	1,438.25	6,715.54
Finland	3,666.03	2,586.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,252.86
Czech Republic	0.00	0.00	1,052.20	995.49	458.75	857.88	963.65	486.60	36.32	67.11	4,918.00
Slovak Republic	0.00	0.00	0.00	0.00	318.78	0.00	0.00	1,077.67	709.02	0,00	2,105.48
Slovenia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	721.28	721.28
Greece	0.00	0.00	0.00	31.17	0.00	0.00	0.00	0.00	0.00	0.00	31.17
Korea	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.51	0.00	0.00	22.51
Italy	0.00	0.00	0.00	9.52	0.00	0.00	11.09	0.00	0.00	0.00	20.61
Spain	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.75	0.00	1.35
Total	468,066.20	188,582.05	393,821.80	277,171.12	189,752.78	464,272.91	499,451.43	621,227.01	527,902.67	1,535,941.66	5,166,189.63

Multilateral Climate Funds

Multilateral finance mechanisms are defined as the provision of resources coming from supranational entities created to meet specific objectives, whose management is run by the cooperation of multiple countries and whose funding is provided by the contribution of multiple countries. Multilateral climate funds are those whose objective is to provide funding to projects and programmes related to climate change adaptation and/or mitigation.

A certain number of international climate funds have been created under the UNFCCC, whose main purpose is to finance the implementation of climate change adaptation and mitigation measures. Such funds are mainly multilateral and are administered by governments or by institutions such as international, regional, or national development banks or by other United Nation (UN) agencies or entities created especially for this purpose. Among these UNFCCC climate funds, the Adaptation Fund (AF), the Green Climate Fund (GCF) and the Global Environment Facility (GEF) are all active in Georgia. Other non-UNFCCC multilateral climate funds active in Georgia include the Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P), the European Fund for Sustainable Development (EFSD) and the Green for Growth Fund (GGF).

These funds primarily operate by providing grants towards climate change projects, co-financed by both a variety of international institutions and by the project beneficiaries in Georgia. Co-financing instruments are diverse, including additional grants, loans, and in-kind contributions. In comparison with bilateral support, projects supported by multilateral climate funds tend to be much larger in scope, longer, involve much higher magnitudes of financial flows and typically comprehend a substantial amount of co-financing by beneficiaries.

The following table 4 presents the climate change projects in Georgia approved and supported by multilateral climate change funds in between 2010 and 2022. Information provided is based on a thorough review of projects described in the websites of each corresponding fund.

A cumulative total of 2.19 billion GEL has been committed to Georgia towards a total of 36 climate change projects under multilateral climate funds over the period 2010 to 2021. In terms of project size, the biggest projects are those under GCF (56%), followed by the GEF (16%), the E5P (13%) and the EFSD (13%), with the remaining 2% distributed by the AF and GGF. In terms of number of projects supported, the GEF has implemented the greatest number of climate-change related projects in Georgia over the same time period, totalling a total of 17 projects, with the EFSD in second place at a total of 7 projects. Of these projects, most funding is directed towards the forestry sector and the energy sector, as shown in figure 2.

Figure 3 provides statistics concerning development over time, whereby the projects approved since 2015 have a total magnitude oscillating between 150 and 200 million GEL. While the frequency of projects approved by the GCF is low, years where GDF projects have been approved demonstrate a significant spike in climate finance flows towards Georgia.

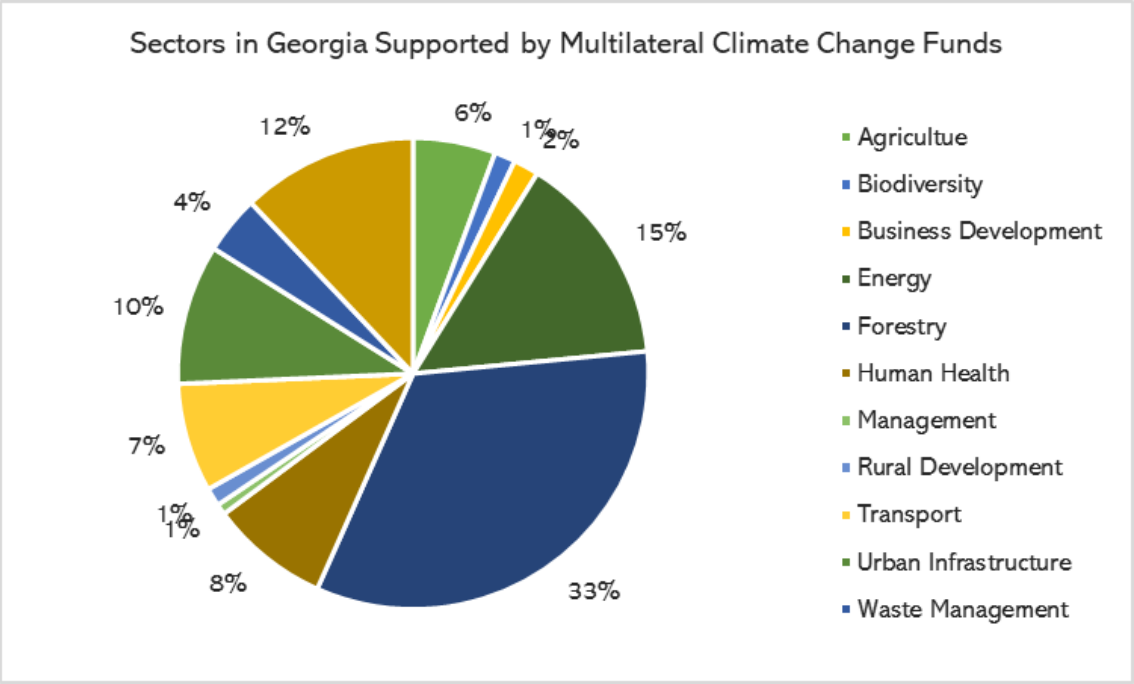


Figure 2. Sectors in Georgia Supported by Multilateral Climate Change Funds in the period 2010-2021.

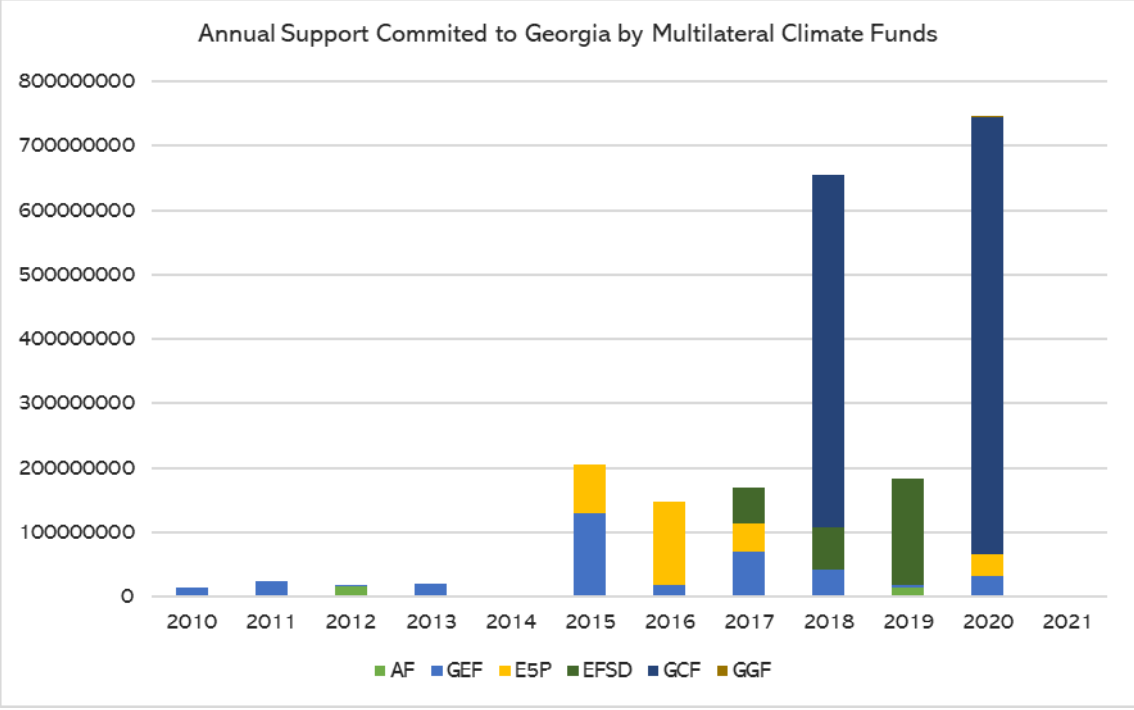


Figure 3. Temporal Evolution of Support Committed to Georgia by Multilateral Climate Funds in the period 2010-2021.

Furthermore, Georgia is benefiting from several regional climate change projects supported by the Green Climate Fund (GCF) and the European Fund for Sustainable Development (EFSD) as follows:

- **Green Cities Facility:** Approved in 2018 with a lifespan of approximately 23 years, this GCF project supports a total of 9 countries in Easter Europe, Asia-Pacific, and Africa, of which Georgia is one of the beneficiary countries. The GCF is providing a grant of 183 million GEL and 687 million GEL to these nine countries, supported by a grant of 1,335 million GEL by the European Bank for Reconstruction and Development (EBRD). The main purpose of this project is to enable the transition of cities to lo-carbon, climate-resilient urban development.
- **Sustainable Energy Financing Facilities:** Approved in 2016 with a lifespan of approximately 15 years, this GCF project financed by the EBRD aims to deliver climate finance to the private sector to promote the implementation of scalable and replicable climate change projects by SMEs across industrial, commercial, residential, transport and agricultural sectors. A total of 10 countries will be benefitting from this project in Eastern Europe, Africa, and Asia-Pacific, among which the private sector in Georgia is included. The GCF will provide a total of 1,231 million GEL in loans and 122 million GEL in grants, together with the EBRD; which will provide a total of 1,080 million GEL in loans and 35 million GEL in grants across these ten countries.
- **Finance and Technology Transfer Centre for Climate Change (FINTECC):** Approved in 2019 by the EFSD with a total budget of 2.18 billion GEL, of which the EFSD will contribute 58.8 million GEL in grants and technical assistance, the aim of this project is to promote the adoption of climate-friendly technologies in the Eastern Europe region by improving the financial environment for climate action. This includes the provision of technical assistance, development of incentives, as well as the introduction, marketing, and dissemination of innovative technologies.
- **EU4Business – SME Competitiveness Programme in Eastern Partnership Countries:** Approved in 2019 by the EFSD with a total budget of 1.17 billion GEL, of which the EFSD will contribute 208.6 million GEL in grants and technical assistance, the aim of this project is to support SMEs operating in Georgia, Moldova, Ukraine, Armenia, Azerbaijan, and Belarus to upgrade their operations to meet EU standards towards fortified sustainable development and growth.
- **Facility for Eastern Partnership investment in connectivity (EPIC):** Approved in 2019 by the EFSD with a total budget of 3.53 billion GEL, of which the EFSD will contribute 84.4 million GEL in grants and technical assistance, the aim of this project is to modernise transport infrastructure in order to increase connectivity in the Eastern Europe region while improving local mobility, road safety and economic growth.

Table 4. Projects Supported by Multilateral Climate Funds Currently Active in Georgia.

Approval	Project Name	Project Duration	Sector(s)	Funding Source	Committed Amount (GEL)	Financial Instrument
Adaptation Fund (AF)						
2012	Developing Climate Resilient Flood and Flash Flood Management Practices to Protect Vulnerable Communities of Georgia	2012-2017	Agriculture	Adaptation Fund	14,963,668.35	Grant
2019	Dairy Modernization and Market Access: Adaptation Component (DiMMAdapt)	2021-2025	Water Resources	Adaptation Fund	17,127,636.40	Grant
Green Climate Fund (GCF)						
2018	Scaling-up Multi-Hazard Early Warning System and the Use of Climate Information in Georgia	2018-2025	Water Resources, Human Health, Urban Infrastructure	Green Climate Fund (GCF)	87,157,166.40	Grant
				Swiss Agency for Development and Co-operation (SDC)	16,108,000.00	Grant
				Government of Georgia	443,395,251.20	In-kind
2020	Enabling Implementation of Forest Sector Reform in Georgia to Reduce GHG Emissions from Forest Degradation	2020-2027	Forestry	Green Climate Fund (GCF)	125,103,687.00	Grant
				Government of Georgia	450,434,318.00	In-kind
				Germany's Federal Ministry of Economic Cooperation and Development of Germany (BMZ)	38,153,000.00	Grant
				Swedish International Development Agency (SIDA)	8,584,425.00	Grant
				Crystal	40,060,650.00	Loan
				Swiss Agency for Development and Co-operation (SDC)	15,604,577.00	Grant
Global Environment Facility (GEF)						
2010	Ensuring Sufficiency and Predictability of Revenues for the Protected Areas Systems	2018-No information	Forestry	GEF Trust Fund	3,221,600.00	Grant
				Government of Georgia	8,376,160.00	Grant
				Caucasus Protected Areas Fund	2,061,824.00	Grant
2011	Disposal of POPs Pesticides and Initial Steps for Containment of Dumped POPs Pesticides	2011-2016	Waste Management	GEF Trust Fund	3,221,600.00	Grant
				Government of Georgia	1,257,712.64	In-kind
				United Nations Development Programme (UNDP)	483,240.00	In-kind
				Strategic Approach to International Chemicals Management (SAICM)	2,603,159.11	In-kind
2011	Promotion of Biomass Pellet Production and Utilization in Georgia	2011-2018	Energy, Forestry	GEF Trust Fund	2,979,980.00	Grant
				Government of Georgia	322,160.00	In-kind
				United Nations Development Programme (UNDP)	499,348.00	Grant
				Domestic Private Sector	13,675,692.00	In-kind
2012	Alignment of National Action Programme and Preparation of the Second Leg of the Fourth Reporting and Review Process	2012-2013	Forestry	GEF Trust Fund	439,310.26	Grant
				United Nations Environment Programme (UNEP)	731,303.20	Grant
2013	Expansion and Improved Management Effectiveness of the Adjara Region's Protected Areas	2013-2017	Biodiversity	GEF Trust Fund	4,135,361.74	Grant
				Government of Georgia	7,395,150.58	Grant
				United Nations Development Programme (UNDP)	483,240.00	Grant
				German Reconstruction Credit Bank (KfW)	7,524,046.80	Grant
				Caucasus Nature Fund	980,242.68	Grant
				World Wildlife Fund (WWF)	161,080.00	Grant

Approval	Project Name	Project Duration	Sector(s)	Funding Source	Committed Amount (GEL)	Financial Instrument
2014	Georgia's First Biennial Update Report	2014-2017	Management	GEF Trust Fund	1,134,003.20	Grant
				Government of Georgia	206,182.40	In-kind
2014	Strengthen National Decision Making Towards Ratification of the Minamata Convention and Build Capacity Towards Implementation of Future Provisions	2014-2018	Waste Management	GEF Trust Fund	664,320.00	Grant
2015	Green Cities: Integrated Sustainable Transport in the City of Batumi and the Achara Region	2015-2019	Urban Infrastructure, Transport	GEF Trust Fund	2,748,024.80	Grant
				Government of Georgia	16,430,160.00	In-kind/Grant
				United Nations Development Programme (UNDP)	902,048.00	In-kind/Grant
2015	Harmonization of information management for improved knowledge and monitoring of the global environment in Georgia	2015-2018	Management	GEF Trust Fund	3,865,920.00	Grant
				Government of Georgia	2,577,280.00	In-kind
				United Nations Development Programme (UNDP)	483,240.00	Grant
				Czech Development Agency	1,288,640.00	Grant
2015	Enhancing Resilience of Agricultural Sector in Georgia (ERASIG)	2015-2019	Agriculture	GEF – Special Climate Change Fund	7,074,480.00	Grant
				International Fund for Agricultural Development (IFAD)	42,847,280.00	Loan
					1,610,800.00	Grant
				Government of Georgia	39,362,797.44	In-kind/Grant
2016	Applying Landscape and Sustainable Land Management (L-SLM) for Mitigating Land Degradation and Contributing to Poverty Reduction in Rural Areas	2016-2019	Forestry, Rural Development	GEF Trust Fund	2,975,096.05	Grant
				Government of Georgia	161,080.00	In-kind
				Rec Caucasus	4,671,320.00	In-kind
				European Commission	3,553,321.71	Grant
				German Society for International Cooperation (GIZ)	3,221,600.00	Grant
				United Nations Environment Programme (UNEP)	161,080.00	In-kind
2016	Development of Georgia's Fourth National Communication and Second Biennial Update Report to the UNFCCC	2016-2020	Management	GEF Trust Fund	2,744,803.20	Grant
				Government of Georgia	592,130.08	In-kind
				United Nations Development Programme (UNDP)	64,432.00	In-kind
2017	PCB-free Electricity Distribution in Georgia	2014-2021	Waste Management, Energy	GEF Trust Fund	12,596,456.00	Grant
				Government of Georgia	3,865,920.00	In-kind
				Domestic Private Sector	52,657,052.00	Equity/In-kind
				United Nations Industrial Development organization (UNIDO)	241,620.00	Grant
2018	Generating Economic and Environmental Benefits from Sustainable Land Management for Vulnerable Rural Communities of Georgia	2018-2021	Forestry, Rural Development	GEF Trust Fund	4,680,881.71	Grant
				Government of Georgia	5,959,960.00	In-kind/Grant
				Rec Caucasus	4,220,296.00	In-kind/Grant
				German Society for International Cooperation (GIZ)	2,416,200.00	In-kind
				German Reconstruction Credit Bank (KfW)	1,127,560.00	In-kind
				United Nations Environment Programme (UNEP)	966,480.00	In-kind

Approval	Project Name	Project Duration	Sector(s)	Funding Source	Committed Amount (GEL)	Financial Instrument
2018	Enhancing Financial Sustainability of the Protected Area System in Georgia	2018-2023	Forestry, Biodiversity	GEF Trust Fund	5,884,200.85	Grant
				Caucasus Nature Fund	945,591.15	Grant
				Bank of Georgia	644,320.00	Grant
				Government of Georgia	15,302,600.00	Grant
2019	Georgia's Integrated Transparency Framework for Implementation of the Paris Agreement	2019-2023	Management	GEF - Capacity-Building Initiative for Transparency (CBIT) Fund	3,221,600.00	Grant
				Government of Georgia	442,454.54	In-kind
2020	Achieving Land Degradation Neutrality Targets of Georgia through Restoration and Sustainable Management of Degraded Pasturelands	2020-2023	Agriculture, Forestry, Rural Development	GEF Trust Fund	5,723,120.85	Grant
				Food and Agriculture Organization (FAO)	17,834,777.60	Grant
				Government of Georgia	3,060,520.00	In-kind
				Rec Caucasus	2,416,200.00	In-kind
				World Wildlife Fund (WWF)	1,610,800.00	In-kind
				German Society for International Cooperation (GIZ)	1,449,720.00	In-kind
2022	Low Carbon Solutions through Nature Based Urban Development for Kutaisi City	2022-2026	Urban Infrastructure, Energy	GEF Trust Fund	3,383,420.97	Grant
				Government of Georgia	35,933,082.08	In-kind
				Rec Caucasus	4,510,240.00	In-kind
				United Nations Environment Programme (UNEP)	483,240.00	In-kind
Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)						
2015	Energy Efficiency in Tbilisi Schools	No information	Energy	Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	22,891,800.00	Grant
				Council of Europe Development Bank (CEB)	53,414,200.00	Loan
2016	Tbilisi Bus	No information	Transport	Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	26,707,100.00	Grant
				European Bank for reconstruction and Development (EBRD)	103,013,100.00	Loan
2017	Energy Efficiency in Public Buildings in Georgia	No information	Energy	Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	7,134,611.00	Grant
				Nordic Environment Finance Corporation (NEFCO)	10,797,299.00	Loan
2017	Batumi Bus	No information	Transport	Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	5,722,950.00	Grant
				European Bank for reconstruction and Development (EBRD)	20,984,150.00	Loan
2020	Energy Efficiency Improvements in Public Schools in Mountainous Regions	No information	Energy	Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	9,919,780.00	Grant
				Nordic Environment Finance Corporation (NEFCO)	24,799,450.00	Loan
European Fund for Sustainable Development (EFSD)						
2017	Adjara	No information	Water Resources	German Reconstruction Credit Bank (KfW)	28,080,608.00	Grant
2017	Enguri HPP	No information	Water Resources	European Bank for reconstruction and Development (EBRD)	28,042,455.00	Grant
2018	Energy Sector Reform	No information	Energy	German Reconstruction Credit Bank (KfW)	33,574,640.00	In-kind

Approval	Project Name	Project Duration	Sector(s)	Funding Source	Committed Amount (GEL)	Financial Instrument
2018	Hazardous Waste Management	No information	Waste Management	European Bank for reconstruction and Development (EBRD)	31,819,602.00	Grant
2019	Energy Efficiency in Public Buildings Programme	No information	Energy	European Bank for reconstruction and Development (EBRD) and German Reconstruction Credit Bank (KfW)	98,434,740.00	Grant
2019	Khashuri Water Supply and Sanitation Improvement Project	No information	Water resources, Waste Management	Alternative für Deutschland (AfD)	28,805,515.00	Grant
2019	Promoting Local Currency Lending: GGF "L Shares" for Georgia	No information	Business development	German Reconstruction Credit Bank (KfW)	38,534,530.00	Equity
Green for Growth Fund (GGF)						
2020	Update on Georgia Household Appliance Study	No information	Energy	Green for Growth Fund (GGF)	63,631.57	Grant
2021	Capacity building and Promotion of Innovative Green Start-ups	No information	Business Development	Green for Growth Fund (GGF)	95,382.50	Grant
2021	ESG Materiality Assessment and Disclosures	No information	Business Development	Green for Growth Fund (GGF)	192,329.27	Grant

International Financial Institutions

International financial institutions are institutions that have been established by more than one country, and hence are subject to international law. Their owners or shareholders are generally national governments which come together to provide finance opportunities.

Multilateral development banks are a special type of international financial institutions. While these global institutions function under their own specificity and operational modality, they are, to a greater or lesser extent, dedicated to economic and social development through the mobilisation of financial resources, the creation of technical, institutional and knowledge capacity, and the provision of global, regional, or national public goods, as pertinent. Operating in multi-country contexts, these banks have the capacity to raise resources in international financial markets that are then on-lent to member countries on more favourable terms than private financial markets. They also mobilise resources from official sources that are channelled to beneficiary countries.

The following list encompasses the most important international financial institutions and multilateral development banks actively funding climate change projects in Georgia:

- European Investment Bank (EIB).
- Council of Europe Development Bank (CEB).
- European Bank for Reconstruction and Development (EBRD).
- Asian Development Bank (ADB).
- Black Sea Trade and Development Bank (BSTDB).
- Nordic Investment Bank (NIB).
- Nordic Environment Finance Corporation (NEFCO).
- The International Fund for Agricultural Development (IFAD).
- The World Bank Group.

The World Bank Group is one of the world's largest multilateral development banks, serving as one of the principal sources of funding and knowledge for developing countries. With 189 member countries, it is a unique global partnership operating through five institutions committed to reducing poverty, increasing shared prosperity, and promoting sustainable development, namely:

- The International Bank for Reconstruction and Development (IBRD).
- The International Development Association (IDA).
- The International Finance Corporation (IFC).
- The Multilateral Investment Guarantee Agency (MIGA).
- The International Centre for Settlement of Investment Disputes (ICSID).

As shown in table 5, Georgia has a total of 28.36 billion GEL has been committed through international financial institutions over the period 2010 to 2022 towards financing projects linked to climate action in Georgia. The largest source is the European Investment Bank at 9.39 billion GEL (33% of the total committed) followed by the Asian Development Bank at 9.07 billion GEL (32% of the total committed). Significant amounts have been provided by the European Bank for Reconstruction and Development at 5.04 billion GEL (18% of the

total committed) and the International Bank for Reconstruction and Development (12% of the total committed). The remaining 5% has been committed primarily by the International Development Association and the Multilateral Investment Guarantee Agency of the World Bank Group. Most of this funding has been committed towards climate change infrastructure projects regarding transport (53%), energy (18%), other urban infrastructure and services such as water and sanitation (19%). There are several pipeline projects under evaluation for approval by the IBRD and the EIB, totalling at 1.1 billion GEL and 0.4 billion GEL, respectively.

Table 6 provides statistics concerning development over time, whereby the total annual funding committed to Georgia has oscillated between 1.2 billion GEL and 4.1 billion GEL/year, generally increasing over time. An important decrease in climate finance committed in 2020 and 2021 is observed, which could be attributed to the global disruptions provoked by the COVID-19 pandemic.

Concerning the types of financial instruments, over 97% of funding committed towards climate-related projects between 2010 and 2022 takes the form of loans, with the remaining 3% corresponding to guarantees, equity and technical assistance as shown in figure 4.

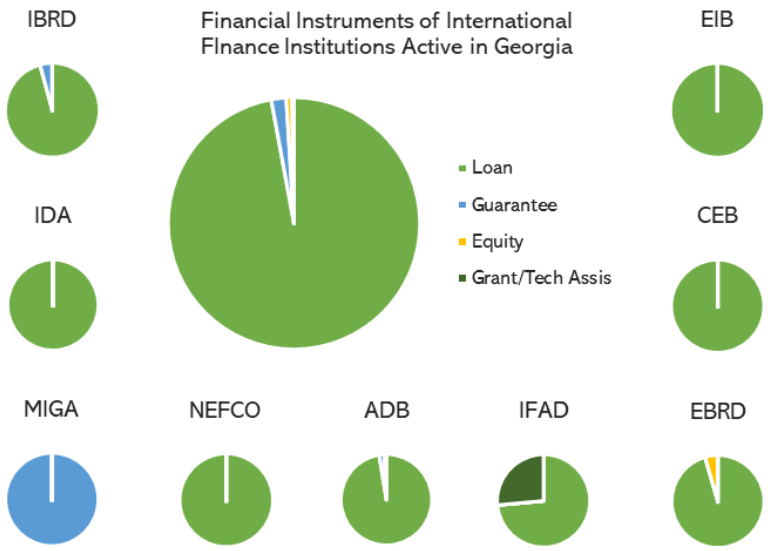


Figure 4. Financial Instruments of International Finance Institutions Active in Georgia.

In comparison with climate finance historically available to Georgia through bilateral international cooperation and through climate funds, loans provided to Georgia by multilateral development banks constitute the primary source of funding for climate change adaptation and mitigation projects in the country. The importance of these sources is expected to further increase in the future for Georgia considering the pledge of multilateral development banks to become Paris-aligned by 2023. Two years after the 2015 Paris Agreement, multilateral development banks pledged to align their financial flows with the global objectives established therein, adopting an approach based on the following six building blocks:

- Mainstreaming principles aligned with mitigation goals.
- Mainstreaming principles aligned with adaptation and climate-resilient operations.
- Scaling-up the provision of climate finance by operationalizing ne approaches to i) prioritize, target, and report on climate finance, ii) mobilize private sector investments, iii) support access to concessional finance and leveraging private capital, and i) providing technical assistance for climate action.
- Providing policy development support and engagement
- Developing tools and methods for characterising, monitoring, and reporting climate activities.
- Aligning internal operations with the goals of the Paris Agreement.

At the COP 26 held in November 2021 in Glasgow, multilateral development bank pledged to enhance efforts towards the urgent transition for climate change adaptation and mitigation by means of technical and financial support tailored to the needs of each country under an active coordination and partnership approach between organizations and coalitions. More specifically, these banks pledged to[5]:

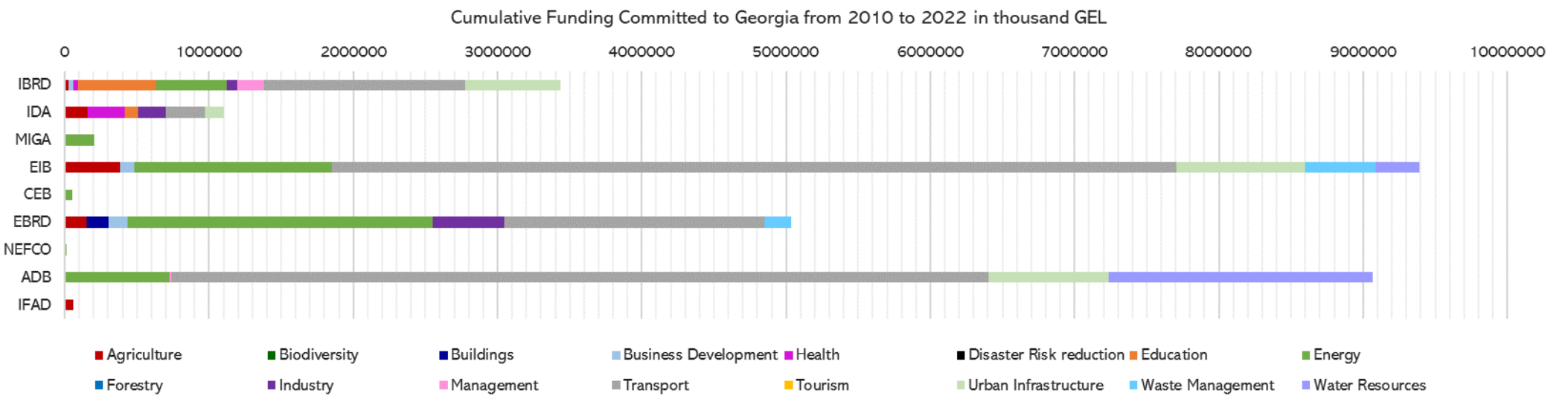
- Increase climate finance flows and increase private capital mobilised for climate action through investment vehicles and blended finance instruments.
- Promote natural capital, biodiversity, nature-based solutions, gender-smart solutions, and a just transition.
- Develop approaches for policy-based lending.
- Accelerate climate finance for cities to implement projects at a local level.
- Design, pilot, and implement carbon pricing instruments such as carbon taxes and fossil fuel subsidy reductions.
- Support the development of plans for enhanced transition towards low-carbon and resilient development.

The World Bank Group has announced in June 2021 its new Climate Change Action Plan 2021-2025[6] that aims to deliver record levels of climate finance to developing countries such as Georgia towards climate change mitigation and adaptation by aligning financial flows with the Paris Agreement while seeking sustainable pathways out of the disruption caused by the COVID-19 pandemic. Within this plan, IBRD and IDA operations will be aligned with the Paris agreement by July 2023, while IFC and MIGA operations for the private sector will be 85% aligned by July 2023 and 100% aligned by 2025. Among the actionable areas of the plan, climate finance provided will be increased by 35% by 2025, of which at least 50% will be dedicated to adaptation initiatives.

[5] Collective Climate Ambition – A Joint Statement at COP 26 by the multilateral Development Banks. Available at: https://thedocs.worldbank.org/en/doc/8b63ef9b33c96b80138ac1b1528bd65e-0020012021/original/COP26-Joint-MDB-Climate-Ambition-Statement.pdf
[6] World Bank Group Increases Support for Climate Action in Developing Countries. Available at: https://www.worldbank.org/en/news/press-release/2021/06/22/world-bank-group-increases-support-for-climate-action-in-developing-countries

Table 5. Cumulative Funding Committed to Georgia from 2010 to 2022 by Sector and International Financial Institution in thousand GEL.

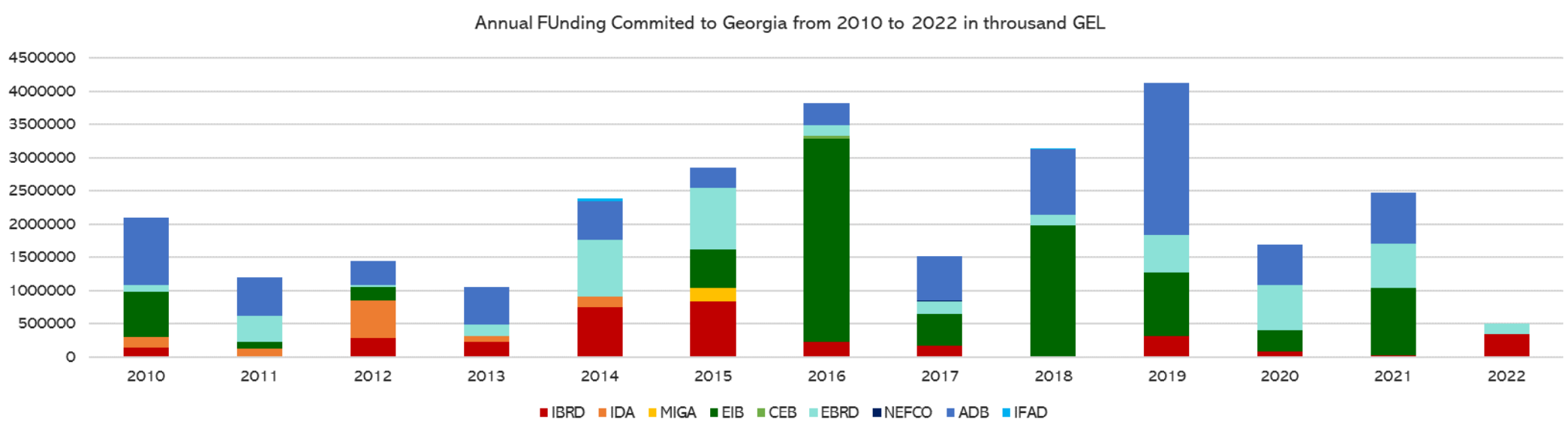
Cumulative Funding Committed to Georgia from 2010 to 2022 by Sector and International Financial Institution in thousand GEL



International Finance Institution	Agriculture	Biodiversity	Buildings	Business Development	Health	Disaster Risk Reduction	Education	Energy	Forestry	Industry	Management	Transport	Tourism	Urban Infrastructure	Waste Management	Water Resources	Total
IBRD	25,631	0	0	34,387	32,216	0	538,442	491,365	0	75,385	184,179	1,394,308	0	660,705	0	0	3,436,619
IDA	161,080	0	0	0	257,728	0	90,205	0	0	193,296	0	267,393	0	133,696	0	0	1,103,398
MIGA	0	0	0	0	0	0	0	202,961	0	0	0	0	0	0	0	0	202,961
EIB	381,530	0	0	101,869	0	0	0	1,367,785	0	0	0	5,853,433	0	892,780	488,358	305,224	9,390,979
CEB	0	0	0	0	0	0	0	53,414	0	0	0	0	0	0	0	0	53,414
EBRD	152,612	0	152,612	133,536	0	0	0	2,110,070	0	499,348	0	1,800,407	0	0	189,353	0	5,037,938
NEFCO	0	0	0	0	0	0	0	10,797	0	0	0	0	0	0	0	0	10,797
ADB	0	0	0	0	0	0	0	728,887	0	0	8,859	5,664,894	0	833,508	0	1,829,023	9,065,172
IFAD	58,247	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58,247
Total	779,100	0	152,612	269,791	289,944	0	628,647	4,965,279	0	768,029	193,038	1,4980,435	0	2,520,690	677,712	2,134,247	28,359,525

Table 6. Annual Funding Committed to Georgia from 2010 to 2022 by International Financial Institution in thousand GEL.

Annual Funding Committed to Georgia from 2010 to 2022 by International Financial Institution in thousand GEL



International Finance Institution	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total Committed	Pipeline Projects
IBRD	140,140	0	289,944	225,512	757,076	837,616	233,244	178,154	0	314,612	89,277	19,890	351,154	3,436,619	1,127,560
IDA	165,912	128,864	557,337	90,205	161,080	0	0	0	0	0	0	0	0	1,103,398	0
MIGA	0	0	0	0	0	202,961	0	0	0	0	0	0	0	202,961	0
EIB	681,031	102,632	209,842	0	0	587,556	3,052,240	473,097	1,987,771	953,825	316,670	1,026,316	0	9,390,979	431,129
CEB	0	0	0	0	0	0	53,414	0	0	0	0	0	0	53,414	0
EBRD	95,383	396,183	22,551	179,319	843,074	924,599	158,885	193,995	162,735	566,191	682,939	659,473	152,612	5,037,938	0
NEFCO	0	0	0	0	0	0	0	10,797	0	0	0	0	0	10,797	0
ADB	1,018,710	579,888	363,686	554,115	589,553	306,052	325,382	670,963	971,957	2,300,786	608,963	775,117	0	9,065,172	0
IFAD	0	0	0	0	44,458	0	0	0	13,788	0	0	0	0	58,247	0
Total	2,101,176	1,207,567	1,443,360	1,049,151	2,395,241	2,858,784	3,823,165	1,527,006	3,136,251	4,135,413	1,697,849	2,480,795	503,766	28,359,525	1,558,689

Multilateral Development Partners

Climate finance sources are responsible for providing the financial resources for approved climate change-related projects and programmes, based on their project selection criteria. These funds are channelled into the recipient country through numerous of national, regional, and international implementing agencies for the implementation of each project or programme. Implementing agencies are thus responsible for procuring and supervising the climate change projects, managing the funding committed by the funding provider to ensure that they are mobilized appropriately to execute the project objectives.

At the international level, climate finance is channelled into Georgia through a variety of multilateral development partners, particularly the following UN Agencies:

- United Nations Development Programme (UNDP).
- United Nations Environment Programme (UNEP).
- Food and Agriculture Organization of the United Nations (FAO).
- United Nations Industrial Development Programme (UNIDO).

Other agencies such as the World Meteorological Organization (WMO), The World Wildlife Fund (WWF) and the International Union for Conservation of Nature (IUCN) also contribute to channelling climate finance in the country.

Through dedicated programmes, multilateral development banks also collect and channel climate finance into Georgia from diverse funding sources including dedicated climate funds, other international finance institutions, as well as cooperation provided by ODA countries. In addition to providing financial loans and grants from its own resources, the European Bank for Reconstruction and Development, for example, also channels climate finance into Georgia from the Green Climate Fund and the European Union as the implementing agency for the Green Cities Programme.

At the national level, the JSC TBC Bank of Georgia has been accredited direct access to the Green Climate Fund. This means that GCF resources may be channelled directly into Georgia and managed by the JSC TBC Bank for the procurement, implementation, and supervision of the corresponding mitigation and/or adaptation GCF project.

UNFCCC Climate Change Mechanisms

Several climate change adaptation and mitigation projects and programmes are being implemented in Georgia through a set of UNFCCC climate change mechanisms, including Nationally Appropriate Mitigation Actions (NAMAs), Capacity-Building Initiative for Transparency (CBIT) Projects, Clean Development Mechanisms (CDM) Projects, and the REDD+ Programme.

Nationally Appropriate Mitigation Actions (NAMAs) refer to specific actions that reduce emissions in developing countries relative to "business as usual" emissions in 2020, prepared under the umbrella of a national governmental initiative directed at achieving transformational change in a specific sector or across several sectors. The NAMA Registry

is a publicly available online platform operated by the UNFCCC Secretariat which allows developing countries to seek financial, capacity-building, and/or technology support from Annex I Parties and Organizations for the development or implementation of NAMAs.

As shown in the following table, Georgia has three NAMAs seeking support for implementation through the NAMA Registry. However, the country is facing mayor problems in securing the necessary financial capital for to the preparation and subsequent implementation its NAMAs. Currently, only the NAMA "Adaptive sustainable forest management in Borjomi-Bakuriani Forest District" is under implementation, thanks to the receipt of bilateral funding from Austria, more specifically, a grant of 5,722,950.00 GEL. Nevertheless, a funding gap of 1,907,650.00 GEL to finalize the implementation of this NAMA and Georgia continues to seek additional support through the NAMA registry.

The country´s other two NAMAs are hold, as Georgia has not yet secured any international support to commence implementation, mainly owning to the following reasons:[7]

- Inability to provide the NAMA facility with a detailed business plan at the time of application: Potential funding sources have not been provided with a robust and transparent business plan, which heighten the investment risk in Georgia.
- Lack of clear-cut regulations that define the financial technicalities for the receipt and use of support for NAMA implementation: There is no legislative or regulatory framework that defines i) the recipient entities in Georgia of NAMA support, ii) how these entities will manage and distribute funds to beneficiaries in line with NAMA objectives, and iii) how NAMA financial flows will be reported to donors in a transparent manner.
- Lack of technical expertise for NAMA preparation and implementation: Georgia is faced with limited technical capacity for formulating robust NAMA proposals and actively seeking and securing donor support for implementation. As such, the country defaults to seeking international support for preparing NAMA proposals. For example, the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety has provided support to Georgia in the development of the proposal documents for the NAMA "Efficient use of biomass for equitable, climate proof and sustainable rural development". This support has been provided through the Mitigation Momentum II project as part of the International Climate Initiative (IKI).
- Lack of national coordination: The NAMA "Energy efficient refurbishment in the Georgian public building sector" is faced against a legislative framework which is currently incompatible with and hinders the implementation of several lines of action of the NAMA. On the other hand, the NAMA "Efficient use of biomass for equitable, climate proof and sustainable rural development" is faced with a lack of cooperation and coordination between the Georgian Ministry of Environment and the Ministry of Energy, both of them key in the successful implementation of the NAMA. However, their diverging priorities regarding renewable energy hinder the

[7] Issaka S.A., 2021. Setbacks to the implementation of the nationally appropriate mitigation actions. Case studies of the NAMAs of Ethiopia, Georgia, and Indonesia. Quaestiones Geographicae 40(3), Bogucki Wydawnictwo Naukowe, Poznań, pp. 33–44.

impulse in securing the necessary resources for NAMA implementation. While the Ministry of Environment prioritises small-scale renewable energy projects aimed at promoting rural development, the Ministry of Energy prioritizes utility-scale hydroelectric infrastructure projects.

Table 7. NAMAs in Georgia seeking support for implementation.

Name of NAMA	Expected start year of implementation	Implementation Status	Cost of implementation	Sectors	Support received for implementation
Adaptive sustainable forest management in Borjomi-Bakuriani Forest District	2014	Under implementation – seeking additional support	7,630,600.00 GEL	Forestry	In the year 2014, the Austrian Ministry of Agriculture and Forestry, Environment and Water Management provided Georgia with a grant of 5,722,950.00 GEL for NAMA implementation through the NAMA Registry.
Efficient use of biomass for equitable, climate proof and sustainable rural development	2016	On hold – seeking support to begin implementation	48,454,310.00 GEL	Energy	Georgia has not yet received support for implementing this NAMA through the NAMA registry.
Energy efficient refurbishment in the georgian public building sector	2016	On hold – seeking support to begin implementation	72,109,170.00 GEL	Energy	Georgia has not yet received support for implementing this NAMA through the NAMA registry.

The **Capacity-Building Initiative for Transparency (CBIT)** is a special initiative designed to support developing country Parties, upon request, in acquiring the necessary capacity for meeting the MRV requirements of the Enhanced Transparency Framework established under Article 13 of the Paris Agreement. As of September 30, 2021, the CBIT project portfolio comprises 81 projects amounting to a total of $130.9 million. Financing is secured through the CBIT trust fund administered by the GEF. The CBIT project "Integrated transparency framework for implementation of the Paris Agreement" is currently under implementation in Georgia, in partnership between the UNEP and the Ministry of Environmental Protection and Agriculture of Georgia. A GEF grant of USD 1 million has been provided between September 2019 and March 2023 to improve, data collection and management, emission factors, the national GHG inventory, information systems and technologies, institutional arrangements, and NDC tracking.

Under the **Clean Development Mechanism (CDM)**, mitigation projects in developing countries can earn certified emission reduction credits. These credits can be traded and sold by developed countries to meet a part of their emission reduction targets under the Kyoto Protocol. At least 2% of the proceeds for the sale of such credits are channelled to finance the AF. To date, Georgia has a total of seven registered CDM projects as indicated in the following table:

Table 8. CDN projects active in Georgia.

Project Name	Certified emissions reduction credits			
	Registration Year	Effective period	Sectors	Emissions reductions (tonnes CO_{2eq}/year)
Landfill Gas Capture and Power Generation Project in Tbilisi	2007	2008-2015	Waste Management; Energy Generation and Transmission	72,700
Leak Reduction in Above Ground Gas Distribution Equipment in the KazTransgaz-Tbilisi Gas Distribution System	2009	2009-2019	Energy Generation and Transmission	339,197
Leak Reduction in Above Ground Gas Distribution Equipment in 'Socar Georgia Gas' gas distribution system, Georgia	2012	2012-2022	Energy Generation and Transmission	173,651
Refurbishment of Enguri Hydro Power Plant	2012	2013-2022	Energy Generation and Transmission	581,715
Adjaristsqali Hydro Project	2012	2016-2023	Energy Generation and Transmission	391,956
Gudauri Small Hydropower Project	2012	2013-2020	Energy Generation and Transmission	22,891
Dariali Hydroelectric Power Project	2013	2016-2026	Energy Generation and Transmission	259,229

1.2 National Climate Finance

Georgia has financed and co-financed several climate-related projects implemented in the country using domestic national resources extracted from the state´s budgetary system. It has also established mechanisms and policy frameworks to promote the mobilisation of domestic public and private climate finance, including the establishment of sustainable development funds and the implementation of incentives favouring climate action.

National Expenditure in Climate-Related Projects

In terms of public financing of climate-related projects, domestic funding is mostly realized through the state budget, also involving local and the autonomous republics' budgets. The domestic climate finance landscape is coordinated by the Ministry of Finance (MoF). However, though the biggest implementing entities are presented under the Ministry of Regional Development and Infrastructure, the Ministry of Environmental Protection and Agriculture, the Ministry of Economy and Sustainable Development, and Ministry of Internally Displaced Persons from Occupied Territories, Labour, Health and Social Affairs.

The MoF is the key actor responsible for the efficient enforcement of Georgia's fiscal policy, ensuring efficient budget allocation aligned with national policies and aspirations towards achieving European and global sustainable development goals. Georgia´s state budget sets out a concrete plan for how the government will seek funding, as well as the type and

quantity of resources that will be mobilized to meet its commitments. The current budget for 2022 is centred around twelve priority areas as follows[8]:

1. Affordable, quality healthcare and social security.
2. Defence, public order, and security.
3. Regional development, infrastructure, and tourism.
4. Education, science, and vocational training.
5. Macroeconomic stability and improvement of the investment environment.
6. Institutional development and legal support of the country´s interests.
7. Support of internally displaced persons/migrants and facilitating their integration.
8. Culture, religion, youth promotion and sport.
9. International relations and Euro-Atlantic integration.
10. Agriculture.
11. Judiciary.
12. Environment protection and management of natural resources.

Climate change is not included as an explicit priority or line of action within Georgia´s current state budget. However, it is mainstreamed throughout the twelve budget priority areas. The most notable links to climate change in the 2022 national budget priorities can be seen in the following areas:

Priority Area 10 – Agriculture:

- Significant emphasis will be placed on promoting environmentally friendly, climate-friendly agricultural practices and promoting the development of organic production.
- Promoting the sustainable development of aquaculture in marine and inland waters.

Priority Area 12 – Environment protection and management of natural resources:

- Environmental standards will qualitatively approach European requirements.
- Within the framework of the Green Climate Fund project, a significant expansion of the hydrometeorological observation network is planned.
- Expansion of ambient air and water quality monitoring and evaluation systems will continue.
- Multipurpose forest use will be developed, which will create additional ecological, economic, and social benefits.
- Establish new protected areas, expand, and protect existing protected areas, and create new ecotourism infrastructure.
- Promote environmental education and raise environmental awareness.
- Effective control system for forest resources.
- Enhanced waste collection and management system.

[8] Ministry of Finance of Georgia (2021). Law on State Budget. Citizen´s Guide.

Georgia´s national expenditure[9] is monitored through the Electronic Budget Management System (E-Budget). Different line ministries in Georgia provide budget information on their programmes and sub-programmes, as well as the respective outputs, outcomes, and performance measure indicators. The E-Budget System subsequently classifies all the budgetary spending according to economic classification, functional classification, and programme classification. However, the E-Budget System currently receives limited information in a nonuniform manner as each line ministry provides different uncompilable data.

Since neither the state budget nor the Electronic Budget Management System have a specific climate change component, both the allocation of public resources and the tracking of climate change expenditure in the country are greatly difficulted. As of 2022, there is therefore no specific disaggregation on climate change budget formulation, and no information is available on the specific climate change expenditures.

Georgia is currently moving towards the adoption of a Green Budgeting System.[10] A Green Budget is a guiding document for the Parliament of Georgia, which is designed to align the budget of a given year with the legislative and institutional reforms to be implemented in the sector of environmental protection and natural resources. The development of Green Budgets signifies that each state body or institution would be required to separately report programmes or measures that can be considered as "green". It aims to overcome unsystematic substantiation of environmental expenditures, weak connection between the processes of assessment and decision-making, as well insufficient inter-agency collaboration in the budgeting process for achieving common, inter-sectoral goals for sustainable development. Green Budgeting is also aimed to facilitate the prioritization of expenditures considering factors of climate change.

To assist the identification of climate change related activities in the national expenditure and budgetary planning, the Environmental Protection Committee within the Parliament of Georgia has recommended to include a climate change component within the Green Budget System. This recommendation by the Environmental Protection Committee could provide an entry point to introduce climate change related markers which would enable Ministries to indicate climate change measures.

However, the situation in relation to climate change budget formulation is to be changed from 2023. The ordinance of the Government of Georgia #88 on the Measures to be Taken to Compile a Document of the Main Data and Directions of the Country for 2023-2026 was adopted on 25 February 2022 and recommends spending institutions to voluntarily define the policy area of the program in the E-Budget System through classification (SDGs, Gender, Climate Change, etc.), to set the respective performance indicators for climate policy area, and include a narrative on how the program/activities are linked to climate change. There is no legal requirement but a non-mandatory opportunity for spending institutions to provide this information and it is not a comprehensive tool for full-fledged integration of

[9] A country´s national expenditure is comprised of capital formation and final consumption grouped together.
[10] Environmental Protection and Natural Resources Committee of the Parliment of Georgia (2021). Green Budget Project. Available at: http://environment.cenn.org/app/uploads/2021/02/EN_Green_Budget_A4_Print.pdf

climate change dimension in the PFM, but it can be considered as a major first step for the climate change budget formulation and important steppingstone for further integration of climate change in the budgeting system.

At the sub-national level, self-governing cities such as Tbilisi and Batumi also mainstream climate change related actions throughout their municipal budgetary planning, spending, and monitoring processes, although no direct climate change public expenditure system is in place. These self-governing cities, together with other municipalities, have expressed their willingness to be part of Covenant of Mayors and provide their contribution to climate change agenda. These municipalities, however, face severe financial constraints for implementing local environmental and climate related projects. It is also recommended that these cities develop a Green Budgetary System with indexed climate change tags which would facilitate the development of projects and programmes linked with climate action by facilitating the allocation of local public budgets to climate action, while increasing the ability to monitor climate finance flows at the local level.

Funds Facilitating Climate Action

A national fund specifically dedicated to finance and support the implementation of climate change action has not yet been created in Georgia, though discussion for its creation has considered by the relevant counterparts and it might be more highlighted in the future.

Nevertheless, several state funds are already channelling national and international finance for sustainable development projects, although they are not explicitly dedicated to climate change adaptation and/or mitigation. These funds are detailed below.

It is important to note that these funds do not have a green investment portfolio and do not tag projects by their contribution to climate action or sustainable development goals. The development of both practices by Georgia´s funds would be highly beneficial to enhance the country´s national climate finance landscape.

The Georgian Energy Development Fund (GEDF):

The GEDF is a joint-stock company founded and completely managed by the Ministry of Economy and Sustainable Development of Georgia since 2010. Its mission is to is promote the realization of country's clean energy potential through the development of special renewable energy projects, the retrieval of appropriate funds, and their effective implementation. Although the fund does not explicitly state its link to climate change, all of the fund's investment activities contribute to Georgia's mitigation efforts due to their inherent nature of promoting the renewable energy transition in the country.

The core activities of the GEDF encompass the proposition and development of renewable energy projects, including carrying out preliminary research works, feasibility assessments, and environmental impact assessments. The GEDF also finds investors for these projects, while facilitating agreements of donor and loan support from international institutions and funds, as well as private sources.

The GEDF then works in joint venture under Public-Private-Partnership (PPP) agreements with the secured investors throughout the implementation of the renewable energy projects, with diverse levels of involvement depending on the agreement signed with each particular project, including an exit option for the fund at defined stages of the project, typically at commissioning. The investors are responsible for the preparation of all necessary documents of construction, obtaining construction permits and licenses, engineering, construction, and commissioning.

The GEDF finances the initial costs of proposition and development of these projects. No further capital contribution is done by GEDF during the project implementation phase.

The GEDF has developed a Renewable Energy Investor Guidebook[11] that explains all the necessary steps for the successful implementation of a renewable energy project in Georgia through the GEDF and outlines all existing legislation, permits, deadlines, fees, and procedures involved.

The following table presents the portfolio of renewable energy projects under the GEDF from 2010 to date.

Table 9. Portfolio of GEDF renewable energy projects in Georgia.

Project Name	Renewable energy capacity	Starting year	Investment by GEDF
Namakhvani HPPs Cascade	433 MW	2016	20,994,920.00 GEL
Chordula Hydro Power Station	1.97 MW	2018	No information
Torzila Hydro Power Station's Project	1.07 MW	2017	6,765,360.00 GEL
Enguri Touristic Center	No information	No Information	No information
Borjomi Hydro Power Plant	11.79 MW	No Information	No information
Dariali Energy	108 MW	2016	402,700,000.00 GEL
Lopota Hydro Power Station	6 MW	2014	26,283,504.14 GEL
Supsa Hydro Power Station	8.4 MW	2014	418,821,041.04 GEL
Kvirila Hydro Power Station	6.6 MW	2014	42,525,120.00 GEL
Ruisi Wind Farm	12.6 MW	2019	48,324,000.00 GEL
Zestaponi Wind Power Station	50 MW	2017	193,296,000.00 GEL
Qartli wind farm	20.7 MW	2016	95,681,520.00 GEL
Central Wind Energy Power Station	120 MW	2016	644,756,662.11 GEL
Nigoza Wind Energy Power Station	50 MW	2016	212,272,499.75 GEL
Udabno Solar Power Plant	5 MW	2016	14,497,200.00 GEL

The JSC Partnership Fund:

The Partnership Fund is Georgia's state-owned investment fund established in 2011 that, together with the private sector, invests in commercially viable projects across five key sectors: agribusiness, energy, manufacturing, real estate and tourism, and logistics. It is managed by the Ministries of Economy and Sustainable Development, Environment Protection and Agriculture, Finance, and Justice. As of 2019, the fund had an asset value of 4.9 billion GEL and an equity of 2.3 billion GEL, being the primary shareholder of:

- Georgian Railway (100% of shares).

[11] Available at: https://vre.gedf.com.ge/en/about-us.

- Georgian Oil & Gas Corporation (100% of shares).
- Georgian State Electricity System (100% of shares).
- Electricity System Commercial Operator (100% of shares).
- Telasi (24.5% of shares).

The fund either initiates project or supports projects initiated by private investors, with an investment mandate us based on stable mid-to-long term financing through equity, mezzanine, and debt instruments. The fund participates in up to 49% of the project´s total equity and enables the projects to attract senior financing from commercial sources and international finance institutions, primarily from AEBRD, ADB, and IFC, among others. Since its establishment in 201, the Partnership Fund´s project total investment portfolio as of 2019 is presented in the following figure.

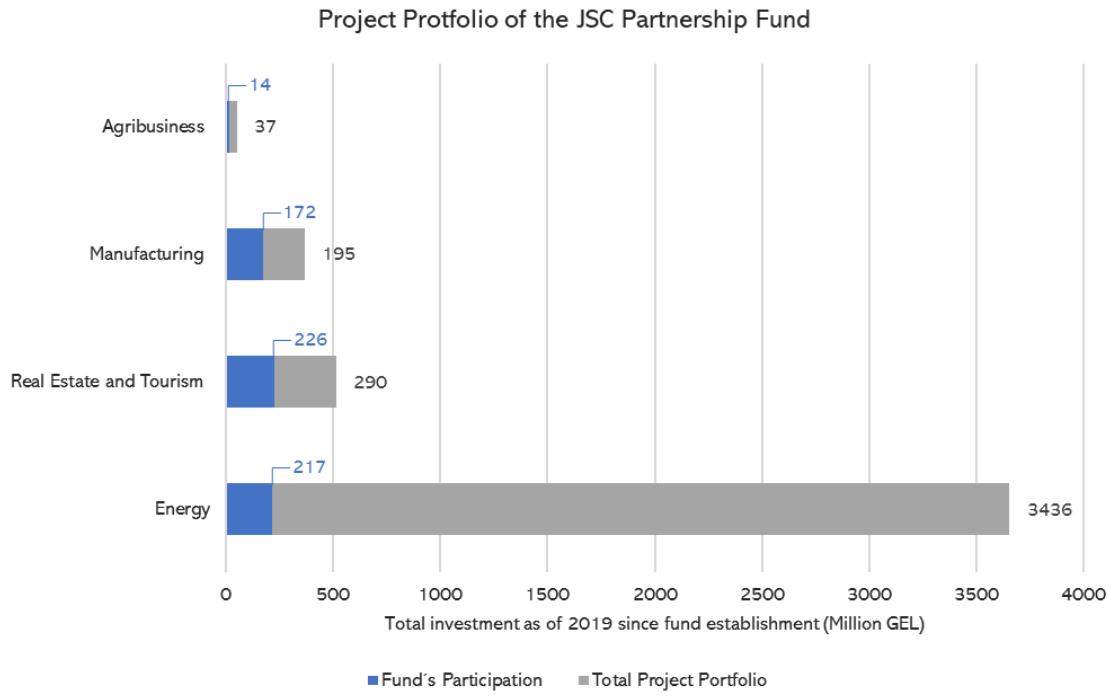


Figure 5. Total project portfolio of the JSCP Partnership Fund between 2011 and 2019.

Currently, the fund has one on-going project in the energy sector directly linked to climate change mitigation, namely the construction of the Nenskra Hydropower Plant, which is being co-financed primarily by EBRD, ADB, EIB, and KDB for a total 4.2 billion GEL investment since project commencement in 2017. The JSP Parentship Fund is participating in 10% of the project´s equity, surmounting to 420 million GEL. Other on-going projects supported by the fund potentially may derive mitigation and adaptation co-benefits, but their link to climate change has not been identified and/or reported by the fund. In other words, the fund does not have a green investment portfolio and does not tag projects by projects by their contribution to climate action.

The Municipal Development Fund (MDF):

Established in 1997, the MDF is part of the Administration of Housing Programs, Urban Planning, and Community Development Industry. Its primary objective is to is mobilize financial resources from international financial institutions and donor agencies, as well as Georgia´s central local governments, in order to make them available for investments in the regional and municipal infrastructure and services. The fund´s primary donors include the World Bank, EBRD, ADB, KfW, USAID, JICA, Meehan Family Foundation, MCG Millennium Challenge Georgia, UNDP, GIZ, and SIDA. Detailed information on the fund´s size and total project portfolio is not publicly available. Several ongoing projects supported by the fund are either directly or indirectly linked to sustainable development and climate change goals. However, the MDF does not have a dedicated green investment portfolio and the fund does not tag projects by their contribution to climate action.

Georgia Regional Development Fund (GRDF):

The Millennium Challenge Georgia (MCG) established the GRDF in 2006 to promote domestic growth and self-sustainability in the Georgian private sector by investing growing and dynamic small and medium enterprises (SMEs) operating outside the capital of Tbilisi, primarily focused on the agriculture and tourism sectors. The GRDF in managed by the Small Enterprise Assistance Funds (SEAF) with headquarters in the United States, with the currency of all investments being US dollars. The fund committed a fixed amount of 30 million USD (97 million GEL) in 2006 for mezzanine investments seeking a target internal rate of return of 10% in projects greater than 0.5 million USD (1.6 million GEL) up to a maximum of 3 million USD (9.7 million GEL). Up to date, the fund has invested in 10 projects with an average size of 2 million USD (6.4 million GEL) and continues to invest, with no investments yet having been exited or repaid.

The fund invests in projects linked to the Sustainable Development Goals #1 (no poverty), #8 (decent work and economic growth), and #9 (industry, innovation, and infrastructure). While the SME´s receiving support from the fund could potentially provide mitigation and adaptation co-benefits, the fund does not have a green investment portfolio and does tag investments by their contribution to climate action.

Georgian Co-Investment Fund:

The Georgian Co-Investment Fund provides investors with a private equity structure designed to promote investment in energy and infrastructure, hospitality and real estate, agriculture, and manufacturing. Established in 2013, this private investment fund is currently managing assets over 6.4 billion GEL and plans to deploy its capital over the next seven years, seeking a minimum internal rate of return threshold for projects of 17%. The fund intends to invest in 25-75% of the total equity of projects, each having a minimum size of 16.1 million GEL.

The project portfolio of the Georgian Co-Investment Fund focuses on the following areas:

- Medium and large-scale hydro projects.

- Thermal powerplants above 200 MW capacity.
- Large-scale commercial infrastructure
- Import and export substitution opportunities for agribusinesses.
- Developing the agriculture value chain.

While hydro projects are directly linked to climate change mitigation goals, the fund does not have a green investment portfolio and does not tag projects by projects by their contribution to climate action.

Government Incentives Favouring Climate Action

Government incentives favouring climate action is a relatively new concept in Georgia that has only been recently introduced in the transport sector since 2016, the energy generation and transmission sector in 2018, as well as the industry sector in 2020.

Concerning the transport sector, several tax incentives have been introduced in Georgia since 2016 to promote climate change mitigation, particularly aimed at facilitating the renovation of the country's car fleet and fostering the adoption of cleaner transport fuels and technologies by creating a favourable economic environment for the development of a low-carbon transportation system as follows:

- Since 2016, no excise tax[12] is levied on imported electric vehicles. Moreover, excise tax for hybrid cars have decreased by 60%.
- Since 2017, excise tax on almost all types of non-electric vehicles have increased by about 25% percent, doubling for cars above 10 years of age and almost tripling for cars over 14 years of age.
- In 2017, the excise tax on fuel import increased considerably, doubling for imported petrol and tripling for imported diesel.[13]

Moreover, the national framework for vehicle technical inspections have been reformed to favour the import of new and electric cars as follows:

- New vehicles up to 4 years of age are no longer required to undergo technical inspections.
- The frequency of technical inspections for vehicles between 4 and 8 years of age have been reduced to a biannual basis.
- The frequency of technical inspections for older vehicles above 8 years of age have been set to an annual basis.
- Non-electric vehicles are subject to an increased technical inspection fee 25% above that of electric vehicles.

[12] An excise tax is a tax is imposed on the sale of specific goods or services, or on certain uses.
[13] LEPL Environmental Information and Education Center. Air quality portal. Available at: https://air.gov.ge/en/pages/4/6?news_event_id=3

Local governments such as the city of Tbilisi have also provided economic incentives to further stimulate electric vehicle use by eliminating the parking fee for these types of vehicles in public parking lots in the city.[14]

The MoF serves a crucial role in assessment and enforcement of tax incentives/tools to enable climate related actions, thus supporting effective and efficient taxation policy as well as revenue collection.

The impact of these environmental tax incentives is evident for creating a favourable climate finance landscape in the transport sector. As reported by the Ministry of Internal Affairs of Georgia[15], the number of registered electric and hybrid vehicles in 2019 were 15 times greater than number of registrations in 2015, prior to the introduction of the tax incentives. The number of hydrogen fuel-cell vehicles and hybrid gasoline/ hydrogen guel-cell vehicles registered in 2019 are double than the number of registrations in 2015, prior to the introduction of the tax incentives. A similar impact is observed on the number of imported vehicles. Thanks to these tax incentives, the number of import of vehicles with petrol-based engines was reduced by half in just one year (2017 compared to 2016) and in continued reduction until 2020. Conversely, the import of hybrid vehicles tripled in just one year (2017 compared to 2016) and continued increasing until 2020.

Concerning the energy sector, the Government of Georgia adopted the Law of Georgia on Public-Private Partnership[16] as of May 4, 2018. This law defines a Public-Private Partnership (PPP) as an agreement between a public sector institution or municipality and a private developer, in which the private developer assumes substantial financial, technical, and operational risk to design, finance, build, and operate the project. The law admits PPPs through direct negotiations only in the energy sector, which must meet a series of specific criteria. Among these, the minimum term for the PPPs must be at least 5 years and the project value shall be no less than 5 million GEL. The introduction of this law has catalysed the investment in utility-scale hydro, solar, thermal, and wind renewable energy projects in the country by promoting public-private joint investments through the Georgian Energy Development Fund (GEDF), the JSC Partnership Fund, and the Georgian Co-Investment Fund.

Particularly focused on incentivising energy-efficiency measures, the Ministry of Economy and Sustainable Development of Georgia prepared the Law Energy Efficiency, which was approved and adopted by Parliament on May 21, 2020. This law provides the legal framework for exploring, developing, and introducing fiscal mechanisms such as financial incentives and tax concessions for promoting energy efficiency measures in the near future, including:

- Establishing energy efficient public procurement practices.

[14] Tbilisi City Council resolution #33-99, 27/12/2016. Available at: https://matsne.gov.ge/ka/document/view/3510243?publication=16
[15] For raw data on vehichle imports and registration in Georgia, visit the Ministry of Internal Affairs website, available at: https://info.police.ge/page?id=377&parent_id=121.
[16] Law of Georgia on Public-Provate Partnerships. Available at: https://vre.gedf.com.ge/cdn/library/matsne-4193442-0%20PPP%20Law_ENG.pdf

- Establishing accreditation and certification schemes in industry, construction and buildings.
- Establishing a certified energy management system for industries based on recurrent energy audits, the goal of which is to identify the possibility of reducing energy consumption, preparing recommendations on energy efficiency measures, and entering voluntary agreements with industrial enterprises towards reaching mutually agreed energy efficiency targets. Under this system, Georgia will also envisage the introduction of incentive programmes for SMEs, in order to implement energy audits and measures to be implemented as a result of energy audits.
- Establishing a legally binding energy efficiency commitment scheme for energy suppliers and distributors, subject to fines for incompliance.
- Establishing an energy consumption metering and tax accrual system.

As part of Georgia's NDC and its 2030 Climate Change Strategy, the country is committed to explore the development and implementation of further climate-change-related incentives in the energy and transport sectors, as well as introducing incentives in other sectors:

- By 2030, explore enhanced incentive options to attract further large-scale investments in utility-scale renewable energy projects.
- By 2030, explore incentive options for individuals and SMEs to promote the purchase and installation of high-efficiency stoves, high-efficiency heating systems, and solar-powered water heating systems in residential and commercial buildings.
- By 2030, explore incentive options for farmers to process agricultural residues with the aim of limiting field burning practices in Georgia.
- By 2030, explore incentive options to reduce firewood usage in Georgia, such as bio-tax incentives.
- By 2030, introduce enhanced tax incentives for electric and hybrid transport.
- By 2030, increase taxes on fossil fuels.
- By 2030, explore incentive options to promote public transport.

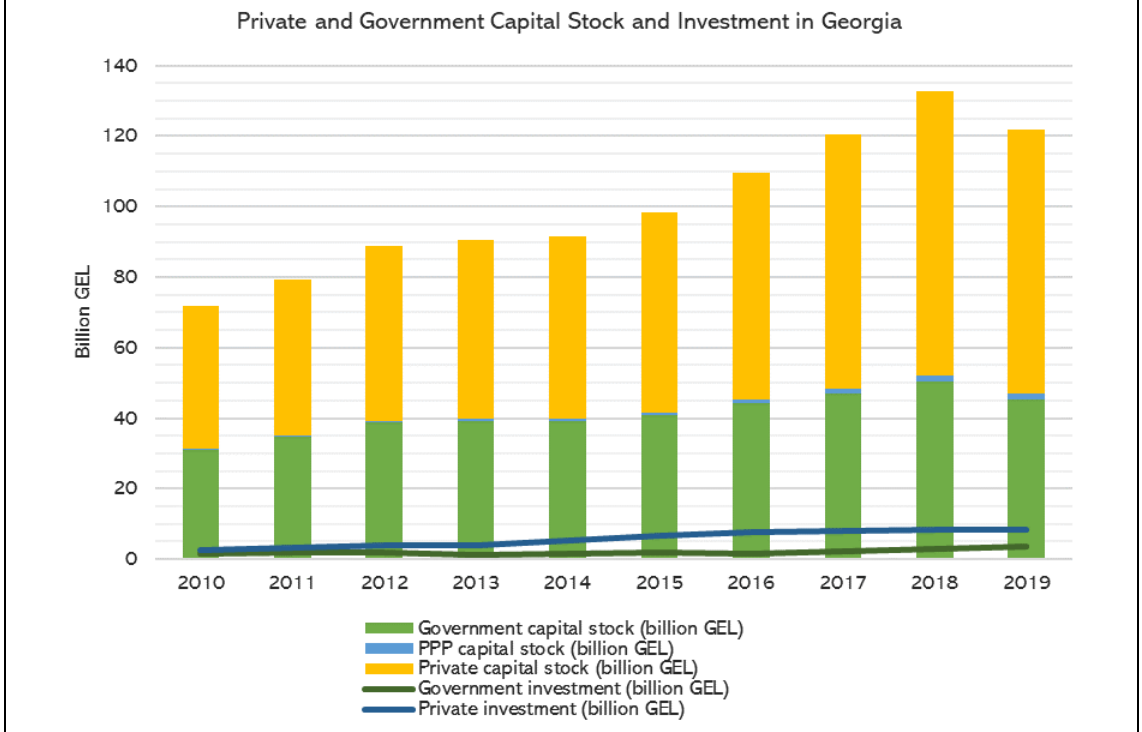
A "Sustainable Finance Taxonomy" is currently being developed by the National Bank of Georgia, which assist in the identification of private climate finance in the country. It will make it mandatory for banks to report their operations according on the taxonomy. This will fill the absence of a nationally adopted taxonomy in the country. The Sustainable Finance Taxonomy will incorporate climate, green and social finance while also adding wider considerations concerning the longer-term economic sustainability of the organizations that are being funded, as well as the role and stability of the overall financial system in which they operate. Therefore, the sustainable finance definition used in this taxonomy covers green finance (that includes climate finance) along with social finance.

1.3 Private Climate Finance

Private investment in the country's capital stock has increased significantly over the past twenty years thanks to private sector deregulation, tax system streamlining, improved market transparency and promotional activities, all of which have increased the economic appeal of private investment in the country.

In fact, private investment in Georgia in 2019 (surmounting to 8.28 billion GEL) was 3.5 times greater than that in 2010 (surmounting to 2.42 billion GEL), observing a much faster growth rate compared to government investment which doubled in the same time period from 1.71 to 3.71 billion GEL. It is also observed that investment in Georgia is now primarily derived from private sources, with private investment in 2019 being 2.3 times greater than government investment. Georgia's capital stock over the past ten years is also mostly attributed to private capital, with the difference between public and private capital steadily diverging in favour of private funds. The private capital stock increased by 85% between 2010 and 2019, compared to the government stock, which only increased by 46%. As of 2019, Georgia´s total capital stock was 121.98 billion GEL, 61% of which corresponds to the private sector (74.88 billion GEL), 37% corresponds to the government capital stock (45.44 billion GEL), while the remaining 2% corresponds to public-private partnerships (PPPs) surmounting to 1.66 billion GEL. The following table provides further details on the private and government capital stock and investment in Georgia over the past decade.

Table 10. Government and private capital stock and investment in Georgia, 2010-2019.

Government and Private Capital Stock and Investment in Georgia, 2010-2019		
		
Year	Capital Stock	Annual Investment

	Government capital stock (billion GEL)	PPP capital stock (billion GEL)	Private capital stock (billion GEL)	Government investment (billion GEL)	Private investment (billion GEL)
2010	31.10	0.37	40.36	1.71	2.42
2011	34.60	0.48	44.29	1.87	3.31
2012	38.68	0.62	49.55	1.97	4.05
2013	39.12	0.67	50.65	1.36	4.01
2014	38.99	0.72	51.71	1.44	5.36
2015	40.87	0.81	56.68	1.78	6.49
2016	44.16	1.15	64.27	1.72	7.79
2017	46.84	1.38	72.32	2.31	8.08
2018	50.26	1.68	80.76	2.86	8.36
2019	45.44	1.66	74.88	3.57	8.28

Source: Adapted from IMF (2021). Investment and Capital Stock Dataset 1960-2019.

As there is currently no centralised system in place in Georgia for identifying non-Official Development Assistance (non-ODA) projects in the country, the share of such private investment into climate change initiatives is not easily quantifiable. At the international level, the OECD database reports only two instances of international private funding for climate change projects in Georgia within the 2010-2019 period as follows:

Table 11. International private funding of climate change projects in Georgia recorded within the OECD database within the 2010-2019 period.

Commitment year	Provider	Project description	Funds provided	Financial mechanism	Target sector
2017	William & Flora Hewlett Foundation	Support to UNEP for transport policy and administrative management in Georgia	9,016,008.06 GEL	Grant	Transport – Mitigation
2019	Grameen Crédit Agricole Foundation	Support to Lazika Capital for microfinance of SMEs	298,474.80 GEL	Concessional loan	Business Development – Adaptation

However, it is known that Georgia is mobilizing private funds from the Global Climate Partnership Fund (GCPF) through Basisbank and TBC Bank. Th GCPF is a public-private partnership that uses public funding to leverage private capital in order to mobilize investments through local financial institutions in each country. It supports projects that mitigate climate change and drive sustainable growth in developing and emerging markets, targeting small and medium-sized businesses and private households for energy efficiency and renewable energy generation. It also supports observations, information exchange, research, capacity development on weather forecasts early warnings, from capacity development and monitoring of greenhouse gases. Through GCPF's financing, the Basisbank has strengthened its green lending and has built up capacity to assess eligible green projects. As the leading universal banking group in Georgia, TBC Bank has obtained resources from the GCPF to increase its lending capacity for private climate-related projects.

At the national level, some Georgian companies have also started to see climate change investments as a business development opportunity, diversifying their portfolios and strengthening their competitive advantages in emerging new business contexts such as the Georgia-EU Deep and Comprehensive Free Trade Area (DCFTA) and the Association Agreement with the European Union (EU).

Furthermore, innovative financial incentives and funding mechanisms are already widely available for the private sector in Georgia, but many remained unexplored or unused. The

following table indicates existing and potentially available private finance mechanisms in Georgia.

Table 12. Available private finance mechanisms in Georgia.

Mechanism	Domestic sources				International sources	
	Commercial banks	Microfinance institutions	Institutional investors	Non-financial corporations	Financial institutions	Non-financial corporations
Corporate bonds	Available but not yet used	Available but not yet used	Available but not yet used	Available but not yet used	Available but not yet used	Available but not yet used
Project bonds	Available but not yet used	N/A	Available but not yet used	Available but not yet used	Available but not yet used	Available but not yet used
Direct lending	Existing channel	Available but not yet used	Available but not yet used	N/A	Existing channel	N/A
Mezzanine financing	Existing channel	N/A	Existing channel	N/A	Available but not yet used	N/A
Direct investment	N/A	Available but not yet used	Existing channel	Existing channel	Existing channel	Existing channel
Equity funds	N/A	N/A	N/A	N/A	Existing channel	N/A
Guarantees/insurance	N/A	N/A	N/A	N/A	Available but not yet used	N/A
Fund seeding	Available but not yet used	Available but not yet used	N/A	N/A	Available but not yet used	N/A
Currency swaps	N/A	N/A	N/A	N/A	Existing channel	N/A
Securitisation	N/A	N/A	Available but not yet used	N/A	Available but not yet used	Available but not yet used
Pooling/aggregations	N/A	N/A	Available but not yet used	N/A	Available but not yet used	Available but not yet used

Source: Adapted from OECD (2018), Mobilising Finance for Climate Action in Georgia, Green Finance and Investment, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264289727-en

Trends indicate a progressively more favourable market for private investments, providing an excellent opportunity for leveraging private finance towards climate action investment in Georgia. Nevertheless, substantial barriers must still be overcome to boost private climate finance in the country as further described in section 2 of this document.

2. Barriers to Financing Climate Change Actions

Mobilising financial resources will require Georgia to overcome several key barriers that are currently preventing the engagement and investment of finance resources for climate action in the country. This section identifies these key barriers related to finance and investment in Georgia that are hindering the country's access to finance for climate change activities.

It is important to note that the key barriers identified in this section are at the national level, and that there will be potential sector specific barriers and at the macro-environment that require to be addressed on an ongoing basis.

Lack of coherent national climate change policy framework to mobilise finance for climate action

Georgia has had a substantial history of climate change policy development in the context of the international commitment processes and national objectives, with a series of policy documents addressing the issues of climate change. Nevertheless, climate change is not yet being consistently included as a key aspect across several components of national, sectoral, and sub-national policies. For instance, Georgia's Economic Development Strategy "Economy 2030" includes thematic areas that may be related to climate change; however, interlinkages between economic development and climate change are not explicitly stated in the document. Several sectors are also lacking strategic policy documents showcasing lines of action for addressing climate change.

The national policy framework sets the foundation for budget allocation, including national expenditure, private sector incentivisation, and application for international support. National-level strategies should function as an umbrella for sub-national level strategies and should provide clear interlinkages. Ensuring coherence among policy documents at the national and sub-national level will build stakeholders' confidence, in both public and private sectors, to direct their financial resources to climate action. It will also prevent inefficiency and unexpected obstacles and avoid confusion among stakeholders. The allocation of funding for climate change actions is therefore hampered without its effective and consistent mainstreaming across all aspects of the national policy framework. Climate change should be integrated into the national policy framework through an overarching strategy defining the country's direction it envisions to follow, and against which shorter-term documents containing the specific actions can be linked.

Inconsistent stocktaking of investment needs for climate action

An accurate stocktake of the financial investments needed to achieve Georgia's climate change mitigation and adaptation targets, constitutes one of the main enabling conditions for mainstreaming climate change within Georgia´s State Budget, as well as allocating the necessary resources for specific state interventions. As for many other countries worldwide, this task remains challenging for Georgia as the country's main strategic documents lack specific targets with their related financial requirements that can subsequently be linked to budget programmes.

While general useful figures are available for climate change mitigation, these are incomplete, outdated, and fragmented across various policy documents, with limited to no estimates available for the adaptation counterpart. Several key strategies also outline the necessity for costs estimates for policy reforms to still be calculated. However, it is fundamental to understand the financial needs for each envisioned mitigation and adaptation actions, in order to effectively seek out the necessary funding and efficiently allocate resources towards country´s priority actions, in consideration of the shifting national climate finance landscape.

It is important to note that the lack of targets and financial requirements in national and sub-national policy documents was related to the absence of a streamlined and structured approach to strategic and policy documents. However, this has changed with the adoption in 2020 of Resolution 629 of the Government of Georgia in On Approval of the Rules for Development, Monitoring and Evaluation of Policy Documents. It sets specific requirements for strategic documents and will resolve the issue for documents to be produced from 2020 onwards. The policy documents subsequently developed in line with Resolution 629 should include specific and justified financial requirements for climate action that can subsequently be linked to budget programmes.

Lack of private sector investments

Although Georgia has undergone profound structural and market reforms to modernise and revitalise its economy within the past 15 years, several factors continue to limit the country´s appeal as an investment destination for private climate finance sources.

However, limited availability of low-cost, long-term capital in the Georgian private sector continues to be a mayor barrier to promote investments in climate-related projects. Private finance mechanisms in Georgia for climate change mitigation and adaptation projects typically require high up-front capital costs, long payback periods and a high reliance on government incentives, all of which limit the potential of climate change investment in the country. While some low interest rate loans from commercial banks do exist in Georgia, the minimum loan threshold substantially exceeds the scope of private climate initiatives, particularly those of small to medium sized enterprises (SMEs). That, combined with high collateral requirements from banks further inhibit loan accessibility by Georgian enterprises.

The high collateral requirement from banks – about 220% of the value of the loan – also makes it difficult for Georgian companies, especially SMEs, to take loans (EU4Business,

2017). One study shows that commercial banks normally do not reach the threshold of uncollateralised loan stipulated by law (25% of total portfolio). This implies that commercial banks may perceive a greater level of risk than those required by the regulations (EIB, 2016). Moreover, attractive short-term lending opportunities in Georgia, such as retail banking (rather than corporate banking), often exacerbate a shortage of long-term capital that could be mobilised to finance climate action. The following table indicates existing and potentially available private finance mechanisms in Georgia.

Furthermore, several funding mechanisms are already widely available for the private sector in Georgia, but many remained unexplored or unused. According to the OECD, the private finance mechanisms in Georgia available but not yet used include[17]:

- Corporate bonds from domestic commercial banks and microfinance institutions, as well as domestic and international financial institutions and non-financial corporations.
- Project bonds from domestic commercial banks, as well as domestic and international financial institutions and non-financial corporations.
- Direct lending from domestic microfinance institutions and institutional investors.
- Mezzanine financing from international financial institutions.
- Direct investment from domestic microfinance institutions.
- Guarantees from international financial institutions.
- Fund seeding from domestic commercial banks and microfinance institutions.
- Securitisation form domestic institutional investors, as well as international financial institutions and non-financial corporations.
- Pooling/aggregations form domestic institutional investors, as well as international financial institutions and non-financial corporations.

Decreasing revenues, increasing expenditure and a growing public debt

At a national level, severe financial constraints limit state expenditure in climate related activities, with decreasing revenue growth, increasing expenditure and a growing public debt, all exacerbated with the socioeconomic crisis provoked by the global Covid-19 pandemic in Georgia.

Georgia's revenue has been relatively stagnant from 2018 to 2020 between 10.5 and 10.7 billion GEL, while expenditure continued to increase, driven by response measures and subsidies to mitigate the negative effects of the Covid-19 pandemic (Table 13). Although revenue partially recovered in 2021 to 12.8 billion GEL, expenditures reached 14.2 billion GEL in the same year, still resulting in a net operating balance of -1.4 billion GEL.

[17] OECD (2018), Mobilising Finance for Climate Action in Georgia, Green Finance and Investment, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264289727-en

Table 13. Evolution of Georgia's central government budget.[18]

Year	Revenue (billion GEL)	Expenditure (billion GEL)	Net operating balance (billion GEL)
2021	12.8	14.2	-1.4
2020	10.5	12.5	-2.0
2019	10.7	10.0	0.7
2018	10.6	9.5	1.1
2017	9.8	9.4	0.4
2016	8.6	8.7	-0.2
2015	8.2	8.2	0.01
2014	7.4	7.5	-0.05
2013	6.8	6.5	0.3
2012	7.1	6.6	0.4
2011	6.4	5.9	0.5
2010	5.4	5.5	-0.05

These severe financial constraints are also reflected in Georgia's growing debt, with the country's public debt to GDP at 52% in 2021 and government dept to GDP at 54% in that year (Table 14). The government dept to GDP in 2020 of 60.2% surpassed the maximum ceiling for government debt set by the Economic Freedom Act, which provides a ceiling for government debt to GDP ratio at 60%. Although this high increase in 2020 was caused by the Covid-19 pandemic, Georgia's government dept will remain high, with the International Monetary Fund (IMF) Work Economic Outlook Database forecasting it to decline to 49% in 2025[19], still substantially higher than in the period from 2010.

Table 14. Evolution of Georgia's debt.[20]

Year	External public debt (billion GEL)	External government debt (billion GEL)	Domestic government debt (billion GEL)	Public dept to GDP (%)	Government debt to GDP (%)
2021	25.4	24.0	5.8	52	54
2020	24.7	23.5	6.2	63	60
2019	16.5	15.7	4.2	42	40
2018	14.5	14.1	3.3	40	39
2017	13.4	13.2	2.9	40	39
2016	12.0	11.9	2.5	40	40
2015	10.3	10.3	2.2	37	37
2014	7.8	7.7	1.9	31	31
2013	7.3	7.1	1.3	30	29
2012	7.2	6.6	1.2	31	29
2011	7.0	6.0	1.2	32	28
2010	7.0	5.8	1.1	37	32

[18] https://www.geostat.ge/en/modules/categories/91/government-finance-statistics
[19] IMF, World Economic Outlook Database: October 2021 Edition. Available at: https://www.imf.org/en/Publications/WEO/weo-database/2021/October
[20] https://mof.ge/saxelmwifo_sagareo_valis_statistika

As a result, and in consonance with past climate investment trends and the planned 2021-2023 climate budget, this demonstrates the pivotal role of private funding and international support for the financing and implementation of the climate actions in Georgia.

High dependence on foreign financing

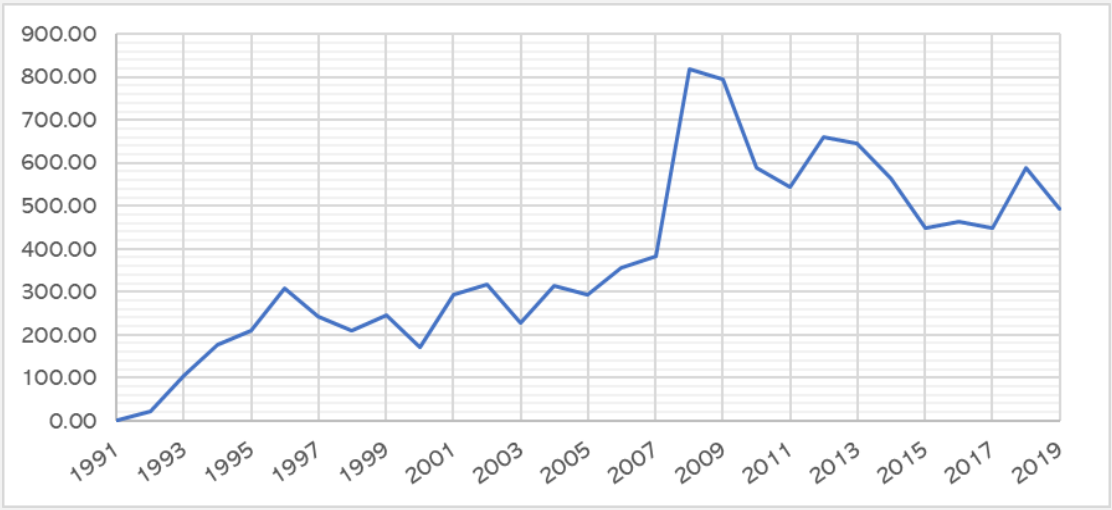
Since Georgia obtained independence in 1991, it has benefited significantly from international development cooperation and has heavily depended on foreign financing to fund national projects. The yearly net official development assistance (ODA) has been steadily increasing since the early 90s (Table 15). Although the sharp increase in 2008 is linked to the August 2008 war, which brought in additional assistance pledges, the expected decrease after the 2008 August conflict has been moderate and yearly net ODA figures remain high.

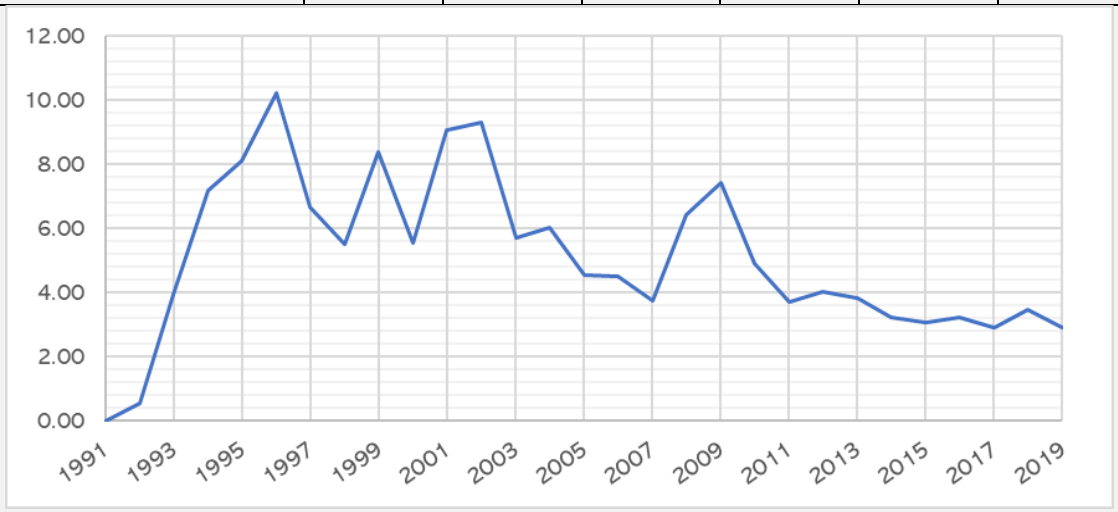
This dependence on foreign financing is also reflected in Georgia's net ODA as percentage of the gross national income (GNI) (Table 15), which is the sum of value added by all resident producers plus any product taxes not included in the valuation of output, plus net receipts of primary income from abroad. When ODA comprises a large proportion of the GNI, a country is highly dependent on foreign aid. Georgia's net ODA as percentage of GNI stood at 2.89% in 2019. Of the Newly Independent States (NIS) countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan), only Kyrgyzstan and Tajikistan have a higher dependence on international financing, with the average of NIS standing at 0.89% in 2019.[21] This adds a risk in being too heavily reliable on unpredictable aid and donor-driven aid programmes.

[21] https://stats.oecd.org/Index.aspx?DataSetCode=Table2A#

Table 15. Evolution of net ODA disbursements to Georgia (million USD).[22]

	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2019
	Period average					
Net ODA (million USD)	102.34	235.78	289.51	588.03	572.65	497.84
Net ODA as % of GNI	4.95	7.26	6.93	5.40	3.58	3.12





Currency depreciation

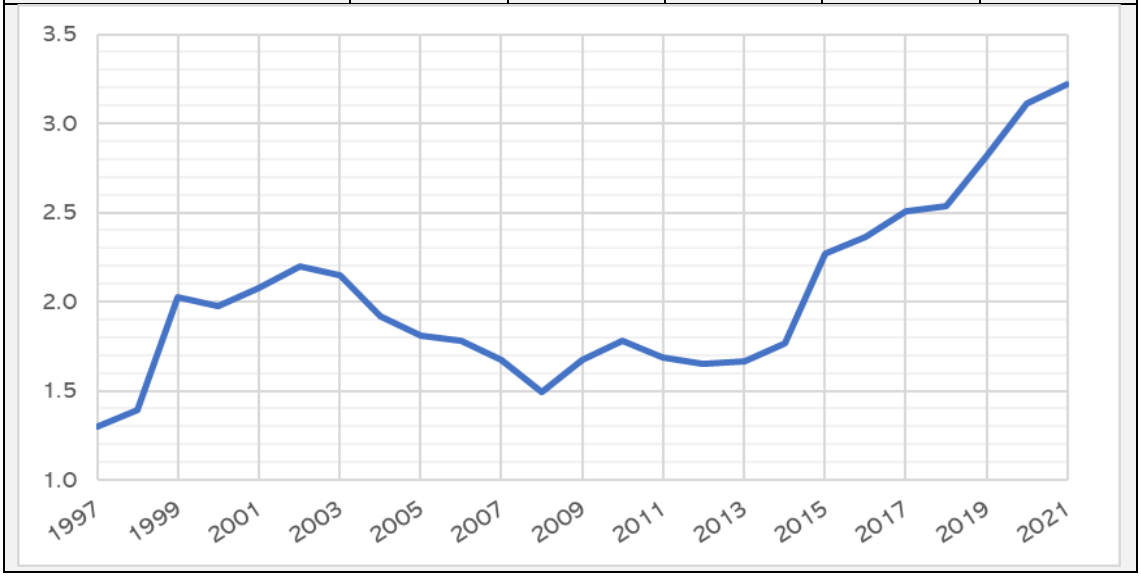
The national currency in Georgia, the Georgian Lari (GEL), has depreciated in recent years, which has especially accelerated since the start of the Covid-19 pandemic. Whereas in 2010, the official rate was 1.78 GEL to 1 USD, this has fallen to 3.22 GEL to 1 USD in 2021 (Table 16). Several reasons have contributed to the fall of the national currency of the country., such as, among others, reduced exports, depreciation of the currencies of important trade partners, negative expectations of the population, and decreased inflows from foreign sources.

[22] https://stats.oecd.org/Index.aspx?DataSetCode=Table2A#

The dollarisation of Georgia's economy is considerable, with 63% of deposits and 57% of loans denominated in US dollars as of end-2018[23], and the majority of the state's debt being in foreign currency. As the GEL depreciates, the foreign debt burden increases in direct proportion with the depreciation, with debtors not being able to pay off the loans in USD, as their income is in GEL, which will jeopardise banks and other credit service organisations. Therefore, the country remains vulnerable to exchange rate risk and the fast depreciation of the GEL provides a risk for the financial stability in Georgia. This negatively affects the country's macroeconomic environment and hinders the inflow of international investments.

Table 16. Exchange rate (1 USD to GEL, period average).[24]

	1997-2001	2002-2006	2007-2011	2012-2016	2017-2021
	Period average				
Exchange rate	1.7522	1.9702	1.6601	1.9433	2.8385



Lack of climate finance tracking

The national budgeting system in Georgia has substantially improved in recent years and includes clear budget planning, preparation, and implementation processes. However, as of April 2022, there are no specific legislative or procedural requirements on climate change budget formulation and in key budget documents. Therefore, a system of programme/project prioritisation related to climate change does not exist as part of the budget process. The lack of mechanisms for climate change reporting means that as of 2022 there is no specific disaggregation on climate change budget formulation, and no information is available on the specific climate change expenditures. These aspects are partially caused by the country lacking a system for climate budget tagging on a continuous basis, resulting in climate change expenditure not being identified and tagged in any steps

[23] https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1562748580656&uri=SWD:2019:292:FIN
[24] https://databank.worldbank.org/reports.aspx?source=2&series=PA.NUS.FCRF&country=GEO

of the budgetary process of Georgia, and the country not obtaining a clear picture of climate finance flows mobilised in the country through national expenditure as well as international support.

This results in significant limitations pertaining to the extent and quality of information concerning climate finance presented by the country, both at the national and international levels. The provision of an accurate, comprehensive, and transparent track record of climate change needs, spending, and support received, as well as the outputs and results of the mobilized funding is a clear enabling condition for boosting donor and investor confidence in Georgia. Donors tend to be unwilling to provide substantial amounts of financing under the absence of a transparent record of how climate finance gaps are being filled and how climate finance support is being utilized by the country.

Although the country has taken the first steps in including climate change in the budget formulation process through the ordinance of the Government of Georgia #88 on *the Measures to be Taken to Compile a Document of the Main Data and Directions of the Country for 2023-2026,* which was adopted on 25 February 2022, the proposed classification system creates a partial assessment opportunity and is not sufficient to evaluate and report on the climate change related expenditure. It provides a non-mandatory opportunity for spending institutions to provide information on climate change policy areas but is not a mandatory comprehensive tool for full-fledged integration of climate change dimension in the PFM, since it does not allow further defining the type of climate change action and quantitative evaluation of the climate-related expenditure. Georgia should further develop the system for calculating climate related expenditure, which should accurately determine the finance flows mobilised in the country through national expenditure as well as international support.

3. Guidelines for Resource Mobilisation

The environment for climate change resource mobilisation is growing rapidly, while also becoming increasingly competitive due to the rise of actors in need of finance to combat climate change induced issues. Although this explosion of public, private, bilateral, and multilateral sources offer countries new opportunities to address their climate change related needs, it also adds a level of complexity to identify and apply to relevant funding opportunities. Nevertheless, resource mobilisation is essential for countries to successfully implement and deliver climate change actions and programmes.

Georgia is therefore faced with a large scale of requirements, processes, and reporting among all the available funds, making it challenging to identify the most appropriate funding source for an activity. These guidelines provide Georgia with an approach for resource mobilisation, which will build on the exiting institutional and policy framework of the country to ensure the realisation of country-driven objectives. Resource mobilisation is a coordinated process of identifying actions for which monetary contributions are needed, initiating, and maintaining appropriate contacts with relevant donors, identifying the best finance source by need, prepare/plan for accessing these sources, and carrying out, and managing resource mobilisation activities. This will allow Georgia to close the funding gaps for actions in key strategical climate change documents.

The resource mobilisation guidelines have been divided in three main steps, namely, ensuring national institutional capacity, assessing the financial needs, and determining the most appropriate sources finance to meet the identified needs, and planning access to these sources (Figure 6). Each step contains several actions that Georgia should follow to ensure adequate resource mobilisation.

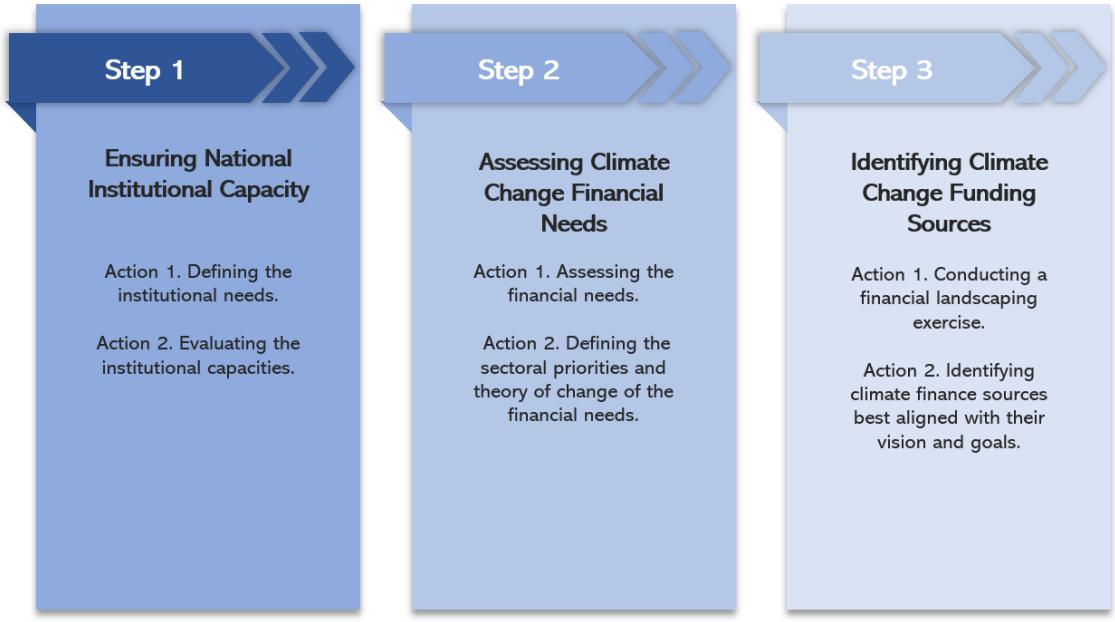


Figure 6. Resource mobilisation steps and corresponding actions.

3.1 Ensuring National Institutional Capacity

Action 1. Defining the institutional needs.

Mobilising resources is a multifaced challenge and countries will require sufficient institutional and governance processes for planning and coordination. The institutional capacities should be sufficient to assess climate change related financial needs, identify the relevant resource partners, engage, and negotiate with these resource partners, and manage, report, and communicate results of the funded activity. Proper engagement with resource partners will ensure transparency and build trust. However, lacking, and weak institutional capacities will act as a major deterrent for funding sources to invest in projects and programmes. In the eyes of investors, these institutions are not suitably equipped to provide strong value for their money. The institutions seeking resources to resolve the assessed funding gaps therefore require sufficient capacities to[25]:

- **Identify** the most suitable resource partner according to the scope and aim of the activity. This will involve assessing the climate change funding sources and identifying the most suitable match, and subsequently verifying that the resource partner is an acceptable source.
- **Engage** with selected resource partners concerning the activity for which resources are required. It will involve applying the agreed communications approach and developing advocacy tools such as concept notes and proposals, which will require knowledge on specific communication techniques for certain resource partners. This can be strengthened by having specific liaison roles/focal points for specific resource partners.
- **Negotiate** to finalise the conditions of partnership, including procedures and resources and reach an agreement, which highlights the importance of sufficient knowledge on types of funding agreements that can be reached.
- **Manage and report** on the use of the provided resources through agreed mechanisms to maintain good relations with the resource partner and prove them with regular feedback on the progress of the activity. This can be completed through particular donor formatting for reporting at agreed set intervals or providing them with mid-term and end-term evaluations of the activity.
- **Communicate results** and disseminate the activities lessons learned to raise visibility and advocate continued support.

Furthermore, institutions involved in arrangements that support finance for climate change responses should have several core functions, namely: (i) resource mobilisation (from domestic, international, public and private sources), and creation of a framework for management of fund flows; (ii) identifying the contribution that different stakeholders (ministries, sub-national government, civil society or the private sector) could make to implementation; (iii) fostering public engagement on efforts to respond to climate change,

[25] FAO, 2012. Guide to Resource Mobilisation.

and providing accountability for action; and (iv) taking stock of progress made, external developments, and opportunities for new or further action.

Financial intermediaries can be set up in the national systems to ensure mobilising and disbursing climate finance and can include national agencies, national financial institutions, and national climate change funds:

- National agencies are national finance ministries, which coordinate and manage climate expenditures through the budget systems, environment ministries, which have the technical responsibility to develop, negotiate and host climate change action and planning, and other sector line ministries, which execute and deliver climate funding.
- National financial institutions include national development banks, private banks, and micro-finance institutions. These financial institutions are favourable in accessing a wide range of international and national sources of public and private climate finance and disburse the funds to public and private sector investors.
- National climate change funds (NCCF) are extra centralised budgetary systems that support countries to collect, blend, and coordinate funds from different sources. They do not duplicate financial flows and collect funds from original sources such as the GEF and GCF, but rather provide a mechanism that can blend these resources with other resources.

The institutional needs will vary and depend on the country and the resources needs to successfully implement and deliver climate change actions and programmes. There is not one single approach for the institutional arrangements to mobilise and deliver climate finance, and it will depend on a country-basis. Georgia will therefore require defining the institutional needs according to the resource requirements as outlined in their national key strategic documents. It will potentially need to strengthen them according to the assessment of the existing capacity, which will be addressed in the following actions.

Action 2. Evaluating the institutional capacities.

Following defining the country-driven institutional needs to obtain the resources required as per the key national strategic documents, an important task is to assess the level of the existing capacity and identify the necessary areas to strengthen according to the defined institutional needs.

This process can be initiated through a decision tree to facilitate the understanding of the needs of the country and obtain an overall assessment of the relevant institution. The following figure illustrated in a simplified manner the decision tree process to assess the institutional capacities. This will be followed by a more in-depth assessment through a checklist.

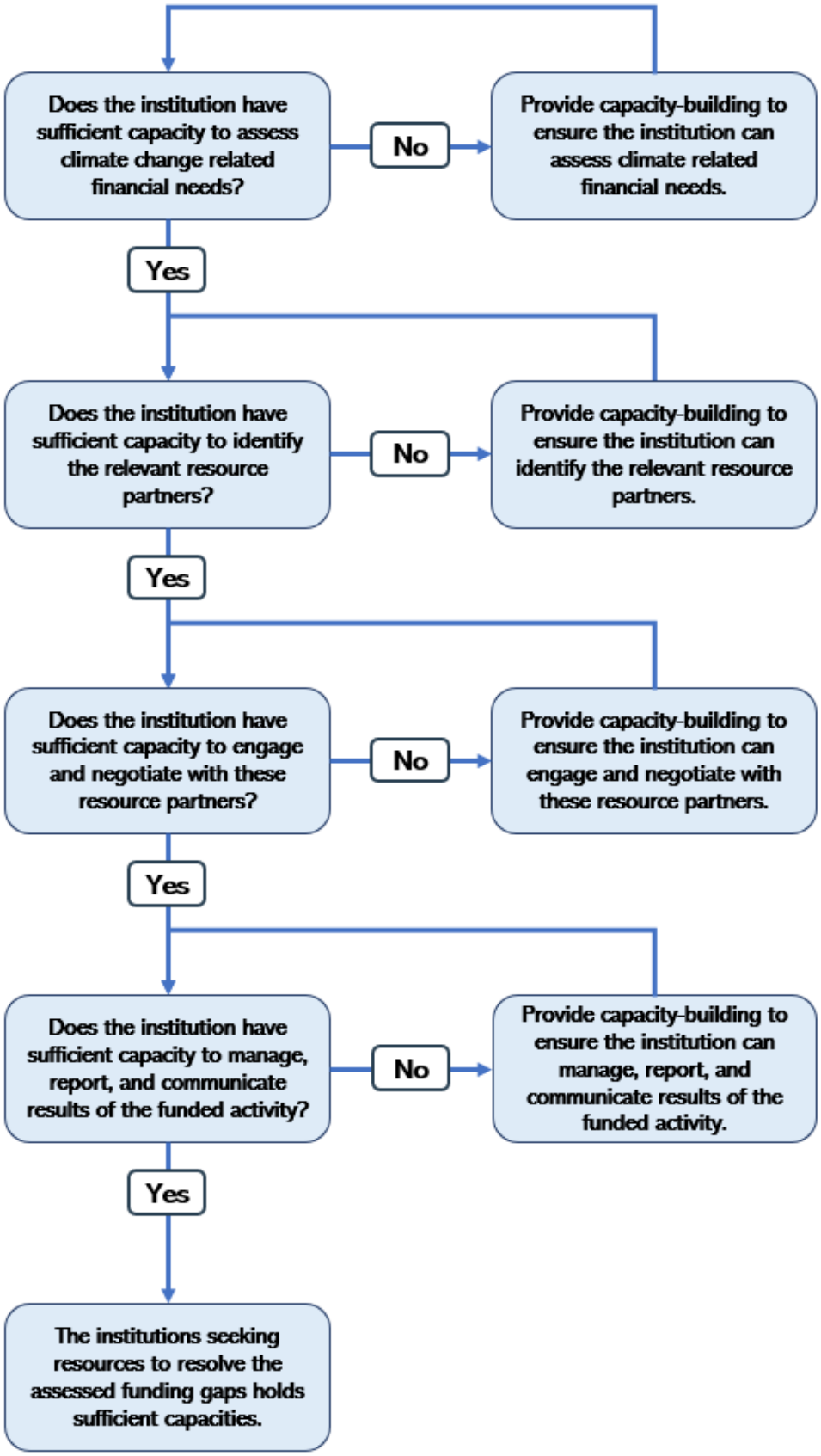


Figure 7. Decision tree for overall assessment of institutional capacity.

The assessment of the existing institutional capacity of institutions seeking resources will be followed by a more in-depth assessment through a checklist (Table 17). Institutions in Georgia seeking support will require to assess whether these priority institutional capacity and needs are fulfilled. Only when all checks are completed, does the institution contain sufficient capacities to assess climate change related financial needs, identify the relevant resource partners, engage, and negotiate with these resource partners, and manage, report, and communicate results of the funded activity.

Table 17. Checklist to evaluate priority institutional capacities and needs.

	Priority Institutional Capacities and Needs
☐	The institution has sufficient capacity to obtain an overview of the climate change related financial needs for priority (sub)action(s).
☐	The institution contains sufficient capacity to disaggregate the climate change related financial needs for priority (sub)action(s) between adaptation and mitigation, and according to the relevant NDC sector.
☐	The institution has an overall understanding of the relevant resource partners available for providing support, including their relevant main investment objectives, regional focus, type of provided funding mechanisms, eligibility criteria, and application procedures.
☐	The institution is aware of the avenues to be utilised to initiate and maintain a dialogue with relevant resource partners available for providing support.
☐	The institution contains a designated department or team of experts to engage and negotiate with relevant resource partners to obtain financial support.
☐	The institution contains a designated department or team of experts to manage and regularly report and communicate results of the funded activity to relevant stakeholders.
☐	The institution has legally binding organisational mandates to provide the adequate resources required from resource partners.
☐	The institution has the required systems and tools for data collection and management relevant for assessing financial needs, obtaining relating information and engaging with the corresponding resource partner.

3.2 Assessing Climate Change Financial Needs

Action 1. Assessing the financial needs.

To obtain funding for national programmes and actions, it is essential to have a clearly defined strategy that outlines the vision and the needs of the financial requirements of the country. Accurate information of climate finance flows will allow Georgia to make more informed decisions about planning, prioritization, and allocation of resources for climate change, and to measure and evaluate progress. The aim is to understand what each institution is doing regarding climate change, and what additional support is required to achieve the climate change objectives of a country. Furthermore, it is also necessary to understand any limitations to accessing climate finance, and the realistic absorption capacity, which relates to Georgia's capacity to absorb the benefits spilled over by Foreign Direct Investment (FDI), including financial, knowledge, and technology spill overs.

Each institution should communicate their financial needs for priority actions and the posing gaps that require further funding (Table 18). It is important that this is not just provided for the technology related costs, but also costs associated with research, monitoring, capacity building, and increased/changed regular expenditure. This will provide an understanding of the current situation in Georgia regarding climate financing, highlight any budgetary implications, support the identification and prioritization of the required resource mobilisation, and ensure they are based on up-to-date information.

Table 18. Identification of the financial climate change needs.

Intervention	Climate change priority (sub)action							
	Adaptation				Mitigation			
	Estimated need (GEL) (A)	Budget funding (GEL) (B)	Pledged financing (GEL) (C)	Financing gap (GEL) (D)	Estimated need (GEL) (A)	Budget funding (GEL) (B)	Pledged financing (GEL) (C)	Financing gap (GEL) (D)
Research								
Implementation • Up-front capital costs • Ongoing maintenance costs								
Monitoring								
Capacity-building								

Source: Adapted by authors based on CDKN Dalberg NCCF Resource Mobilisation Report.

To illustrate applying the assessment from Table 18 to estimate the financial needs for priority actions in each climate change area defined in the country's updated, spending institutions should follow the following steps:

A. Estimate need: total cost for implementing the action under this priority.
B. Budget funding: Total funding provided through national budget lines for n actions in the budget year of t.
C. Pledged funding: Funds that are committed by external entities to implement an action under this priority.

The final financing gap (D) = A – B – C.

Action 2. Defining the sectoral priorities and theory of change of the financial needs.

In addition to each institution communicating their financial needs for priority actions and the posing gaps that require further funding, these should be linked to the relevant climate change area defined in the country's updated NDC (Table 19).

Table 19. Climate change areas defined in Georgia's updated NDC.

Mitigation	Adaptation
Energy	Tourism
Transport	Agriculture
Buildings	Water resources
Industry	Natural ecosystems and biodiversity
Agriculture	Human health
Forestry	Infrastructure
Waste	

This provides important information to the country and answers the following essential question:

Are the financial needs for priority actions and the posing gaps that require further funding linked to NDC priorities of the country?

Furthermore, to improve the transparency and attractiveness for investors, institutions should substantiate their financial needs with a theory of change (Figure 8), which outlines the institutions overall vision, goals, outcomes, outputs, and priority actions. This provides the context to the actions through which institutions can communicate their desired and expected impact. Each of the priority actions which might constitute a financing gap should be part of the theory of change of the institution to substantiate the need for finance for climate action in Georgia.

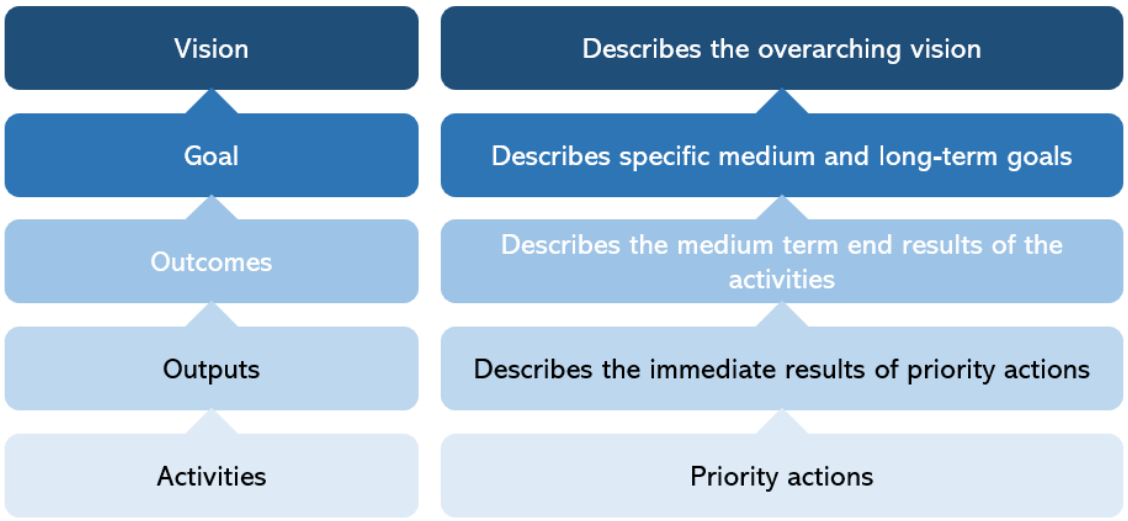


Figure 8. Theory of change for assessment of financial needs.

This approach can be integrated in the program budgeting practices in Georgia. According to the Rules and Methodology on Program Budgeting (#385, 08/07/2011)[26], each spending institution should provide information on funds used for the programs and measures implemented within the priorities set for the past two years, funds allocated for the programs and measures planned within the priorities of the current year, and mid-term budget of priorities for the years to plan. According to this information, each ministry will prepare and adopt their mid-term action plans, which encompasses a detailed list of activities required for the achievement of the program aims and goals encompassing the following four years, with the following information requested to be included for each activity, as defined in the Rules and Methodology on Program Budgeting:

- Essence of measures/activities
- Implementing agency/unit
- Baseline indicator of the activity and targeted indicator of its implementation
- Source of funding
- Costing required for the implementation of the activity in the current conditions of funding and entirety
- Adjustment of targeted indicator if the additional source of funding is solicited
- Information on the type of activity

Regarding the information on costing to be provided for each activity, the Rules and Methodology on Program Budgeting requires the following:

- Each activity should be supported with a costing to define the expenses to be incurred for individual activities. Methodology of costing is individual in most cases, though the following need to be considered:

[26] Rules and Methodology on Program Budgeting, Ministry of Finance, Tbilisi, 2011. Available at: https://www.mof.ge/images/File/budget_legislation/METHODOLOGY_OF_PROGRAM_BUDGETING.pdf

- When an activity is related to intellectual work carried out by the Office of the Ministry (other agency) costing will use man/hours as a unit of measurement.
- If a program cost depends on the number of beneficiaries, costing will use the number of beneficiaries as a unit of measurement.
- If a program envisages creation of a new infrastructure or making of a product, rather than intellectual work only, costing will use the expenses required for creation of the product (with intellectual work calculated in the first clause, provided it is not part of another activity or if it can be separated).

❖ In preparing the costing, it is also possible to use alternative ways, whereby an average cost of maintenance of an institution/unit is used as a unit of measurement (can be calculated from total expenses of several past and current years), which may then be broken down into agency/unit competencies and respective percentages in such total expenses.

The ordinance of the Government of Georgia #88 on *the Measures to be Taken to Compile a Document of the Main Data and Directions of the Country for 2023-2026* was recently adopted and recommends spending institutions to define the policy area of the program in the E-Budget System through a classification system which will include climate change, SDGs and gender, to set the respective performance indicators for climate policy area, and include a narrative on how the program/activities are linked to climate change.

Furthermore, defining the sectoral priorities and theory of change of the financial needs is in line with the recommendations of Georgia's Green Budgeting.[27] The Green Budget is a guiding document for the Parliament of Georgia, which is designed to align the budget of a given year with the legislative and institutional reforms to be implemented in the sector of environmental protection and natural resources. This signifies that each state body or institution is recommended to separately report programmes or measures that can be considered as green or environmental measures to identify the green measures and programmes in the country. Although Green Budgeting does not provide any guidelines, it does highlight the following aspects to be assessed and analysed by Green Budgeting:

1. Budgetary outcomes caused by distribution of inter-agency efforts and strategic agenda:
    a. Needs analysis of the environmental policy.
    b. Assessment of environmental actions in terms of fiscal sustainability.
    c. Formulation of "Green Goals" in the planning of long- and medium-term budgets.
2. Environmental impact of state measures:
    a. Identification of budgetary expenditures on actions that are potentially harmful to the environment.
    b. Assessment of the taxation system in terms of environmental impact.

27 Green Budget Project, Environmental Protection and Natural Resources Committee of the Parliament of Georgia, Tbilisi, 2021. Available at: http://environment.cenn.org/app/uploads/2021/02/EN_Green_Budget_A4_Print.pdf

c. Taking stock of subsidies for fossil fuel.
d. Prioritization of expenditures, considering factors of climate change.

3. Relevant budgetary measures:
   a. Ex-ante environmental impact assessment.
   b. Cost-benefit analysis.
   c. Ex-post assessment

3.3 Identifying Climate Change Funding Sources

Action 1. Conducting a financial landscaping exercise.

Mobilising resources requires detailed information of climate finance sources, their priorities, rules and procedures and accountability mechanisms. This can be seen as a financial landscaping exercise to select the type of investor that best matches the activity. It involves assessing their priority area including if the region or location of the activity features in the geographic priority area, the eligibility criteria, the application process of the financing source, and what types of funding mechanisms the resource partner provides.

Annex I provides a list of multilateral climate funds, multilateral financial institutions, bilateral finance institutions, and national finance institutions. For each financial source, the main investment objective, regional focus, types of funding mechanisms, key eligibility criteria, and application procedure is provided.

As these potential climate finance sources will be linked to the actions of Georgia's NDC, it is essential that the financial landscaping exercise is linked to the policy framework of the country, which will be further addressed in the final action of identifying climate change funding sources. This will allow the country to easily assess potential resource partners for each action.

Action 2. Identifying climate finance sources best aligned with their vision and goals.

Spending institutions in Georgia will subsequently require identifying climate finance sources best aligned with their vision and goals. This can be facilitated by selecting a shortlist of resource partners and comparing their related pros and cons, which will allow the prioritisation of high-potential climate finance sources. The prioritisation should be completed by comparing essential aspects between the climate finance source and the activity that requires funding, such as alignment with the theory of change developed during the assessment of the climate change financial needs and the selection criteria of the financing source (Figure 9).

Climate finance sources that strongly align with the vision and objectives of the activity and with funding criteria that suitably match will score higher and should be engaged with to provide financial support.

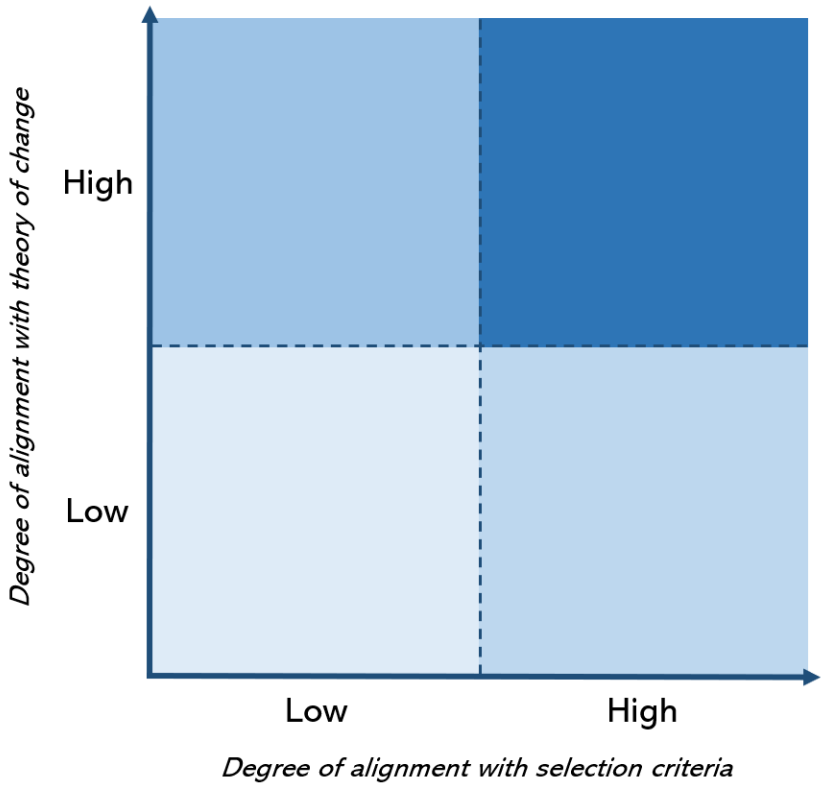


Figure 9. Climate funding source prioritisation matrix.[28]

Tables 20 and 21 have linked the climate finance sources presented in Annex I according to the priority mitigation and adaptation sectors of Georgia's updated NDC, respectively. This will support the selection procedure for spending institutions in Georgia to match the objective and goal of a project to the scope and focus of finance sources.

[28] Adapted by authors based on CDKN Dalberg NCCF Resource Mobilisation Report.

Table 20. Potential funding sources for mitigation actions by Georgia's NDC sectors.

	Energy	Transport	Buildings	Industry	Agriculture	Waste	Forestry
Multilateral Climate Funds – UNFCCC Climate Funds							
Green Climate Fund (GCF)	X	X	X	X	X	X	X
Special Climate Change Fund (SCCF)	X	X	X	X	X	X	X
Least Developed Countries Fund (LDCF)							
Adaptation Fund (AF)							
Global Environment Facility (GEF) - General Trust Fund	X	X	X	X	X	X	X
International Fund for Agricultural Development (IFAD)					X		
Multilateral Climate Funds – Non- UNFCCC Climate Funds							
Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	X	X	X			X	
European Fund for Sustainable Development (EFSD)	X	X	X		X		
Green for Growth Fund (GGF)	X	X	X	X			
International Finance Institutions – World Bank Group							
International Bank for Reconstruction and Development (IBRD)	X	X	X	X	X	X	X
International Development Association (IDA)	X	X	X	X	X	X	X
International Finance Corporation (IFC)	X	X	X	X	X	X	X
Multilateral Investment Guarantee Agency (MIGA)	X	X	X	X	X	X	X
International Finance Institutions – Other							
European Investment Bank (EIB)	X	X	X	X	X	X	X

	Energy	Transport	Buildings	Industry	Agriculture	Waste	Forestry
European Bank for Reconstruction and Development (EBRD)	X	X	X	X	X	X	X
Council of Europe Development Bank (CEB)	X	X	X	X		X	
Asian Development Bank (ADB)	X	X	X	X			
Black Sea Trade and Development Bank (BSTDB)	X	X	X	X			
Nordic Investment Bank (NIB)	X	X	X	X		X	
Nordic Environment Finance Corporation (NEFCO)	X	X	X	X	X	X	X
United Nations Program on Reducing Emissions from Deforestation and Forest Degradation (UN REDD Program)					X		X
Bilateral Finance Institutions							
Austrian Development Agency (ADA)	X	X	X	X	X	X	X
Denmark´s Investment Fund for Developing Countries (IFU)	X	X	X	X	X	X	X
Swedish International Development Agency (SIDA)	X	X	X	X	X	X	X
German Reconstruction Credit Bank (KfW)	X	X	X	X	X	X	X
German Society for International Cooperation (GIZ)	X	X	X	X	X	X	X
Germany's Federal Ministry of Economic Cooperation and Development of Germany (BMZ)	X	X	X	X	X	X	X
Germany's International Climate Initiative (IKI)	X	X	X	X	X	X	X
Swiss Agency for Development and Cooperation (SDC)	X	X	X	X			X

	Energy	Transport	Buildings	Industry	Agriculture	Waste	Forestry
Dutch Entrepreneurial Development Bank (FMO)	X				X		X
United States Agency for International Development (USAID)	X	X	X	X	X	X	X
Norwegian Agency for Development Cooperation (NORAD)	X	X	X	X	X	X	X
Czech Development Agency (CzechAid)	X	X	X	X	X	X	X
French Development Agency (AFD)	X	X	X	X	X	X	X
Japan International Cooperation Agency (JICA)	X	X	X	X	X	X	X
National Finance Institutions							
Georgian Energy Development Fund (GEDP)	X						
Georgia's JSC Partnership Fund	X			X	X		
Georgia's Municipal Development Fund (MDF)							
Georgia Regional Development Fund (GRDF)					X		
Georgian Co-Investment Fund	X			X	X		

Table 21. Potential funding sources for adaptation actions by Georgia's NDC sectors.

	Coastal Zone	Tourism	Agriculture	Water Resources	Biodiversity	Forestry	Human Health
Multilateral Climate Funds – UNFCCC Climate Funds							
Green Climate Fund (GCF)	X	X	X	X	X	X	X
Special Climate Change Fund (SCCF)	X	X	X	X	X	X	X
Least Developed Countries Fund (LDCF)	X	X	X	X	X	X	X
Adaptation Fund (AF)	X	X	X	X	X	X	X
Global Environment Facility (GEF) - General Trust Fund	X	X	X	X	X	X	X
International Fund for Agricultural Development (IFAD)			X				
Multilateral Climate Funds – Non- UNFCCC Climate Funds							
Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)				X			
European Fund for Sustainable Development (EFSD)							
Green for Growth Fund (GGF)							
International Finance Institutions – World Bank Group							
International Bank for Reconstruction and Development (IBRD)	X	X	X	X	X	X	X
International Development Association (IDA)	X	X	X	X	X	X	X
International Finance Corporation (IFC)							
Multilateral Investment Guarantee Agency (MIGA)	X	X	X	X	X	X	X
International Finance Institutions – Other							
European Investment Bank (EIB)	X	X	X	X	X	X	X

	Coastal Zone	Tourism	Agriculture	Water Resources	Biodiversity	Forestry	Human Health
European Bank for Reconstruction and Development (EBRD)	X	X	X	X	X	X	X
Council of Europe Development Bank (CEB)	X			X	X	X	X
Asian Development Bank (ADB)	X	X		X			X
Black Sea Trade and Development Bank (BSTDB)	X			X	X	X	
Nordic Investment Bank (NIB)	X			X			
Nordic Environment Finance Corporation (NEFCO)	X			X			
United Nations Program on Reducing Emissions from Deforestation and Forest Degradation (UN REDD Program)							
Bilateral Finance Institutions							
Austrian Development Agency (ADA)	X	X	X	X	X	X	X
Denmark´s Investment Fund for Developing Countries (IFU)							
Swedish International Development Agency (SIDA)	X	X	X	X	X	X	X
German Reconstruction Credit Bank (KfW)	X	X	X	X	X	X	X
German Society for International Cooperation (GIZ)	X	X	X	X	X	X	X
Germany's Federal Ministry of Economic Cooperation and Development of Germany (BMZ)	X	X	X	X	X	X	X
Germany's International Climate Initiative (IKI)	X	X	X	X	X	X	X

	Coastal Zone	Tourism	Agriculture	Water Resources	Biodiversity	Forestry	Human Health
Swiss Agency for Development and Cooperation (SDC)	X	X	X	X	X	X	X
Dutch Entrepreneurial Development Bank (FMO)			X			X	
United States Agency for International Development (USAID)	X	X	X	X	X	X	X
Norwegian Agency for Development Cooperation (NORAD)	X	X	X	X	X	X	X
Czech Development Agency (CzechAid)			X	X	X	X	X
French Development Agency (AFD)	X	X	X	X	X	X	X
Japan International Cooperation Agency (JICA)	X	X	X	X	X	X	X
National Finance Institutions							
Georgian Energy Development Fund (GEDP)							
Georgia's JSC Partnership Fund		X	X				
Georgia's Municipal Development Fund (MDF)	X	X		X			
Georgia Regional Development Fund (GRDF)		X	X				
Georgian Co-Investment Fund		X	X				

4. Prioritising and Mainstreaming Climate Change Budget Programmes

Countries are recognising the importance of integrating climate risks (both physical and transitional) and their implications into fiscal risks assessments undertaken by the Ministry of Finance and building climate change mitigation and adaptation spending into the budgetary process. This is also an integral part of the broader SDG budgeting reform agenda, allowing to link climate change and SDG budgeting to maximise the impact of the public finance management (PFM) system. Countries are also moving from annual budgeting to medium-term budgeting, which is derived from medium-term outlook and goals from development policies and plans. Different variants or approaches to this include Medium-Term Expenditure Framework (MTEF), Medium-term Budgetary Framework (MTBF), and Medium-Term Performance Framework (MTPF).

In the context of the MTEF, Georgia elaborates the country's Basic Data and Directions Document (BDD). The BDD is the basic plan of Georgia's development that outlines information on medium-term macroeconomic and fiscal forecasts, as well as information on basic development directions for Georgia's central, autonomous republics and local governments. It provides the data analysing the previous year's fiscal performance and the contours of the next year's financial plans and ensures the communication between national and regional strategies and priorities from the one side and between the spending of legal entities' strategies or priorities from the other side. The document covers a period of four years and is updated on an annual basis. When new policies or commitments are made by line ministries and public institutions within their respective action plans or sector strategies, the BDD sets a framework within which the institution should take resources into account.

This section provides a step-by-step approach and various tools and measures to integrate climate change into the medium-term budgeting process of Georgia to increase the prioritisation and mainstreaming of climate change relevant budget programmes during budget formulation. The approach also addresses the inclusion of gender and social aspects while considering climate change in planning and budgeting. It builds on the current developments in Georgia's budgetary process.

It is specifically aimed at providing recommendations to the recently established Climate Change Council (CCC), which is a high-level inter-governmental body that aims to ensure improved coordination of measures being implemented for climate change related issues. Among its responsibilities, the CCC reviews climate-related projects to be submitted to relevant funds and financial institutions and recommends the Ministry of Environmental Protection and Agriculture (MEPA) whether to support these projects. Furthermore, it reviews the national strategies and plans related to climate change and, in case of approval, shall initiate the decision-making process by the government of Georgia.

4.1 Integrating Climate Change into Pre-budget Documents

To allow for the prioritisation and mainstreaming of climate change relevant budget programmes during budget formulation, it is first essential to reflect climate change policies in pre-budget documents such as medium-term strategies. Including this from the start of the budget formulation cycle provides certainty and predictability to ministries, departments, and agencies regarding their climate expenditure planning, and supports them to streamline climate change policy integration into their budget submissions.

This can be realised by including information on the climate change significance or impact, climate change factors, and the related climate change budget implications and financial requirements of policy directions and projects in pre-budget documents. In the context of Georgia's budgetary process, and in line with the Rules and Methodology on Program Budgeting (#385, 08/07/2011), the following information requires to be submitted to the Ministry of Finance by line ministries in their pre-budget for the mid-term action plans:

a. Essence of measures/activities
b. Implementing agency/unit
c. Baseline indicator of the activity and targeted indicator of its implementation
d. Source of funding
e. Costing required for the implementation of the activity in the current conditions of funding and entirety (if the activity can be developed in a different manner if additional funding is solicited)
f. Adjustment of targeted indicator if the additional source of funding is solicited
g. Information on the type of activity: whether it is an extension of the program under the current route or is related to a reform, new policy, or program

Preferably, this information should be included for climate change allocations over a medium-term period, as per the MTEF approaches, which will result in medium-term plans reflecting the climate change policy priorities with cost estimates. This should be available for both climate change mitigation and adaptation commitments and be in line with the main national climate change policy framework, such as a country's NDC or LT-LEDS.

Georgia's BDD for 2022-2025 contains considerations for the protection of environments, maintenance of its sustainability and rational use of natural resources in parallel with economic development and outlines it as a key priority of the Government of Georgia. However, this does not necessarily relate to climate change issues, and the BDD does not address climate change as a specific aspect to address. Furthermore, the BDD contains priorities to strengthen gender equality in all areas of public life, and rapidly and effectively respond to each case of gender-based violence, and support specific vulnerable groups such as children, older people, ethnic minorities, and people with disabilities. Nonetheless, these priorities are not specifically linked to gender and vulnerable groups aspects of climate change.

Therefore, as of 2022, there is no specific reflection of climate change policies in these pre-budget documents. However, the situation in relation to climate change budget formulation is to be changed from 2023. The ordinance of the Government of Georgia #88 on *the Measures to be Taken to Compile a Document of the Main Data and Directions of the Country for 2023-2026* was adopted on 25 February 2022 and recommends spending institutions to define the policy area of the program in the E-Budget System through a classification system which will include climate change, SDGs and gender, to set the respective performance indicators for climate policy area, and include a narrative on how the program/activities are linked to climate change.

To facilitate this upcoming change and improve the integration of climate change into pre-budget documents, the CCC should ensure that each ministry within the Council sets clear policy targets for climate change relevant initiatives, including indicators and cost estimates by year, and individual programmes. This should also provide a clear link to the NDC targets, and specific initiatives aimed at achieving these targets. This can be achieved by providing support to ministries to screen policies, evaluate the climate change impact, and reflect policy priorities in climate change sectoral medium-term strategic plans.

By providing this top-down support, it will ensure that climate change adaptation- and mitigation-related actions, measures, and key performance indicators (KPIs) are accurately reflected in key strategic documents. This will allow explicit reflection of climate change policies in strategic budget documents and will lead to spending institutions being able to present, in addition to the currently mandatory information as per the Budget Code of Georgia, information on climate change related expenditure.

4.2 Integrating Climate Change into Medium-term and Annual Budget Preparation

It is essential that during the budget preparation process of a country spending institutions actively participate to ensure that the expenditure policy proposals are aligned with the policy objectives set out in approved and costed strategic plans. This will also involve comprehensive and clear budgetary guidelines set out by the Ministry of Finance, which should include climate change considerations, to support spending institutions in reflecting climate change policies in the medium-term and annual budgeting.

Higher-level support from the Ministry of Finance or other intern-governmental bodies such as the CCC through guiding documents or capacity building for spending institutions in their planning and budgeting processes is therefore important to ensure that the budget properly reflects the expenditure policy priorities of each ministry. These expenditure policy proposals submitted to the government should be aligned with the policy objectives set out in approved and costed strategic plans of each ministry.

Although Georgia adopted the Rules and Methodology on Program Budgeting (#385, 08/07/2011)[29], which provides guidance and the methodology to be applied to program budgeting, it does not reflect the approach for climate change considerations in the budgeting process. Furthermore, the ordinance of the Government of Georgia #88 on *the Measures to be Taken to Compile a Document of the Main Data and Directions of the Country for 2023-2026*, which creates the opportunity for spending institutions to tag climate change related actions, does not provide any additional guidance for the Ministries to report this information.

It is therefore recommended for the CCC to provide specific guidance to ministries in integrating climate change into their annual budget preparation, which will also include ensuring that climate priorities are updated in the mid-term budgeting process. This can be achieved through the Thematic Working Group on Climate Finance under the CCC, which is an advisory body of the Council for the development of specific issues related to climate change related financial topics. Working Groups (WGs) within the Council are composed of civil servants, experts, and representatives of academic institutions and gather every three months. During these tri-monthly meetings, the Climate Finance WG can provide capacity building to the financial departments of the Ministries within the CCC on gaining an understanding what climate change entails, how mitigation and adaptation can be differentiated, and how to integrate climate change in their annual budget preparation.

Furthermore, through the CCC, the Ministry of Finance can be supported in including more climate budget tagging support in the budget guidance documents, such as the Rules and Methodology on Program Budgeting. For instance, Annex N1 (14.08.2015 N265) of Program Budgeting of the Rules and Methodology on Program Budgeting could incorporate definitions of climate change, mitigation, and adaptation.

Climate Change

A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

Mitigation

Human intervention to reduce or limit the sources or enhance the sinks of greenhouse gas emissions.

Adaptation

Solutions for natural or human systems that aim to prevent or reduce the risk or vulnerabilities of the adverse impact of the current climate and the expected future climate and to increase resilience.

[29] Rules and Methodology on Program Budgeting, Ministry of Finance, Tbilisi, 2011. Available at: https://www.mof.ge/images/File/budget_legislation/METHODOLOGY_OF_PROGRAM_BUDGETING.pdf

In addition, Annex N2 (14.08.2015 N265) of the Rules and Methodology on Program Budgeting could provide further guidance for the inclusion of climate change in the provided structure for the Annex to the program budget (Tables 22 and 23).

Table 22. Incorporation of climate change in indicated information for each program.

Program Name (Program Code)				
Implementing Agency				
Program Description and Goals				
Expected Outcome				
Performance Indicator of the Program Outcome:				
N°	Baseline Indicator	Targeted Indicator	Possibility of Deviation (%/Description)	Potential Risks
1.				
2.				
3. (Gender, if applicable)				
4. (Climate Change – mitigation or adaptation, if applicable)				
5. (Gender related to Climate Change, if applicable)				

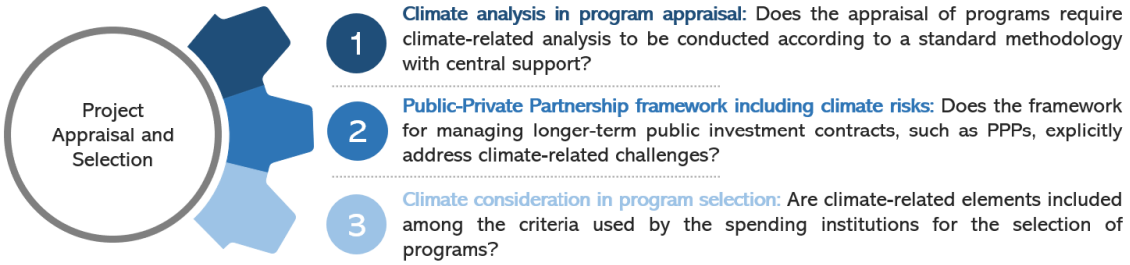
Table 23. Incorporation of climate change in indicated information for each sub-program/activity.

Name of the Sub-Program (Program Code)				
Implementing Agency				
Program Description and Goal of the Sub-Program				
Expected Outcome				
Performance Indicator of the Program Outcome:				
N°	Baseline Indicator	Targeted Indicator	Possibility of Deviation (%/Description)	Potential Risks
1.				
2.				
3. (Gender, if applicable)				
4. (Climate Change – mitigation or adaptation, if applicable)				
5. (Gender related to Climate Change, if applicable)				

The CCC can also support the Ministry of Finance in determining and setting expenditure ceilings specifically for climate change related programs. The importance and

mainstreaming of climate change budgeting should also be reflected in the medium-term expenditure ceilings for budget years. Making room in the budget for climate change responses identified in the context of cross-sectoral plans and including expenditure ceilings specifically for climate change related programmes will increase the importance of climate change and encourage ministries to identify more relevant climate change programmes.

Furthermore, including climate change considerations to the range of criteria used in systems to screen and select projects and programmes during budget formulation can increase and mainstream climate change related investment. It can be included as a simple checklist or as a more robust cost-benefit analyses, such as Climate Change Impact Appraisals (CCIA), Climate Change Screening and Appraisals (CCSA), or Climate Change Benefit Analysis (CCBA). Georgia can build on the IMF's Climate-Public Investment Management Assessment (C-PIMA), which provides a climate-responsive framework to assess countries' capacity to manage climate-related infrastructure. This includes an assessment during the project appraisal and selection (Figure 10).



Source: Adapted by authors based on IMF's C-PIMA approach.

Figure 10. Considerations to select projects and programmes during budget formulation.

Preferably, the budget documents should include projections of the total life-cycle cost of mitigation and adaptation projects, including upfront capital costs and ongoing maintenance costs. This checklist can be drafted in coordination with the CCC, to ensure the relevant inputs from climate change spending ministries are included and allow for the prioritisation of climate policies and initiatives.

4.3 Integrating Climate Change into Budget Approval Process and Accountability

Integrating climate change into Parliamentary budget hearings and negotiations enables better informed decisions from the climate change perspective and will provide more visibility of climate change induced programmes at the national scale.

The Parliament of Georgia contains 16 Committees that receive information on the main directions and macroeconomic projections from the spending institutions, and subsequently conduct Parliamentary Committee hearings on the draft State Budget and corresponding

BDD to provide Expertise Opinions. The Parliamentary Committees play two important roles in relation to approval and accountability:

- Scrutinising budgetary documents to ensure they reflect state priorities.
- General thematic inquiries to understand whether wider government policy is fit for purpose.

The Committee on Environmental Protection and Natural Resources aims to coordinate environmental activities, ensure the sustainable use of natural resources, determine the ecological security policy for the environment and the public, and coordinate respective activities and exercise oversight over their implementation. Although there are no specific climate change budget hearings conducted by the Parliament of Georgia, climate change is considered in the Statute of the Committee on Environmental Protection and Natural Resources. For instance, it conducts thematic inquiries on various issues including those related to climate change, e.g., in the course of 2022 the Committee plans to launch a thematic inquiry on Prospects and Challenges of Decarbonization in Georgia.

The CCC can further support the integration of climate change considerations in the practices of the Committee on Environmental Protection and Natural Resources by coordinating the inclusion of questions regarding climate change expenditure and performance information in the budget hearing templates or support the inclusion of climate change aspects in the budget appraisal criteria of the Parliament of Georgia. Ultimately, the stakeholders engaged in Georgia's Parliamentary Committee hearings should have an adequate awareness of climate change related aspects of the budget.

Furthermore, climate change should be more clearly communicated with the population of Georgia and international stakeholders, which will facilitate improved transparency and accountability to legislature and citizens regarding climate adaptation and mitigation. For instance, the CCC could produce informative publications or make statements regarding aspects of climate change, presenting the resource allocation in comparison with the overall budget, and review trends over time and against estimated funding needs for the NDC.

4.4 Integrating Climate Change Related Gender-Responsive Budgeting

Gender equality is a key element in countries' development strategies and will require an integrated PFM system that ensures budget allocation and implementation in a gender-responsive way. To achieve this, several countries have implemented gender-responsive budgeting (GRB) processes.

The budgetary framework of Georgia does not envisage any specific methodology/requirements for the analysis regarding gender budgeting and it does not include a direct obligation of applying GRB procedures. Existing recommendations on program budgeting (Order of the Minister of Finance N385 "On Adopting of Rules and Methodology of Program Budgeting") suggest that in relation to gender-sensitive programs,

the gender aspect can be considered as one of the components of the result-oriented budget. Accordingly, the methodology provides some basis for applying gender budgeting in the budget management process of Georgia.

Furthermore, the Rules and Methodology on Program Budgeting states that every gender-sensitive budget program should include at least one gender indicator as its performance measure. The Parliamentary Budget Office of Georgia analyses the level of gender relevance of each budgetary program by introducing a gender relevance index and has reported the results on an ad-hoc basis. While this process cannot be officially considered as GRB, the country does have some methods to analyse the gender relevance of the national budget. However, the gender sensitivity is not specifically linked to climate change, and climate change induced gender actions are not separately tagged.

The situation in relation to GRB will also further change from 2023, with the recent approval of the ordinance of the Government of Georgia #88 on *the Measures to be Taken to Compile a Document of the Main Data and Directions of the Country for 2023-2026.* It recommends spending institutions to define the policy area of the program in the E-Budget System through a classification system which will include a criterion for gender. Although it does not include a tag specifically for gender aspects related to climate change, it will provide an indication of a potential link between gender and climate change when programs are tagged for both.

Nevertheless, to further integrate climate change related gender budgeting, it is recommended that through the CCC support is provided to the Ministry of Finance in including climate change related gender aspects in the budgeting guidance document, namely the Rules and Methodology on Program Budgeting. For instance, Annex N2 (14.08.2015 N265) of the Rules and Methodology on Program Budgeting could highlight that it is essential that programs sensitive to gender issues specifically related to climate change should also be identified and include performance indicators, and to provide further guidance for the inclusion of climate change in the provided structure for the Annex to the program budget (Tables 21 and 22). This will allow spending institutions to not solely provide general gender indicators for gender-sensitive budget programmes, but also specify if it is specifically induced by climate change related issues.

5. Strategy and Investment Plan

The strategy and investment plan sets out the programme of investments required to implement each of the priority actions in the updated NDC, both unconditional and conditional, and the strategy for meeting these financing needs. It identifies the required costs of the priority mitigation and adaptation actions of Georgia's updated NDC, assesses the funding status of these actions, and provides funding options needed to address each funding gap.

The strategy and investment plan considers the unconditional objectives of the NDC as those which will be achieved with resources already available in Georgia at the time of NDC submission to the UNFCCC. These resources include both the national budget allocated for NDC implementation, as well as international loans and Gants already committed to Georgia at the time of NDC conceptualization. On the other hand, the conditional component of the NDC refers to the climate change actions that will require "additional and specific resources" either from international or private sources for NDC implementation that were not available at the time of NDC conceptualization.

Concerning mitigation, it is estimated that approximately 8 billion GEL will be needed to fund Georgia´s unconditional NDC mitigation actions, of which there currently exists a funding gap of over 208 million GEL. An additional 5 billion GEL of international support will need to be secured to implement the conditional NDC mitigation actions, as an upper-bound preliminary ballpark estimate.

Concerning adaptation, Georgia´s first NDC submitted to the UNFCCC in 2017 shows that adaptation would require about 4.8 – 6.4 billion GEL of finance from 2021 to 2030. However, this figure was developed based on expert judgement, with no explanation or reference of the calculation methodology applied. It should be highlighted that Georgia has since submitted an updated NDC in 2021, showing a higher level of ambition for both mitigation and adaptation commitments. As such, it is probable that the climate finance needs to 2030 may be significantly higher than the above estimates.

5.1 Unconditional Priority Mitigation Actions

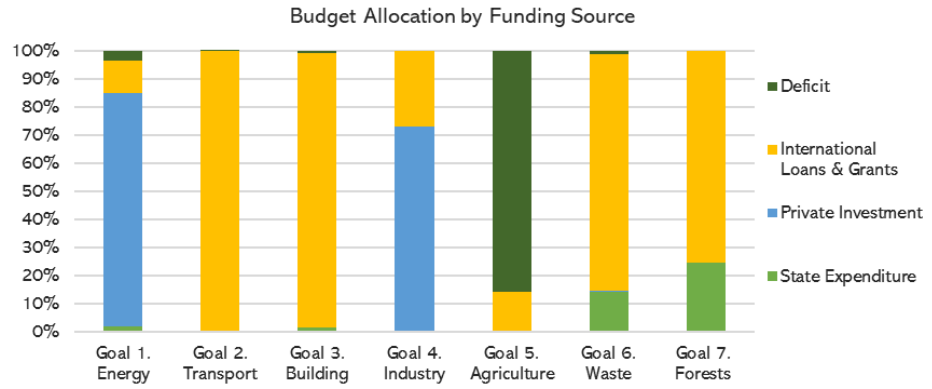
Georgia's 2030 Climate Change Strategy and Action Plan identifies the ways for reaching Georgia's 2030 GHG emissions reduction targets for climate change mitigation, as set in Georgia's updated NDC. It identifies specific directions and actions and serves as a vision and action plan for the implementation of climate change mitigation part of Georgia's updated NDC. The 2021-2023 Action Plan lists the priority actions that are required to be implemented to reach Georgia's unconditional target.

The following table illustrates the estimated budget allocated to fund unconditional NDC mitigation actions in Georgia. As shown, there is currently a funding gap of over 208 million GEL, predominantly for the energy sector (95% of the total funding gap). The remaining

5% of the total funding gap is distributed among the transport (1.3%), building (0.8%), agriculture (1.5%), and waste (1.4%) sectors. There is no funding gap for the industry and forest sectors.

Table 24. Estimated budget allocated to unconditional NDC mitigation actions in Georgia.

Estimated Budget Allocated to Unconditional NDC Mitigation Actions in Georgia



Goal		Budget Distribution (GEL)				
#	Sector	State Expenditure	Private Investment	International Loans and Grants	Deficit	Total Budget
1	Energy	109,692,000	4,699,880,000	662,310,000	199,200,000	5,671,082,000
2	Transport	120,000	0	1,771,213,840	2,523,600	1,773,857,440
3	Building	2,623,896	0	164,157,840	1,429,560	168,211,296
4	Industry	0	24,597,936	9,009,600	0	33,607,536
5	Agriculture	0	0	498,000	2,995,800	3,493,800
6	Waste	36,734,344	56,000	213,795,574	2,800,000	253,385,918
7	Forests	6,445,845	0	19,512,743	0	25,958,588
	Total	155,616,085	4,724,533,936	2,840,497,597	208,948,960	7,929,596,578

Sources of Secured International Loans and Grants

Bilateral Cooperation	Multilateral Climate Funds	International Finance Institutions	Multilateral Development Partners
❖ KfW ❖ European Union (NIF and Twinning) ❖ French Development Agency (FAD) ❖ Government of Germany ❖ Government of Sweden ❖ Government of Norway ❖ Government of Great Britain ❖ Government of Switzerland	❖ Green Climate Fund (GCF) ❖ International Fund for Agricultural Development (IFAD) ❖ Global Environment Facility (GEF) ❖ Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	❖ European Bank for Reconstruction and Development (EBRD) ❖ World Bank ❖ Asian Development Bank (ADB) ❖ Nordic Environment Finance Corporation (NEFCO)	❖ United Nations Environment Programme (UNEP)

The principal financing options to address these funding gaps for the unconditional NDC mitigation actions in Georgia depend on and are influenced by the specific sector they occur in. For instance, funding options in the Energy Generation and Transmission sector are aimed at multilateral finance institutions such as the WB, EBRD, EIB, and ADB. This direction for funding options is also partially reflected in the Transport, Buildings, and Waste sectors. However, for these sectors, funding options also include bilateral finance from European countries/agencies, funding provided by the UNFCCC, other financial institutions and banks active in the Black Sea Region, and partial financing national financing. On the other hand, the Agriculture sector includes the IFAD, FAO, and GEF as its main funding options, while

also including bilateral support from European countries/agencies and emphasising building strategic partnerships with academia and research institutions within Georgia.

The following sub-sections present the mitigation actions within each of the sectors and the corresponding costing requirements and funding status, with Annex II providing more detailed information for each action, including a detailed description, costing, funding status, and funding options.

5.1.1 Energy Generation and Transmission

The overarching goal is to limit GHG emissions in the energy generation and transmission sector in 2030 by 15% compared to the reference level.

Action	Costing	Funding status
UE1. Support renewable energy (wind, solar, hydro, biomass) generation		
UE1.1. Technical and procedural support for wind power (WP) generation.	2,178,000,000.00	No funding gap
UE1.2. Technical and procedural support for solar power (SP) generation.	209,880,000.00	No funding gap
UE1.3. Technical and procedural support for hydro power (HP) generation.	1,980,000,000.00	No funding gap
UE2. Improve average efficiency of thermal power plants		
UE2.1. Implementation of technical work of thermal power plants.	531,200,000.00	Funding gap of 199,200,000.00
UE3. Strengthen the capacities of renewable energy integration in the transmission network of Georgia		
UE3.1. Implementation of Ten-year network development plan of Georgia for electricity distribution companies.	771,804,000.00	No funding gap
UE4. Develop new policy documents and legislation for the energy sector		
UE4.1. Development of a long-term comprehensive multisectoral strategy document for Georgia's energy policy.	198,000.00	No funding gap
Total	5,671,082,000.00	Funding gap of 199,200,000.00

5.1.2 Transport

The overarching goal is to limit GHG emissions in the transport sector in 2030 by 15% compared to the reference level.

Action	Costing	Funding status
UT1. Increase the share of low- and zero-emission and roadworthy private vehicles in the vehicle fleet		
UT1.1. Implementing changes in existing regulation related to the technical inspection of vehicles.	Administrative costs	No funding gap
UT1.2. More efficient execution of fines foreseen under the Administrative Offences Code of Georgia in terms of technical inspection of the vehicles.	120,000.00	No funding gap
UT1.3. Control of the exhaust fumes from the vehicles on the roads.	498,000.00	Funding gap of 498,000.00
UT1.4. For the promotion of electric vehicles, identification of optimal tax incentive alternatives based on the cost-benefit analysis.	Administrative costs	No funding gap
UT1.5. Improve infrastructure for electric vehicles in Tbilisi.	Administrative costs	No funding gap
UT1.6. Discussion on the possibility of increase in import duty for old vehicles based on (economic) feasibility study.	300,000.00	Funding gap of 300,000.00
UT1.7. Emission standards on the import of vehicles based on the cost-effectiveness analysis (EUR4 / EUR5).	1,203,840.00	Funding gap of 990,000.00
UT2. Encourage the reduced demand on fossil fuel and the use of biofuels		
UT2.1. Discuss the increase in taxes for fuels.	300,000.00	Funding gap of 300,000.00
UT2.2. Support and encouragement of the biodiesel production.	Administrative costs	No funding gap
UT3. Promote non-motorised means of mobility and public transport		
UT3.1. Implement the measures included in Tbilisi's Green Transport Policy Plan.	1,762,200,000.00	No funding gap
UT3.2. Implement the measures listed in Batumi's Sustainable Urban Mobility Plan (SUMP).	8,800,000.00	No funding gap
UT4. Implement innovative, evidence-based initiatives in the transport sector		

Action	Costing	Funding status
UT4.1. Develop international climate finance proposals for the improved public, intercity, and non-motorised transport means.	178,200.00	Funding gap of 178,200.00
UT4.2. Develop cost-benefit analysis and feasibility study to identify best options for shifting road freight to rail.	257,400.00	Funding gap of 257,400.00
Total	1,773,857,440.00	Funding gap of 2,523,600.00

5.1.3 Buildings

The overarching goal is to develop low carbon approaches in the building sector, including public and touristic buildings, through encouraging the climate-goals oriented energy efficient technologies and services.

Action	Costing	Funding status
UB1. Develop a system for energy efficiency certification of buildings		
UB1.1. Elaborate the methodology for certification of buildings.	88,715,880.00	No funding gap
UB1.2. Elaborate, approve, and implement secondary legislation on the energy efficiency of buildings.	33,264,000.00	No funding gap
UB2. Raising consumer awareness about energy efficiency		
UB2.1. Development of standards, norms, and labelling schemes for appliances.	411,840.00	No funding gap
UB2.2. Implementation of energy efficiency awareness raising programmes for the public.	299,376.00	No funding gap
UB2.3. Implementation of information campaign about incandescent bulbs	Administrative costs	No funding gap
UB2.4. Implementation of information campaigns for solar water heater systems in buildings.	Administrative costs	No funding gap
UB3. Encourage energy-efficient approaches and installation of energy-efficient lighting in residential, commercial, and public buildings		
UB3.1. Introducing tax regulations on incandescent bulbs.	Administrative costs	No funding gap
UB3.2. Installation of energy efficient lighting in buildings owned/used by public institutions.	621,720.00	No funding gap
UB3.3. Establish energy efficiency information systems for public buildings.	178,200.00	Funding gap of 178,200.00

Action	Costing	Funding status
UB3.4. Improvement of exterior enclosure of school buildings, installation of energy-efficient bulbs, retrofit/replacement of solid fuel heaters.	9,808,920.00	No funding gap
UB4. Support use of solar energy for water heating and use of energy-efficient stoves		
UB4.1. Elaboration of financial incentives mechanism for installation of solar water heater systems in buildings.	178,200.00	Funding gap of 178,200.00
UB4.2. Encourage using of energy-efficient firewood stoves.	33,660,000.00	No funding gap
UB5. Train high professional standard personnel in energy efficiency		
UB5.1. Development of qualification, accreditation, and certification schemes for energy sector experts.	1,073,160.00	Funding gap of 1,073,160.00
UB5.2. Development of educational programs and trainings for energy consultants.	Administrative costs	No funding gap
Total	168,211,296.00	Funding gap of 1,429,560.00

5.1.4 Industry

The overarching goal is to limit GHG emissions in the industry sector in 2030 by 5% compared to the reference level and support the low carbon development of the industry sector through encouraging the climate friendly innovative technologies and services.

Action	Costing	Funding status
UI1. Reduce the level of greenhouse gas emissions from industrial processes and from energy consumption of industrial facilities by introducing modern technologies		
UI1.1. Substitute wet with the dry method in cement production.	15,687,936.00	No funding gap
UI1.2. Supporting the low-emission production of Nitric Acid with modern technologies.	17,820,000.00	No funding gap
UI2. Develop a system for studying the emission factors in the industry sector and for data management		
UI2.1. Develop individual emission factors per production.	99,600.00	No funding gap
Total	33,607,536.00	No funding gap

5.1.5 Agriculture

The overarching goal is to support the low carbon development of the agriculture sector through the encouragement of climate-smart agriculture technologies and services.

Action	Costing	Funding status
UA1. Implement sustainable management of soil and pastures and support the introduction of sustainable domestic animal feeding practices		
UA1.1. Reduce emissions generated by enteric fermentation of cattle, by developing a methodology for changing cattle feed and running a recommendation campaign.	574,200.00	Funding gap of 574,200.00
UA1.2. Increase the quality of livestock nutrition and conservation of pasture biodiversity.	237,600.00	Funding gap of 237,600.00
UA1.3. Rehabilitate and transform windbreaks to minimize climate-related land degradation.	498,000.00	No funding gap
UA2. Build capacities of generating scientific evidence for development of climate-smart approaches in the agriculture sector		
UA2.1. Develop cost-benefit analysis and feasibility study to identify best options to increase further change in livestock feed for the next iteration of the Climate Action Plan.	237,600.00	Funding gap of 237,600.00
UA2.2. Develop cost-benefit analysis and feasibility study to identify best options in which manure management systems can be implemented.	237,600.00	Funding gap of 237,600.00
UA2.3. Support existing and emerging cooperatives to implement sustainable pasture management practices and replicate the success factors of successful cooperatives for other cooperatives.	996,000.00	Funding gap of 996,000.00
UA2.4. Research and consultation to define economic and socially feasible Climate- Smart Agriculture (CSA) actions in the context of Georgia.	356,400.00	Funding gap of 356,400.00
UA2.5. Promote the introduction of climate friendly agricultural practices through extension and awareness raising campaigns.	356,400.00	Funding gap of 356,400.00

Action	Costing	Funding status
Total	3,493,800.00	Funding gap of 2,995,800.00

5.1.6 Waste Management

The overarching goal is to support the low carbon development of the waste sector through the improvement of solid municipal waste management and wastewater treatment systems.

Action	Costing	Funding status
UW1. Reduce GHG emissions from existing unauthorised dumpsites and non-hazardous landfills		
UW1.1. Close official (unauthorized) non-hazardous landfills.	6,520,000.00	No funding gap
UW1.2. Close dumpsites.	2,800,000.00	Funding gap of 2,800,000.00
UW1.3. Construct regional non-hazardous landfills.	47,520,000.00	No funding gap
UW1.4. Upgrade and improve Tbilisi's landfill.	4,000,000.00	No funding gap
UW1.5. Utilize landfill gas in Kutaisi's non-hazardous waste landfill.	4,000,000.00	No funding gap
UW1.6. Utilize landfill gas in Batumi's non-hazardous waste landfill.	4,000,000.00	No funding gap
UW2. Support waste recycling		
UW2.1. Introduce the practice of separating paper waste from the source by the municipalities and encourage paper recycling.	Administrative costs	No funding gap
UW2.2. Biodegradable (organic and garden waste) recycling by municipal composting facilities.	1,188,000.00	No funding gap
UW2.3. Education and awareness raising on waste management.	188,000.00	No funding gap
UW3. Reduce greenhouse gas emissions from wastewater		
UW3.1. Construct municipal wastewater treatment plants.	183,120,618.00	No funding gap
UW3.2. Capture and recover GHGs in Tbilisi's wastewater treatment plants.	21,000.00	No funding gap
UW3.3. Capture and recover GHGs in Batumi's wastewater treatment plants.	17,500.00	No funding gap
W3.4. Capture and recover GHGs in Kobuleti's wastewater treatment plant.	17,500.00	No funding gap
UW4. Develop a data-based waste management system		

Action	Costing	Funding status
UW4.1. Establish a consolidated process for generating waste sector statistics.	62,500.00	No funding gap
Total	253,455,118.00	Funding gap of 2,800,000.00

5.1.7 Forestry

The overarching goal is to increase the carbon capture capacity of forests in 2030 by 10% compared to 2015 levels.

Action	Costing	Funding status
UF1. Restore degraded forests		
UF1.1. Restore 625 ha of degraded forest area (including fire-sites) through forestation	6,585,000.00	No funding gap
UF1.2. Restore degraded forests through supporting natural restoration.	4,758,260.00	No funding gap
UF2. Support sustainable forest management		
UF2.1. Introduce sustainable forest management practices through the implementation of sustainable forest management plans.	12,512,960.00	No funding gap
UF2.2. Introduce sustainable forest management practices through supervision and capacity development.	411,123.00	No funding gap
UF2.3. Promote sustainable management of forests by supporting the multifunctionality of forests, raising public awareness, and supporting public involvement in the forest reform processes.	1,445,400.00	No funding gap
UF2.4. Develop Emerald Network management plans for the territory of the forest of Georgia within the approved emerald network sites.	60,000.00	No funding gap
UF2.5. Enhance the protection and/or sustainable management of forest areas within the new protected territories.	185,845.00	No funding gap
UF3. Develop a forest management system adequate to climate change challenges		
UF3.1. Integrate climate change issues, including mitigation, into management plants of the protected areas.	Administrative costs	No funding gap
Total	25,958,588.00	No funding gap

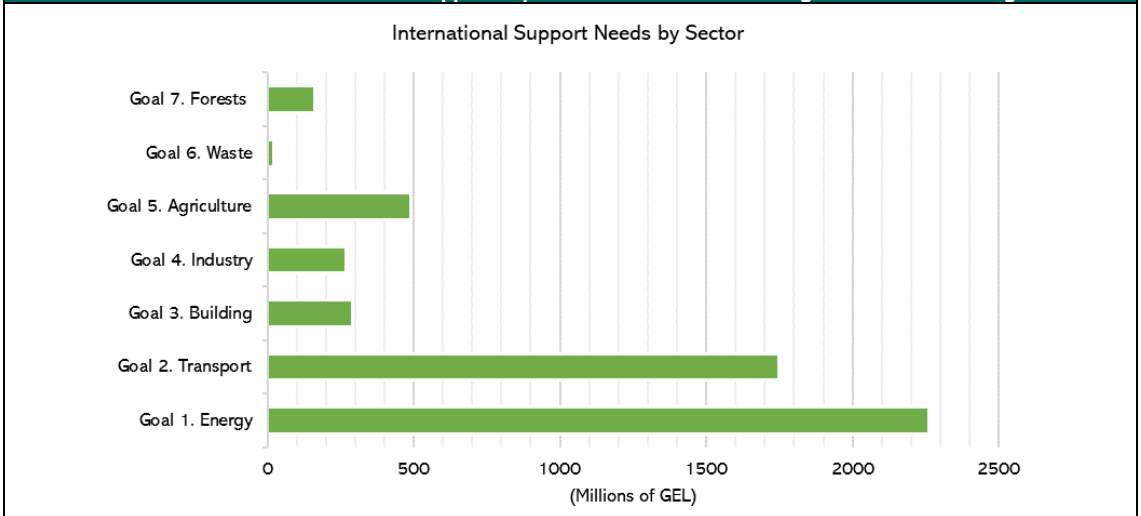
5.2 Conditional Priority Mitigation Actions

Georgia's is also committed to conditionally further reducing national GHG emissions depending on the level of provided international support. This will allow Georgia to explore other potential areas for reducing emissions that will eventually enhance the country's progress in complying with the Paris Agreement temperature targets. The 2030 Climate Change Strategy and Action Plan describes the areas that will potentially be included in the Climate Strategy and Action Plan in the future if international support is provided for these priority directions.

The provided costings are estimated ballpark values from previous similar projects implemented in Georgia, ongoing similar projects in the Region, and pipeline project proposals for Georgia. Detailed cost breakdown evaluations should be performed during the development of project proposals. The following table illustrates the estimated additional international support that would be required to implement the conditional NDC mitigation actions in Georgia. As shown, an approximate 5 billion GEL will be needed to fund these actions, predominantly for the energy sector (43% of the additional funding needs), followed by the transport sector (33% of the additional funding needs). The remaining 24% is distributed among the agriculture (9.4%), building (5.5%), industry (5.1%), forest (3.1%) and waste (0.5%) sectors.

Table 25. Estimated additional international support required for conditional NDC mitigation actions in Georgia.

Estimated additional international support required for conditional NDC Mitigation Actions in Georgia



Sector		Estimated costing (GEL)	Recommended possible international support financing sources
1	**Energy**	2,262,275,000	For larger infrastructure projects, it is recommended to seek funding from development banks such as the EBRD, the EIB or ADB. For technical support, it is recommended to seek support from European Funds such as NEFCO and E5P as well as bilateral support from European countries.
2	**Transport**	1,750,535,181	It is primarily recommended to seek funding from development banks such as ADB, EBRD, and EIB.

3	**Building**	289,591,680	For larger infrastructure projects, it is recommended to seek funding from development banks such as the EBRD, the EIB or ADB. For technical support, it is recommended to seek support from European Funds such as NEFCO and E5P as well as bilateral support from European countries.
4	**Industry**	270,128,400	The principal recommended funding sources are UNFCCC funds, in particular, the GEF. It is of fundamental importance to engage and incentivise the private sector for co-financing.
5	**Agriculture**	492,067,632	For larger projects, the principal funding sources recommended are FAO, GEF and IFAD, with smaller projects to be supported by GIZ and ADB. It is of fundamental importance to engage academia.
6	**Waste**	23,755,000	The principal funding source recommended is the EBRD, with additional support to be provided bilaterally or multilaterally through European agencies and funds.
7	**Forests**	163,368,841	The principal recommended funding sources are UNFCCC funds, in particular, the GEF.
	Total	5,251,721,735	

As conditional actions, Georgia is seeking international support for implementation. The principal financing options to attract this additional international support for the conditional NDC mitigation actions in Georgia cover several financing sources, ranging from multilateral finance institutions such as EBRD, EIB, ADB, NEFO, E5P, AFD, GEF, FAO, IFAD, and GGF, bilateral finance from European countries/agencies such as GiZ, SIDA, and KfW, technology transfer schemes under UNFCCC funds, and national funding to supplement the international sources.

Currently, only two actions (*CA2.1.* and *CA2.2.*) have developed a project proposal to officially request funding from the ADB as one comprehensive project, namely the "Climate Smart Irrigation Sector Development Project" [30]. The proposed project features 3 outputs as follows: i) support the modernization of outdated irrigation systems in the eastern part of Georgia, ii) support water and farmer organizations in further improving and modernizing productive systems, and iii) implementation of the necessary institutional, governance, management, and finance changes to support the irrigation reform strategy. If approved, the ADB would provide 161,080,000.00 GEL as a regular policy-based loan and 80,540,000.00 GEL as a regular loan, with a co-financing amount of 144,972,000.00 GEL. The remaining 64,432,000.00 GEL would need to be provided by local beneficiaries.

The following sub-sections present the mitigation actions within each of the sectors and the corresponding costing requirements, with Annex III providing more detailed information for each action, including a detailed description, costing, funding status, and funding options. It is important to note that, based on the historical climate finance landscape in the country, Georgia should opt, to the extent possible, for seeking grant support. These grants are most appropriate for the conditional actions related to policy/instrument development, studies, and capacity building activities. Infrastructure projects would most benefit from concessional loans, given their sheer magnitude.

[30] Proposed Loans and Technical Assistance Grant Georgia: Water Resources Sector Development Program. Asian Development Bank Concept Paper. Project Number: 54014-001. Available at: https://www.adb.org/sites/default/files/project-documents/54014/54014-001-cp-en.pdf

5.2.1 Energy Generation and Transmission

The overarching goal is to further promote renewable energy to increase energy security, reduce dependence on energy imports, and limit GHG emissions in the sector, conditional to international support.

Action	Estimated costing
CE1. Further promotion of renewable energy generation	
CE1.1. Exploring geothermal and solar energy potential in Georgia.	1,127,560,000.00
CE1.2. Further utilisation of water and wind energy.	1,127,560,000.00
CE1.3. Exploring incentives to attract investments in renewable energy.	6,000,000.00
CE2. Introduction of a power station operating on biogas	
CE2.1. Conducting a feasibility study for a biogas power station.	1,155,000.00
Total	2,262,275,000.00

5.2.2 Transport

The overarching goal is to further shift from polluting modes of transport and environmentally inefficient vehicles to energy-efficient and clean transport opportunities, conditional to international support.

Action	Estimated costing
CT1. Further promote non-motorised means of transport and public transport	
CT1.1. Renew and upgrade public transport infrastructure and services.	93,741,921.00
CT1.2. Renew and upgrade infrastructure for non-motorised transport.	570,000,000.00
CT2. Improve the passenger public and intercity rail services	
CT2.1. Purchase of new and modern train for passenger rail services.	1,076,014,400.00
CT2.2. Improve the quality of the intercity railway system.	724,860.00
CT3. Improve the energy efficiency of light-duty vehicles	
CT3.1. Explore incentives to improve the energy efficiency of light-duty vehicles.	2,000,000.00
CT4. Support the shift of road freight transport to rail transport	
CT4.1. Explore incentives to support the shift for freight transport from road to rail.	8,054,000.00
Total	1,750,535,181.00

5.2.3 Buildings

The overarching goal is to further improve the energy efficiency of buildings through innovative measures to work towards carbon-free buildings, conditional to international support.

Action	Estimated costing
CB1. Improving the energy efficiency of residential buildings	
CB1.1. Creating information system for energy efficiency of residential buildings.	7,630,600.00
CB1.2. Improving energy efficiency of residential buildings.	72,109,170.00
CB2. Introduce autonomous heating systems in existing residential buildings	
CB2.1. Conduct a feasibility study for the identification of economic and climate change potential for autonomous heating systems in existing multiapartment buildings.	1,155,000.00
CB3. Updating climate-specific standards of construction	
CB3.1. Updating technical regulations and climatic standards in the construction sector.	17,931,910.00
CB4. Introduce energy-efficient approaches in the tourism sector	
CB4.1. Introduce financial instruments for the development of carbon-free buildings in the resorts of Georgia.	190,765,000.00
Total	289,591,680.00

5.2.4 Industry

The overarching goal is to further limit GHG emissions in the industry sector and support the low carbon development of the sector through the innovative technologies and systems.

Action	Estimated costing
CI1. Reduce the level of greenhouse gas emissions from steel production of industrial facilities	
CI1.1. Support the low-emission production of steel with modern technologies.	198,128,400.00
CI2. Introduce a system of energy audits and certification schemes at industrial facilities	
CI2.1. Develop mandatory energy audits and certification schemes at industrial facilities.	24,000,000.00
CI3. Enhance the efficient use of waste heat at industrial facilities	
CI3.1. Introduce systems for efficient use of industrial waste for heat production.	48,000,000.00
Total	270,128,400.00

5.2.5 Agriculture

The overarching goal is to further support the low carbon development of the agriculture sector through the encouragement of climate-smart agriculture technologies and services, conditional to international support.

Action	Estimated costing
CA1. Develop an improved data system for the agriculture sector	
CA1.1. Establish a consolidated process for collecting and updating data for the agriculture sector.	8,000,000.00
CA2. Introduce climate-smart irrigation systems	
CA2.1. Improve irrigation infrastructure using climate-smart technologies and systems.	289,944,000.00
CA2.2. Develop and implement regulations for irrigation water.	161,080,000.00
CA3. Enhance post-harvest field management practices	
CA3.1. Regulate agricultural burning practices to reduce GHG emissions and degradation of agricultural fields and surrounding areas.	134,200
CA3.2. Promote sustainable post-harvest agricultural residue management practices through incentives and awareness raising to facilitate the ban on field burning.	12,000
CA3.3. Replant windbreaks to recover from damages caused by unsustainable agricultural burning practices.	4,000,000.00
CA4. Foment sustainable pasture management by regulating overgrazing and trampling	
CA4.1. Regulate pasture management to limit overgrazing and trampling.	2,329,232.91
CA5. Enhance the climate-resilient multifunctional Windbreak & Agroforestry Ecosystem (mWAE)	
CA5.1. Foment research and innovation to further enhance the climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE).	26,578,200.00
Total	492,067,632.00

5.2.6 Waste Management

Conditional to international support, the overarching goal is to further support the low carbon development of the waste sector by reducing the disposal of biodegradable and recyclable wastes in solid waste disposal sites through awareness-raising, pilot projects, and incentives campaigns, while limiting pollution by setting maximum permissible thresholds, all while enhancing the generation of waste statistics by fortifying data collection capacities.

Action	Estimated costing
CW1. Enhance biodegradable waste management practices among non-governmental emitters	
CW1.1. Increase the number of composting facilities through capacity building and incentives campaign.	2,300,000.00
CW1.2. Pilot composting project for biodegradable wine and agricultural residues.	325,000.00
CW2. Establish maximum permissible limits (MPLs) for waste generation, treatment, and disposal	
CW2.1. Establish maximum permissible limits (MPLs) for wastes.	1,130,000.00
CW3. Enhance knowledge on waste management	
CW3.1. Launch awareness-raising campaigns of the five-step waste management hierarchy system.	12,000,000.00
CW3.2. Improve the data collection capacities of the waste sector.	8,000,000.00
Total	23,755,000.00

5.2.7 Forestry

Conditional to international support, the overarching goal is to further increase the carbon capture capacity of forests in 2030 compared to 2015 levels by reducing forest degradation due to unsustainable logging practices and inadequate forest fire management processes, all while improving information systems to better develop and monitor policies in the forestry sector.

Action	Estimated costing
CF1. Develop an improved data system for the forestry sector	
CF1.1. Establish a consolidated process for collecting and updating data for the forestry sector.	20,717,079.00
CF2. Reduce unsustainable forest logging for firewood	
CF2.1. Reduce demands for firewood for residential heating purposes through energy-efficient building envelopes, as well as increased access to alternative energy sources and technologies.	108,125,602.00
CF2.2. Limit the incidence of illegal logging.	27,470,160.00
CF3. Prevent damages inflicted by forest fires	
CF3.1. Establish a comprehensive forest fire prevention and management system.	7,056,000.00
Total	163,368,841.00

5.3 Priority Adaptation Actions

Georgia's updated NDC acknowledges the need for adaptation to adverse effects of climate change, and Georgia is committed to continue studying its adaptive capacity of different economic sectors. The NDC covers the most vulnerable sectors of the economy, ecosystems, and other natural resources, namely, coastal zone, tourism, agriculture, water resources, biodiversity, forest lands, and human health. It plans to implement the following adaptation measures in these particularly vulnerable sectors:

- Georgia intends to assess the impact of climate change on coastal zone, mountain ecosystems and ecosystem services. In addition, Georgia intends to study the impact of climate change on glaciers, economic situation of the mountainous and coastal regions and livelihoods of the local population for the sustainable management of these regions.
- Georgia intends to develop adaptive capacity of the most vulnerable winter and coastal resorts.
- Georgia intends to assess and develop adaptive capacities for the agricultural productions that have the largest share in national GDP and/or for domestic unique products.
- Georgia intends to assess the impact of climate change on the availability of groundwater and surface water resources for sustainable use in agricultural (irrigation), energy production and dwelling purposes in a long-term perspective.
- Georgia intends to encourage the conservation of the species that are endemic, protected under the Red List, as well as indigenous species with a significant importance for food and agriculture.
- Georgia intends to study the most vulnerable areas of forest lands at the preselected territories.
- Georgia intends to assess the effects of climate change on human health through the interdisciplinary study of the relationships between social, economic, biological, ecological, and physical systems.
- Georgia intends to facilitate the measures supporting the reduction of losses and damages caused by extreme weather events.

These measures are to be adopted as part of the country's National Adaptation Plan (NAP) to achieve the adaptation goals set out in the updated NDC. NAPs identify a country's medium- and long-term climate adaptation needs, as well as strategies and programmes that need to be developed and implemented to address those needs.[31]

Georgia has submitted a Readiness Proposal to the GCF as part of the Readiness Programme to support the NAP development process. One of the five areas of support under the Readiness Programme is dedicated to adaptation planning, which includes support for strengthened adaptation planning governance and institutional coordination, such as national, sub-national and/or sectoral plans. Countries can access up to USD 3

[31] https://www.greenclimate.fund/projects/commitment

million for the formulation of NAPs, with adaptation planning proposals able to be submitted on a rolling basis.[32]

However, as of March 2022 work on the elaboration of Georgia's NAP has not yet commenced. The first step is therefore to initiate the formulation of the NAP. This should be a continuous, progressive and iterative process, following a country-driven, participatory and transparent approach. Georgia can build on the "*initial guidelines for the formulation of NAPs by least developed country (LDC) Parties"* (decision 5/CP.17, paragraph 6)[33], which outline four elements that can be undertaken in the development of NAPs, depending on national circumstances, namely:

1. Laying the groundwork and addressing gaps
    a. Identification and assessment of institutional arrangements, programmes, policies and capacities for overall coordination and leadership on adaptation.
    b. Assessment of available information on climate change impacts, vulnerability and adaptation, measures taken to address climate change, and gaps and needs, at the national and regional levels.
    c. Comprehensive, iterative assessments of development needs and climate vulnerabilities.
2. Preparatory elements
    a. Design and development of plans, policies and programmes to address the identified gaps and needs.
    b. Assessments of medium- and long-term adaptation needs, and, as appropriate, development needs and climate vulnerabilities.
    c. Activities aimed at integrating climate change adaptation into national and subnational development and sectoral planning.
    d. Participatory stakeholder consultations.
    e. Communication, awareness-raising and education.
3. Implementation strategies
    a. Prioritizing according to development needs and climate change vulnerability and risk.
    b. Strengthening institutional and regulatory frameworks to support adaptation.
    c. Training and coordination at the sectoral and subnational levels.
    d. Public dissemination of information on the national adaptation plan process.
    e. Building on and complementing existing adaptation planning.
4. Reporting, monitoring, and review
    a. Undertake a regular review to address inefficiencies, incorporating the results of new assessments and emerging science and reflect lessons learned from adaptation efforts.

[32] https://www.greenclimate.fund/readiness/naps
[33] https://unfccc.int/files/adaptation/cancun_adaptation_framework/national_adaptation_plans/application/pdf/nap_initial_guidelines_annex__to_decision_5cp17_eng.pdf

b. Undertake a regular review to monitor and review the efforts undertaken and provide information in their national communications on the progress made and the effectiveness of the national adaptation plan process.

Furthermore, Georgia can utilise the "*technical guidelines for the NAP process*"[34], which are based on the initial guidelines for the formulation of NAPs and offer a range of options for dealing with each element of the NAP process. Other UNFCCC publications that can support the elaboration and process of the NAP are the "*NAP process: a brief overview*"[35], the *"NAP process poster/checklist"*[36], and the *"best practices and lessons learned in addressing adaptation in least developed countries"*[37].

Georgia's NAP process will integrate the National Adaptation Plan of Georgia's agriculture sector to Climate Change (AgriNAP), which was developed as part of the GEF supported project to identify adaptation measures and climate friendly approaches for selected crops.

Following the NAP process and elaboration, and once the strategies and programmes that need to be developed and implemented have been identified, the financing strategy and investment plan for the implementation of individual adaptation actions prioritized through the NAP process can be developed. This will allow Georgia to implement each of the priority adaptation actions in the updated NDC.

[34] https://unfccc.int/files/adaptation/cancun_adaptation_framework/application/pdf/naptechguidelines_eng_high__res.pdf
[35] https://unfccc.int/files/adaptation/application/pdf/nap_overview.pdf
[36] https://unfccc.int/files/adaptation/application/pdf/nap_poster.pdf
[37] https://unfccc.int/files/adaptation/application/pdf/leg_bpll_volume3.pdf

6. Implementation Roadmap

The implementation roadmap will serve as a critical tool to identify all the essential components for the sustainable implementation of the NDC climate finance strategy, aiming to address the barriers and close the gaps identified in Georgia´s current climate finance framework.

It is important to acknowledge that it will constitute a "living" document, meaning that it can be periodically updated and improved to ensure its validity, transparency, and accuracy over time as new information becomes available.

The implementation roadmap will feature the following components:

- **Policy recommendations:** Policy recommendations will be provided to create an improved sectoral financial architecture which considers, among others, tax reforms and market mechanisms. These policy recommendations will address the main barriers identified, selecting the best policy options according to international best practise.
- **Stakeholder mapping and recommendations for institutional arrangements:** A comprehensive list of stakeholders will be developed, responsible for the implementation of the distinct NDC actions. Furthermore, recommendations for institutional arrangements will be provided to enhance the coordination and oversight of climate finance activities in Georgia, building upon the existing institutional architecture to assign clear roles and responsibilities for each stakeholder as it pertains to NDC finance, according to the nationally appropriate formal and legal instruments of each entity.
- **Capacity building programme:** A capacity building programme for public and private sector entities will be developed which will expand the skills and knowledge of the relevant stakeholders for innovative financing for climate priority actions and strengthen the public-private partnerships to mobilise and deliver on the climate change goals. This programme will be based on identified capacity gaps and barriers and will result in recommendations for raising awareness and engagement. The guidance will be situated around a learning-by-doing approach through trainings on business plans and financing for actions.
- **Implementation timeline prioritizing critical efforts:** An implementation timeline will be provided to ensure the implementation of priority actions according to realistic timelines, focussing on higher priority actions in the short-term, and less significant actions in the medium-term to long-term. The aim is to increase the efficient use of limited resources to the most impactful actions in the short-term.
- **Methodologies and performance indicators for tracking NDC climate finance:** A methodology for monitoring climate finance resources needed and received for NDC implementation will be developed in conjunction with performance indicators, in alignment with the national MRV system and UNFCCC requirements.

6.1 Policy Recommendations

There is no single policy instrument adequate to ensure and facilitate the monitoring of climate financial flows from different sources that are directed to NDC implementation, and the corresponding multitude of included actions envisaged in Georgia's NDC. It requires a coherent structure, with policies supporting the cross-sectoral aspects and consisting of clear policy directives, which will provide direction for the key stakeholders involved.

In this context, Georgia has had a substantial history of climate change policy development regarding the international commitment processes and national objectives, with a series of policy documents addressing the issues of climate change and outlining the need of finance to ensure the envisioned targets will be achieved. The development of the NDC Financing Strategy and Investment Plan of Georgia is an important element in this process, as it can drive the policy framework to unlock available private and public finance and make it easier for international donors to mobilise resources in the country.

Nevertheless, Georgia's main strategic documents still lack specific targets with their related financial requirements that can subsequently be linked to budget programmes, international support, or private sector investments. The CSAP includes costing estimates, but still includes actions for which financial information is not available. The NAP still needs to be developed, resulting in a lack of information on the required investments to implement climate adaptation actions. Some sectoral policies have costs indications for the associated measures but these financial estimates, including the ones in the CSAP, are very basic and cannot be linked with the budget framework, international support, or private sector investments.

The lack of targets and financial requirements was related to the absence of a streamlined and structured approach to strategic and policy documents, which will likely change with the adoption in 2020 of Resolution 629 of the Government of Georgia in On Approval of the Rules for Development, Monitoring and Evaluation of Policy Documents. This Resolution sets specific requirements for strategic documents and will resolve the issue for documents to be produced from 2020 onwards.

To further strengthen the policy framework in Georgia according to international best practise and address the main barriers identified, the country should:

- Integrate NDC implementation and the corresponding required financial flows into the national development policy cycle. For instance, if there is a regular cycle of five-year national development plans, this corresponds with the requirement to submit an updated NDC every five years to the UNFCCC Secretariat. Georgia's Economic Development Strategy "Economy 2030" is developed within the framework of a 10-year Government Plan of Georgia. Integrating Georgia's updated NDC, which also has a timeframe until 2030, into this national development policy will facilitate linking the NDC to the timeframe of existing plans and process and corresponding budgetary spending.

- Link NDC implementation with policy processes in place for SDG implementation such as the SDG electronic tracker system[38], which is coordinated and monitored by the Planning & Innovations Unit of the Administration of the Government of Georgia. Through this tool information related to all the projects, and ongoing or planned activities at a national scale are placed. All the 17 SDGs are being monitored and tracked, including climate related goals such as "Goal 13 – Climate Action". This will facilitate identifying and monitoring activities related to climate change and their corresponding provided funding or financial needs and linking it to the envisioned targets of Georgia's updated NDC.
- Ensure that government ministries, departments, and agencies responsible for policy development contain a team of experts or a department with a specific mandate to develop and coordinate climate action for their policy area and the corresponding link to the updated NDC sectors and actions. This would be further strengthened if this specific team of experts or department also has the mandate to coordinate SDG implementation and ensuring gender equality in their policy area.
- Georgia should further develop national policies for carbon taxes, policies for public-private partnerships, and policy incentives for private investments to facilitate the financial framework in the country.

[38] http://sdg.gov.ge

6.2 Stakeholder Mapping and Institutional Arrangement Recommendations

Achieving the NDC commitments will involve ongoing effort, coordination and engagement across government entities, private sector, academia, and civil society organisations (CSOs) as the actions will be undertaken at national, sectoral, and subnational level. Mapping the leading entities and partner institutions responsible for the implementation of Georgia's NDC actions is therefore an important element to ensure that envisioned targets and deadlines, and their related financial needs, will be tracked and achieved. The leading entities will be responsible for evaluating the financial status of the actions throughout the implementation period of Georgia's updated NDC from 2020 to 2030 following the methodology for tracking NDC finance outlined in Section 6.5.1.

In this context, these leading entities will play an important role in assessing the climate change related financial needs of the relevant action, identify potential resource partners to close funding gaps and engage, and negotiate with these resource partners, according to the Resource Mobilisation Guidelines presented in Section 3. The following key tasks will be conducted by the Leading Entities and their Partner Institutions:

- **Leading Entity:** Single entity responsible for coordinating all aspects of NDC implementation of the specified action, assessing the funds secured and mobilized and the remaining finance gaps to be addressed, and working with designated teams within line ministries and other non-governmental entities to deliver the envisioned targets and deadlines.
- **Partner Institution(s):** Supporting the Leading Entity in implementing the specific action, providing information and data on the progress and financial status of the implementation to the Leading Entity.

Furthermore, to enhance the coordination and oversight of climate finance activities in Georgia, it is essential for the institutional arrangements in the country to facilitate important data flows and the availability of expertise to prepare reports and inform stakeholders involved in climate finance activities in Georgia. The institutional arrangements should build upon the existing institutional architecture to assign clear roles and responsibilities for each stakeholder as it pertains to NDC finance, according to the nationally appropriate formal and legal instruments of each entity.

6.2.1 Responsible Institutions for Mitigation Actions

The following two tables present the list of Leading Entities and Partner Institutions responsible for the implementation of the distinct 66 unconditional and 35 conditional NDC mitigation actions. They have been defined in accordance with Georgia´s 2030 Climate Strategy and the 2021-2023 Action Plan of Georgia´s 2030 Climate Strategy.

Table 26. Institutions responsible for the implementation of the unconditional NDC mitigation actions in Georgia.

Sector	Action		Leading Entity	Partner Institution(s)
Energy Generation and Transmission	UE1.1	Technical and procedural support for wind power (WP) generation.	Ministry of Economy and Sustainable Development	• JSC "Georgian Energy Development Fund" • Companies running the WP power plants that will implement this action.
	UE1.2	Technical and procedural support for solar power (SP) generation.	Ministry of Economy and Sustainable Development	• JSC "Georgian Energy Development Fund" • Companies running the SP power plants that will implement this action.
	UE1.3	Technical and procedural support for hydro power (HP) generation.	Ministry of Economy and Sustainable Development	• JSC "Georgian Energy Development Fund" • Companies running the HP power plants that will implement this action.
	UE2.1	Implementation of technical work of thermal power plants.	Ministry of Economy and Sustainable Development	JSC "Georgian Oil and Gas Corporation"
	UE3.1	Implementation of Ten-year network development plan of Georgia for electricity distribution companies.	Ministry of Economy and Sustainable Development	JSC "Georgian State Electosystem"
	UE4.1	Development of a long-term comprehensive multisectoral strategy document for Georgia's energy policy.	Ministry of Economy and Sustainable Development	-
Transport	UT1.1.	Implementing changes in existing regulation related to the technical inspection of vehicles.	Ministry of Economy and Sustainable Development	• Ministry of Internal Affairs • Periodic Technical Inspection (PTI) centres • Ltd "Georgian Accreditation Centre"
	UT1.2.	More efficient execution of fines foreseen under the Administrative Offences Code of Georgia in terms of technical inspection of the vehicles.	Ministry of Internal Affairs	Ministry of Economy and Sustainable Development

Sector	Action		Leading Entity	Partner Institution(s)
	UT1.3.	Control of the exhaust fumes from the vehicles on the roads.	Ministry of Internal Affairs	• Ministry of Environmental Protection and Agriculture • Ministry of Economy and Sustainable Development • LEPL "Land Transport Agency" • The State Sub-Agency Department of Environmental Supervision
	UT1.4.	For the promotion of electric vehicles, identification of optimal tax incentive alternatives based on the cost-benefit analysis.	Ministry of Internal Affairs	• Ministry of Economy and Sustainable Development • LEPL "Service Agency"
	UT1.5.	Improve infrastructure for electric vehicles in Tbilisi.	Tbilisi City Hall	• Companies of electric vehicles • Construction companies • Private companies • State entities
	UT1.6.	Discussion on the possibility of increase in import duty for old vehicles based on (economic) feasibility study.	Ministry of Finance	• Ministry of Environmental Protection and Agriculture • LEPL "Service Agency" • LEPL "Revenue Service"
	UT1.7.	Emission standards on the import of vehicles based on the cost-effectiveness analysis (EUR4 / EUR5).	Ministry of Economy and Sustainable Development	LEPL "Service Agency"
	UT2.1.	Discuss the increase in taxes for fuels.	Ministry of Finance	• Ministry of Environmental Protection and Agriculture • Ministry of Economy and Sustainable Development
	UT2.2.	Support and encouragement of the biodiesel production.	Ministry of Environmental Protection and Agriculture	• Ltd "Biodiesel Georgia" • The Biomass Association of Georgia
	UT3.1.	Implement the measures included in Tbilisi's Green Transport Policy Plan.	Tbilisi City Hall	• Ltd "Tbilisi Transport Company" • Ltd "Tbilisi Minibus" • Tbilisi Parking

Sector	Action		Leading Entity	Partner Institution(s)
	UT3.2.	Implement the measures listed in Batumi's Sustainable Urban Mobility Plan (SUMP).	Batumi City Hall	Ltd "Batumi Autotransport"
	UT4.1.	Develop international climate finance proposals for the improved public, intercity, and non-motorised transport means.	Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department)	• Ministry of Finance • Ministry of Economy and Sustainable Development
	UT4.2.	Develop cost-benefit analysis and feasibility study to identify best options for shifting road freight to rail.	Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department)	• LLC "Georgian Railway" • Ministry of Economy and Sustainable Development
Buildings	UB1.1.	Elaborate the methodology for certification of buildings.	Ministry of Economy and Sustainable Development	• Ministry of Environmental Protection and Agriculture • Relevant municipalities
	UB1.2.	Elaborate, approve, and implement secondary legislation on the energy efficiency of buildings.	Ministry of Economy and Sustainable Development	Relevant municipalities
	UB2.1.	Development of standards, norms, and labelling schemes for appliances.	Ministry of Economy and Sustainable Development	• Relevant municipalities • Relevant private sector
	UB2.2.	Implementation of energy efficiency awareness raising programmes for the public.	Ministry of Economy and Sustainable Development	-
	UB2.3.	Implementation of information campaign about incandescent bulbs	Ministry of Economy and Sustainable Development	• Relevant municipalities • Relevant private sector
	UB2.4.	Implementation of information campaigns for solar water heater systems in buildings.	Ministry of Economy and Sustainable Development	Ministry of Environmental Protection and Agriculture
	UB3.1.	Introducing tax regulations on incandescent bulbs.	Ministry of Economy and Sustainable Development	• Ltd "Revenue Service" • Relevant municipalities • Relevant private sector
	UB3.2.	Installation of energy efficient lighting in buildings owned/used by public institutions.	Ministry of Economy and Sustainable Development	• Ministry of Regional Development and Infrastructure • Relevant municipalities

Sector	Action		Leading Entity	Partner Institution(s)
	UB3.3.	Establish energy efficiency information systems for public buildings.	Ministry of Economy and Sustainable Development	Ltd "Municipal Development Fund"
	UB3.4.	Improvement of exterior enclosure of school buildings, installation of energy-efficient bulbs, retrofit/replacement of solid fuel heaters.	Ministry of Economy and Sustainable Development	Ltd "Municipal Development Fund"
	UB4.1.	Elaboration of financial incentives mechanism for installation of solar water heater systems in buildings.	Ministry of Economy and Sustainable Development	• Ministry of Finance • Ministry of Environmental Protection and Agriculture
	UB4.2.	Encourage using of energy-efficient firewood stoves.	Ministry of Environmental Protection and Agriculture	• Ltd "Environmental Information and Education Center" • Ltd "National Forestry Agency" • NNLE "Agriculture and Rural Development Agency"
	UB5.1.	Development of qualification, accreditation, and certification schemes for energy sector experts.	Ministry of Economy and Sustainable Development	• Accreditation centers • Training centers
	UB5.2.	Development of educational programs and trainings for energy consultants.	Ministry of Economy and Sustainable Development	• Accreditation centers • Training centers
Industry	UI1.1.	Substitute wet with the dry method in cement production.	Ltd "Heidelberg"	Ministry of Environmental Protection and Agriculture
	UI1.2.	Supporting the low-emission production of Nitric Acid with modern technologies.	Ltd "Rustavi Azoti"	Ministry of Environmental Protection and Agriculture
	UI2.1.	Develop individual emission factors per production.	Ministry of Environmental Protection and Agriculture	• Ltd "Rustavi Azoti" • Ltd "Heidelberg Cement"

Sector	Action		Leading Entity	Partner Institution(s)
Agriculture	UA1.1.	Reduce emissions generated by enteric fermentation of cattle, by developing a methodology for changing cattle feed and running a recommendation campaign.	Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department; Department of Agriculture, Food and Rural Development;)	• Ltd "Scientific-Research Center of Agriculture" • NNLP "Rural Development Agency" • LEPL "Environmental Information and Education Center"
	UA1.2.	Increase the quality of livestock nutrition and conservation of pasture biodiversity.	Ministry of Environmental Protection and Agriculture (Department of Hydrology and Land Management; Environment and Climate Change Department; Department of Agriculture, Food and Rural Development;)	• NNLP "Rural Development Agency" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring"
	UA1.3.	Rehabilitate and transform windbreaks to minimize climate-related land degradation.	Ministry of Environmental Protection and Agriculture (Department of Hydrology and Land Management)	• LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department)
	UA2.1.	Develop cost-benefit analysis and feasibility study to identify best options to increase further change in livestock feed for the next iteration of the Climate Action Plan.	Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department; Department of Agriculture, Food and Rural Development)	• Ltd "Scientific-Research Center of Agriculture" • NNLP "Rural Development Agency"
	UA2.2.	Develop cost-benefit analysis and feasibility study to identify best options in which manure management systems can be implemented.	Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department; Department of Agriculture, Food and Rural Development;)	• Ltd "Scientific-Research Center of Agriculture" • NNLP "Rural Development Agency"

Sector	Action		Leading Entity	Partner Institution(s)
	UA2.3.	Support existing and emerging cooperatives to implement sustainable pasture management practices and replicate the success factors of successful cooperatives for other cooperatives.	• Ministry of Environmental Protection and Agriculture • NNLP "Rural Development Agency"	• Ltd "Scientific-Research Center of Agriculture" • Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department; Department of Agriculture, Food and Rural Development)
	UA2.4.	Research and consultation to define economic and socially feasible Climate- Smart Agriculture (CSA) actions in the context of Georgia.	Ministry of Environmental Protection and Agriculture (Environment and Climate Change Department; Department of Agriculture, Food and Rural Development)	• Ltd "Scientific-Research Center of Agriculture" • NNLP "Rural Development Agency" • Ministry of Environmental Protection and Agriculture (Department of Policy-Analysis)
	UA2.5.	Promote the introduction of climate friendly agricultural practices through extension and awareness raising campaigns.	Ministry of Environmental Protection and Agriculture	• LEPL "Environmental Information and Education Center" • NNLP "Rural Development Agency"
Waste Management	UW1.1.	Close official (unauthorized) non-hazardous landfills.	Ministry of Regional Development and Infrastructure	• LEPL "Solid Waste Management Company of Georgia" • LEPL "Municipal Development Fund of Georgia" • Government of Autonomous Republic of Adjara • Ministry of Environmental Protection and Agriculture • Relevant municipalities

Sector	Action		Leading Entity	Partner Institution(s)
	UW1.2.	Close dumpsites.	Municipality City Halls	• Ministry of Environmental Protection and Agriculture • Ministry of Regional Development and Infrastructure • LEPL "Solid Waste Management Company of Georgia"
	UW1.3.	Construct regional non-hazardous landfills.	Ministry of Regional Development and Infrastructure	• LEPL "Solid Waste Management Company of Georgia" • Government of Autonomous Republic of Adjara • Ministry of Environmental Protection and Agriculture
	UW1.4.	Upgrade and improve Tbilisi's landfill.	Tbilisi City Hall	Ministry of Environmental Protection and Agriculture
	UW1.5.	Utilize landfill gas in Kutaisi's non-hazardous waste landfill.	LEPL "Solid Waste Management Company of Georgia"	Ministry of Environmental Protection and Agriculture
	UW1.6.	Utilize landfill gas in Batumi's non-hazardous waste landfill.	Batumi City Hall	• Ministry of Environmental Protection and Agriculture • Ministry of Finance and Economy of the Autonomous Republic of Adjara
	UW2.1.	Introduce the practice of separating paper waste from the source by the municipalities and encourage paper recycling.	Ministry of Environmental Protection and Agriculture	• Relevant municipalities • Relevant private companies
	UW2.2.	Biodegradable (organic and garden waste) recycling by municipal composting facilities.	Relevant municipalities	• Ministry of Environmental Protection and Agriculture • Imereti Scientists' Union "SPECTRI"

Sector	Action		Leading Entity	Partner Institution(s)
	UW2.3.	Education and awareness raising on waste management.	Relevant municipalities	• Ministry of Environmental Protection and Agriculture • LEPL "Environmental Information and Education Center"
	UW3.1.	Construct municipal wastewater treatment plants.	Ltd "United Water Supply Company of Georgia"	• Ministry of Environmental Protection and Agriculture • Ministry of Regional Development and Infrastructure
	UW3.2.	Capture and recover GHGs in Tbilisi's wastewater treatment plants.	Ltd "Georgian Water and Power"	• Ministry of Environmental Protection and Agriculture • Tbilisi City Hall
	UW3.3.	Capture and recover GHGs in Batumi's wastewater treatment plants.	Ltd "Batumi Water"	• Ministry of Environmental Protection and Agriculture • Batumi City Hall
	UW3.4.	Capture and recover GHGs in Kobuleti's wastewater treatment plant.	Ltd "Kobuleti Water"	• Ministry of Environmental Protection and Agriculture • Kobuleti Municipality
	UW4.1.	Establish a consolidated process for generating waste sector statistics.	National Statistics Office of Georgia (GeoStat)	Ministry of Environmental Protection and Agriculture
Forestry	UF1.1.	Restore 625 ha of degraded forest area (including fire-sites) through forestation	Ministry of Environmental Protection and Agriculture	Ltd "National Forestry Agency"
	UF1.2.	Restore degraded forests through supporting natural restoration.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • Ltd "Forestry Agency of Adjara" • N(n)LE "Tusheti Protected Areas Administration" under the Akhmeta Municipality
	UF2.1.	Introduce sustainable forest management practices through the implementation of sustainable forest management plans.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • The State Sub-Agency Department of Environmental Supervision

Sector	Action		Leading Entity	Partner Institution(s)
	UF2.2.	Introduce sustainable forest management practices through supervision and capacity development.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • The State Sub-Agency Department of Environmental Supervision • LEPL "Environmental Information and Education Center" • Ltd "Agency of Protected Areas"
	UF2.3.	Promote sustainable management of forests by supporting the multifunctionality of forests, raising public awareness, and supporting public involvement in the forest reform processes.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • Ltd "Agency of Protected Areas" • LEPL "Environmental Information and Education Center" • Ltd "Forestry Agency of Adjara"
	UF2.4.	Develop Emerald Network management plans for the territory of the forest of Georgia within the approved emerald network sites.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • Ltd "Agency of Protected Areas"
	UF2.5.	Enhance the protection and/or sustainable management of forest areas within the new protected territories.	Ltd "Agency of Protected Areas"	-
	UF3.1.	Integrate climate change issues, including mitigation, into management plants of the protected areas.	Ministry of Environmental Protection and Agriculture	Ltd "Agency of Protected Areas"

Table 27. Institutions responsible for the implementation of the conditional NDC mitigation actions in Georgia.

Sector	Action		Leading Entity	Partner Institution(s)
Energy Generation and Transmission	CE1.1.	Exploring geothermal and solar energy potential in Georgia.	Ministry of Economy and Sustainable Development	Companies running the solar and geothermal power plants that will implement this action.
	CE1.2.	Further utilisation of water and wind energy.	Ministry of Economy and Sustainable Development	Companies running the wind- and waterpower plants that will implement this action.
	CE1.3.	Exploring incentives to attract investments in renewable energy.	Ministry of Economy and Sustainable Development	• Ministry of Environmental Protection and Agriculture • Ministry of Finance
	CE2.1.	Conducting a feasibility study for a biogas power station.	Ministry of Economy and Sustainable Development	Ministry of Environmental Protection and Agriculture
Transport	CT1.1.	Renew and upgrade public transport infrastructure and services.	Ministry of Economy and Sustainable Development	• Private companies • Ministry of Environmental Protection and Agriculture
	CT1.2.	Renew and upgrade infrastructure for non-motorised transport.	Ministry of Economy and Sustainable Development	• Private companies • Ministry of Environmental Protection and Agriculture
	CT2.1.	Purchase of new and modern train for passenger rail services.	Ministry of Economy and Sustainable Development	• Ministry of Finance • Ministry of Environmental Protection and Agriculture
	CT2.2.	Improve the quality of the intercity railway system.	Ministry of Economy and Sustainable Development	• Private companies • Ministry of Environmental Protection and Agriculture
	CT3.1.	Explore incentives to improve the energy efficiency of light-duty vehicles.	Ministry of Internal Affairs	• Ministry of Economy and Sustainable Development • Ministry of Finance • LEPL "Service Agency"
	CT4.1.	Explore incentives to support the shift for freight transport from road to rail.	Ministry of Internal Affairs	• Ministry of Economy and Sustainable Development • Ministry of Finance • LEPL "Service Agency"

Sector	Action		Leading Entity	Partner Institution(s)
Buildings	CB1.1.	Creating information system for energy efficiency of residential buildings.	Ministry of Economy and Sustainable Development	Ministry of Environmental Protection and Agriculture
	CB1.2.	Improving energy efficiency of residential buildings.	Ministry of Economy and Sustainable Development	• Ministry of Environmental Protection and Agriculture • Relevant municipalities
	CB2.1.	Conduct a feasibility study for the identification of economic and climate change potential for autonomous heating systems in existing multiapartment buildings.	Ministry of Economy and Sustainable Development	• Ministry of Environmental Protection and Agriculture • Relevant municipalities
	CB3.1.	Updating technical regulations and climatic standards in the construction sector.	Ministry of Economy and Sustainable Development	Ministry of Environmental Protection and Agriculture
	CB4.1.	Introduce financial instruments for the development of carbon-free buildings in the resorts of Georgia.	Ministry of Finance	• Ministry of Environmental Protection and Agriculture • Ministry of Economy and Sustainable Development
Industry	CI1.1.	Support the low-emission production of steel with modern technologies.	Ltd "Rustavi Steel"	Ministry of Environmental Protection and Agriculture
	CI2.1.	Develop mandatory energy audits and certification schemes at industrial facilities.	Ministry of Environmental Protection and Agriculture	• Ltd "Rustavi Azoti" • Ltd "Heidelberg Cement" • Ltd "Rustavi Steel"
	CI3.1.	Introduce systems for efficient use of industrial waste for heat production.	Ministry of Environmental Protection and Agriculture	• Ltd "Rustavi Azoti" • Ltd "Heidelberg Cement" • Ltd "Rustavi Steel"
Agriculture	CA1.1.	Establish a consolidated process for collecting and updating data for the agriculture sector.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"

Sector	Action		Leading Entity	Partner Institution(s)
	CA2.1.	Improve irrigation infrastructure using climate-smart technologies and systems.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"
	CA2.2.	Develop and implement regulations for irrigation water.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"
	CA3.1.	Regulate agricultural burning practices to reduce GHG emissions and degradation of agricultural fields and surrounding areas.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"
	CA3.2.	Promote sustainable post-harvest agricultural residue management practices through incentives and awareness raising to facilitate the ban on field burning.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"
	CA3.3.	Replant windbreaks to recover from damages caused by unsustainable agricultural burning practices.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"

Sector	Action		Leading Entity	Partner Institution(s)
	CA4.1.	Regulate pasture management to limit overgrazing and trampling.	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"
	CA5.1.	Foment research and innovation to further enhance the climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE).	Ministry of Environmental Protection and Agriculture	• Ltd "Scientific-Research Center of Agriculture" • LEPL "National Agency for Sustainable Land Management and Land Use Monitoring" • NNLP "Rural Development Agency"
Waste Management	CW1.1.	Increase the number of composting facilities through capacity building and incentives campaign.	Ministry of Environmental Protection and Agriculture	• Ministry of Regional Development and Infrastructure • Relevant municipalities
	CW1.2.	Pilot composting project for biodegradable wine and agricultural residues.	Ministry of Environmental Protection and Agriculture	• Ministry of Regional Development and Infrastructure • Relevant municipalities
	CW2.1.	Establish maximum permissible limits (MPLs) for wastes.	Ministry of Environmental Protection and Agriculture	LEPL "Solid Waste Management Company of Georgia"
	CW3.1.	Launch awareness-raising campaigns of the five-step waste management hierarchy system.	Ministry of Environmental Protection and Agriculture	• Ministry of Regional Development and Infrastructure • Relevant municipalities
	CW3.2.	Improve the data collection capacities of the waste sector.	National Statistics Office of Georgia (GeoStat)	Ministry of Environmental Protection and Agriculture

Sector	Action		Leading Entity	Partner Institution(s)
Forestry	CF1.1.	Establish a consolidated process for collecting and updating data for the forestry sector.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • National Statistics Office of Georgia (GeoStat) • Ltd "Agency of Protected Areas"
	CF2.1.	Reduce demands for firewood for residential heating purposes through energy-efficient building envelopes, as well as increased access to alternative energy sources and technologies.	Ministry of Environmental Protection and Agriculture	Ministry of Economy and Sustainable Development
	CF2.2.	Limit the incidence of illegal logging.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • Ltd "Agency of Protected Areas"
	CF3.1.	Establish a comprehensive forest fire prevention and management system.	Ministry of Environmental Protection and Agriculture	• Ltd "National Forestry Agency" • Ltd "Agency of Protected Areas"

6.2.2 Responsible Institutions for Adaptation Actions

Georgia's updated NDC acknowledges the need for adaptation to adverse effects of climate change, and Georgia is committed to continue studying its adaptive capacity of different economic sectors, with the overall adaptation goals in these particularly vulnerable sectors to be adopted as part of the country's NAP. However, as of March 2022, work on the elaboration of Georgia's NAP has not yet commenced, leading to the country still lacking concrete adaptation actions set out to achieve the priority adaptation targets committed in the NDC.

Therefore, to initiate the formulation of the NAP is considered the first urgent activity for implementation of the NDC adaptation actions and assigning the Leading Entities and Partner Institutions by action is not yet feasible. Following the NAP elaboration, and once the strategies and programmes that need to be developed and implemented have been identified, the financing strategy and investment plan for the implementation of individual adaptation actions prioritized through the NAP process can be developed, including a mapping of the key institutions responsible for the implementation of Georgia's NDC adaptation actions.

The following table presents the list of Leading Entities and Partner Institutions responsible for the implementation of the NDC adaptation component, considering the initial requirement to develop the NAP, and subsequently implementing the incorporated adaptation actions.

Table 28. Institutions responsible for the implementation of the NDC adaptation component in Georgia.

Area	Action		Leading Entity	Partner Institution(s)
Planning	AP.1	Preparation of the NAP of Georgia.	Ministry of Environmental Protection and Agriculture	• Private companies • State entities
	AP.2	Preparation of the finance strategy and investment plan for the NAP of Georgia.	Ministry of Environmental Protection and Agriculture	• Private companies • State entities
Implementation	AI.1	Implementation of short-term, high priority adaptation actions as set out in the NAP.	Ministry of Environmental Protection and Agriculture	• Private companies • State entities
	AI.2	Implementation of medium-term, medium priority adaptation actions as set out in the NAP.	Ministry of Environmental Protection and Agriculture	• Private companies • State entities
	AI.1	Implementation of long-term, low priority adaptation actions as set out in the NAP.	Ministry of Environmental Protection and Agriculture	• Private companies • State entities

6.2.3 Proposal of Institutional Arrangements for NDC Finance

There is currently no specific institutional architecture regarding climate finance in Georgia, with the management of NDC financing being divided among different ministries, financial organisations and agencies, and spending being similarly spread out. This leads to the coordination and information sharing of financing pertaining to NDC implementation posing a challenge. Climate finance tracking in Georgia is completed on an ad-hoc and project basis and relies on external support, adding financial strain on the country, and preventing the country to provide transparent information in a sustainable way.

Coordination and centralisation of information is required to monitor climate financial flows from different sources that are directed to NDC implementation. Strong institutional arrangements are vital to enable Georgia to provide reliable, comprehensive, and regularly updated information on climate finance that meets the enhanced reporting requirements of the ETF and serves national decision makers and action-implementing stakeholders. The institutional arrangements should build upon the existing institutional architecture and be framed around the nationally appropriate formal and legal instruments of each entity. In the context of NDC finance, the three main avenues requiring strong institutional arrangements relate to:

- **National expenditure:** Climate change relevant expenditure within the national budget which includes all types of expenditures from consumption to investment including the ones done by the Government of Georgia.
- **International support (ODA):** ODA is defined by the OECD Development Assistance Committee (DAC) as government aid that promotes and specifically targets the economic development and welfare of developing countries.[39] In the context of NDC financing this relates to government aid aimed at climate change activities in Georgia.
- **Private sector investment (Non-ODA):** Climate change related private sector investments (non-ODA) include Other Official Flows (OOF), mobilised private finance, non-DAC countries concessional funds, and private non-concessional flows.

National expenditure

The Electronic Budget Management System (E-Budget) monitors the national expenditure in Georgia. The different line ministries in Georgia provide budget information and the E-Budget System subsequently classifies all the budgetary spending according to economic classification, functional classification, and programme classification. From 2023, spending institutions can additionally define the policy area of the program in the E-Budget System as climate change related. The tagging will be conducted by the policy departments of the relevant spending institution, who bears ample knowledge on the specificities of the

[39] http://www.oecd.org/dac/financing-sustainable-development/development-finance-standards/official-development-assistance.htm

activities, and subsequently passed to the finance departments of the relevant spending institution for finalisation of the assigned weights conjointly with the policy department.

The entity responsible for identifying and extracting data of all expenditure of line ministries and municipalities in the country related to climate change will be the State Budget Department of the Ministry of Finance. The Department will aggregate climate change related expenditure and make this information available according to the reporting requirements as outlined in Section 6.5.3.

International support (ODA)

The electronic Aid Information Management System (eAIMS) contains information on ODA projects in Georgia which are financed by international development partners. The eAIMS system allows bilateral and multilateral donors to voluntarily report information on projects to the online database and follows the OECD classifications to designate ODA projects to a certain sector. It also includes a filter on the relevant SDG the project is related to, including SDG 13 related to climate change.

The entity responsible for identifying and extracting data on ODA projects in Georgia related to climate change will be the Donor Coordination Unit within the Department of Policy Analysis, Strategic Planning & Coordination of the Administration of the Government of Georgia. The Donor Coordination Unit will aggregate climate change related ODA and make this information available according to the reporting requirements as outlined in Section 6.5.3.

Private sector investment (non-ODA)

There is currently no centralised system in place in Georgia for identifying private sector investments (non-ODA) projects in the country. Non-ODA climate change related activities such as Other Official Flows (OOF), mobilised private finance, non-DAC countries concessional funds, and private non-concessional flows comprise a large share of a countries' climate finance architecture and are therefore important to identify. Developing and establishing a data collection system to collect private sector investments related to climate change in Georgia will ensure that all relevant climate finance projects are identified and can be properly classified and reported.

It is proposed that the Ministry of Environmental Protection and Agriculture develops a centralised system similar to the eAIMS database, and using lessons learnt from the eAIMS and E-Budget Systems, which will allow for all non-ODA projects being implemented in Georgia to be report information to the online database. Considering the role and responsibilities of the Environment and Climate Change Department within the Ministry of Environmental Protection and Agriculture, this entity will be responsible for identifying and extracting data on all non-ODA climate related projects in Georgia from the established database and make this information available in an aggregated way according to the reporting requirements outlined in Section 6.5.3.

Institutional Architecture

The proposed institutional architecture (Figure 11) defines each of the different entities involved in monitoring climate financial flows from different sources that are directed to NDC implementation, and the relationships between each architectural entity and institution.

The entities coloured green concern the supportive role of the initial measurement of both domestic and international climate finance flows of climate change activities. The key entities related to the MRV system (the centralised data compilation, final reporting, and verification) are coloured yellow.

The data compilers are the Donor Coordination Unit of the Administration of the Government, the State Budget Department of the Ministry of Finance, and the Environment and Climate Change Department of the Ministry of Environmental Protection and Agriculture. The reported climate financial flows will be submitted to the Climate Change Council for final verification purposes and subsequently reported according to the national and international reporting requirements outlined in Section 6.5.3 by the Ministry of Environmental Protection and Agriculture.

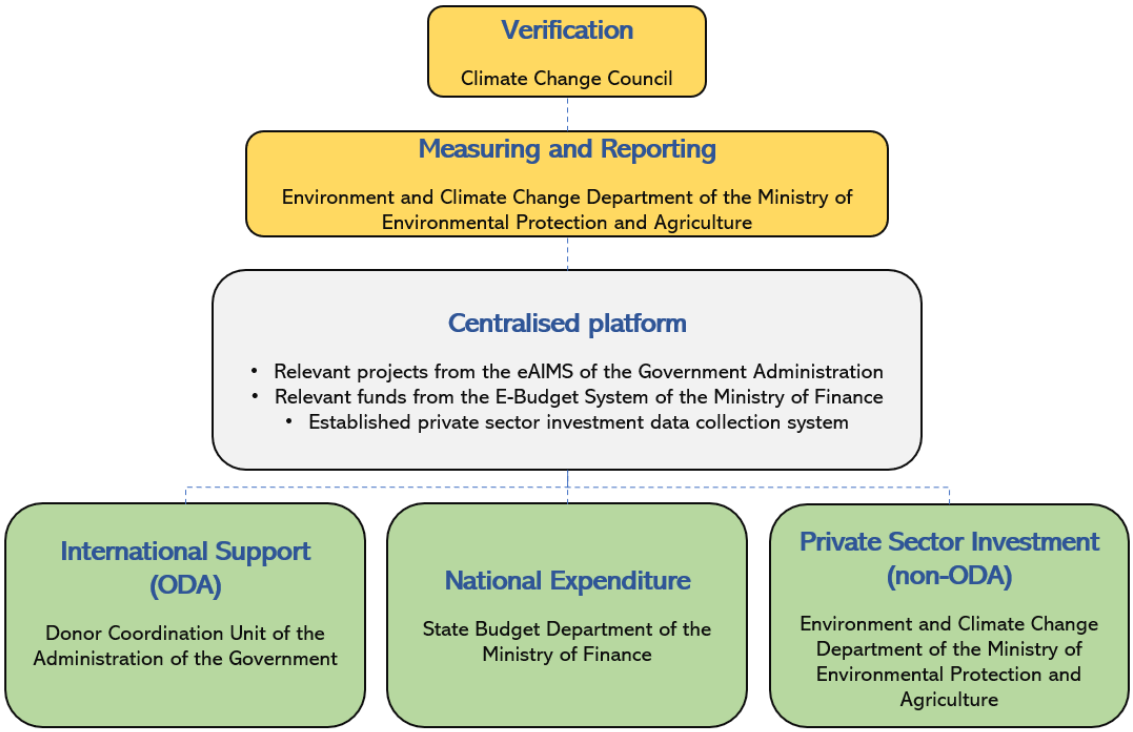


Figure 11. Proposed institutional arrangements for monitoring climate financial flows.

These national institutions have been assigned a series of roles and responsibilities in accordance with their current roles and responsibilities in relation to climate action and climate finance activities in line with the national legislation, legal framework, and statutes of the state entities (Table 29).

Table 29. Roles and responsibilities of involved institutions for monitoring climate financial flows.

Entity	Roles and responsibilities
Ministry of Environmental Protection and Agriculture	❖ Designated entity to provide climate finance data to the inter-ministerial Climate Change Council to verify the aggregated financial information related to climate change Council. ❖ Overall responsibility and providing guidance for the collection, identification, and monitoring of climate finance through the three platforms.
Environment and Climate Change Department of the Ministry of Environmental Protection and Agriculture	❖ Designated entity to collect, identify, and provide data on private sector investments (non-ODA) fully or partially related to climate change. ❖ Analyse who received finance in the country, what it has been used for, and indicate the relevant climate change and NDC objective and aggregate it accordingly ❖ Measure the final climate change information, calculations, reports, and any other specifics provided by the data providing entities.
State Budget Department of the Ministry of Finance	❖ Designated entity to collect, identify, and provide data on climate change related national expenditure to the Environment and Climate Change Department of the Ministry of Environmental Protection and Agriculture. ❖ Provide data on all expenditure of line ministries and municipalities on climate change projects as well as the finance received and keep financial accounts of investment projects and programmes financed by foreign financial sources reflected in the State Budget. ❖ Analyse the data according to the climate change objectives and NDC implementation and aggregate it accordingly.
Donor Coordination Unit of the Administration of the Government	❖ Designated entity to collect, identify, and provide data on international support (ODA) fully or partially related to climate change to the Environment and Climate Change Department of the Ministry of Environmental Protection and Agriculture. ❖ Analyse who has received finance in the country, what it has been used for, and indicate the relevant climate change and NDC objective and aggregate it accordingly. ❖ Further develop the eAIMS system in collaboration with the Financial Analytical Service of the Ministry of Finance to incorporate additional climate change markers or climate change thematic NDC areas to identify climate change related programmes pertaining to NDC implementation.

Climate Change Council	❖ Establish on a permanent basis a Working Group on Climate Finance to prepare all climate finance related documentation for the approval from the Climate Change Council, in particular it will verify the collected data on international support, national expenditure, and private sector investments. ❖ Submit the results from the verification to the Environment and Climate Change Department of the Ministry of Environmental Protection and Agriculture for subsequent publication. ❖ Responsible for the verification of the measurement of the financial needs, and its prioritisation. ❖ Approve and adopt the corresponding processes and mechanisms that are required before information is verified and reported.

6.3 Capacity Building Programme

Capacity building is an essential element for Georgia to expand the skills and knowledge of relevant stakeholders for innovative financing for the NDC priority actions and strengthen the public-private partnerships to mobilise and deliver on the climate change goals. In this context, capacity means that stakeholders in the country have the financial and human resources needed, together with the ability to apply skills, knowledge, and tools to support the implementation of the NDC Financing Strategy and Investment Plan.

The Capacity Building Programme is based on identified capacity gaps and barriers and provides recommendations for raising awareness and engagement, based on a learning-by-doing approach through trainings on financing for actions. It aims to deliver the necessary knowledge, skills, communication streams, and institutional strengthening required for effective monitoring of climate financial flows from different sources that are directed to NDC implementation. Capacity building should complement the capacity currently in place in Georgia and work towards contributing to building and strengthening a self-sustaining, autonomous system of finance mobilisation and tracking in the country. Therefore, to ensure the long-term impact and sustainability of the capacity building, the Capacity Building Programme will not solely focus on the organisation/institutional level, but also build capacity outside government entities such as academic institutions. It is based on the UNFCCC Capacity Building Frameworks[40] and Paris Committee on Capacity Building (PCCB) Toolkit[41].

What is a capacity gap?

Identifying the existing capacity of a stakeholder and assessing what the capacity should be (need) and what they are now, defining the difference between the two as the gap or need.

Capacity building can be provided at different dimensions, from the individual who creates the capacity (human capacity), the institution who retains the capacity (ministries/agencies, organisations, research centres), and the system which enables capacity building (regulatory, legislative, and policy frameworks, public awareness, accountability). In this context, these different points of entry can be described as:

- **Individual level:** Capacity building at the individual level pertains to the process of changing understanding and behaviours by knowledge sharing and skill development s through educational and training activities such as learning by doing approaches.
- **Institutional level:** Capacity building at the institutional level focuses on organisational performance and functioning capabilities such as adapting to change or alterations in processes and ensuring the sustainability of its capacities. It aims

[40] https://unfccc.int/topics/capacity-building/the-big-picture/capacity-in-the-unfccc-process
[41] https://unfccc.int/pccb

to develop the capacity of the institution as a whole, including individual employees and specific departments within the institution, and the coordination and cooperation with other sectors and institutions.

- **System level:** Capacity building at the system level relates to creating a suitable enabling environment which enables capacity building and provides the framework for action, such as the overall policy, economic, regulatory and accountability frameworks within which institutions and individuals operate.

The Capacity Building Programme for Georgia holds several activities to be conducted to expand the skills and knowledge of the relevant stakeholders and provide capacity at different dimensions, namely:

- **Capacity needs assessments:** Involves the analysis of the country and stakeholder capacity building requirements as it pertains to monitoring climate financial flows from different sources that are directed to NDC implementation. This has been conducted as part of the project to provide "Support to Georgia in enhancing its national capacities to track and report on climate finance" and as part of the "NDC Financing Strategy and Investment Plan & Climate Budget Tagging" project. Further assessment will be required at sub-national level and the results from these several capacity needs assessments can be aggregated and submitted to the Paris Committee on Capacity Building to provide the basis for discussions with technical assistance providers and funds for future capacity building activities in Georgia.
- **'Train the trainer' programmes:** Training sessions by international consultants to national individuals or institutions on support needed and received tracking, and in linking climate financial flows from different sources to NDC implementation. It targets a reduced number of individuals and is adapted to the needs of the recipients. This will involve developed course material by international consultants to provide trainings to policy and finance departments in Georgia and other national technical or academic institutions in the country that will be active in monitoring climate financial flows. This will strengthen the knowledge of the individuals and the institutions involved. Considerations can be made to initiate the process at national-level spending institutions, and subsequently cascade down to other lower-level spending institutions.
- **Coaching and mentoring:** On-the-job learning for individuals involved in data collection and monitoring related to climate financial flows to provide hands-on training and allow these individuals to apply their improved knowledge on real data and their ongoing tasks. This will initially require knowledge sharing and capacity strengthening of a select group of national individuals within institutions, at the national and sub-national level, who can subsequently provide coaching and mentoring activities to colleagues and other key stakeholders.
- **National programme of climate change education:** Developing and establishing courses on climate finance in the national school and university curricula to enhance public awareness on the topic. This will ensure capacity building in Georgia on climate change and the related financial flows is being facilitate at the early educational level.
- **Learning exchanges:** Sharing insights and emerging practices on monitoring climate financial flows from different sources related to NDC implementation with other

countries in the region to explore common challenges and questions in NDC financing. Exchange platforms and technical assistance on finance, capacity building, target setting, regulations, and others can support Georgia effectively monitor financial flows to ensure NDC implementation. This can be facilitated through EU4Climate, which supports governments in six EU Eastern Partner countries, namely Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine), to take action against climate change and establishing good practices on climate investments monitoring and reporting.

- **Stakeholder workshops:** National workshops conducted by international climate finance consultants for key national stakeholders on several aspects of climate finance such as emerging practices and common challenges. This will ensure that Georgia is up-to-date on key issues to consider on monitoring climate financial flows from different sources that are directed to NDC implementation and that the country is applying methodologies according to international good practice guidelines. Several national workshops have been provided as part of the project to provide "Support to Georgia in enhancing its national capacities to track and report on climate finance" and as part of the "NDC Financing Strategy and Investment Plan & Climate Budget Tagging" project. Further workshops are required to share good practices on, among others, Climate Budget Tagging (CBT) and for establishing a database for private sector investments.
- **Support for policymakers in effective decision making:** Relates to the system level dimension to enhance the skills and relationships needed to drive forward new strategies, policies, and climate change actions. This will require capacity building to ensure that the newly developed policy, economic, regulatory and accountability frameworks are in line with good practices and provide institutions and individuals sufficient guidance on the required approach.

These activities are set out in a capacity building monitoring plan which, for each of the activities listed above, includes the dimension, the responsible entity, and the timings for when this activity will happen (Table 31). The progress of each of the activities is tracked through a three-step traffic light system (Table 30). The traffic light system aims to quickly identify the capacity building activities that have been completed or that have not yet been commenced.

Table 30. Three-step traffic light system for tracking capacity building monitoring plan.

Progress	Criteria
✔	Completed
✓	In progress
✗	No progress

Table 31. *Capacity building monitoring plan.*

Progress	Activity	Dimension	Responsible Entity	Timeframe
✓	Capacity needs assessments	Individual, Institutional, and System	Ministry of Environmental Protection and Agriculture	Annually
✗	'Train the trainer' programmes	Individual and Institutional	International Consultants	Monthly
✗	Coaching and mentoring	Individual	Ministerial Finance and Policy Departments	Weekly
✗	National programme of climate change education	Individual	Educational Institutions	Annually
✓	Learning exchanges	Institutional	Ministry of Environmental Protection and Agriculture	Annually
✓	Stakeholder workshops	Individual and Institutional	International Consultants	Bi-annually
✓	Support for policymakers in effective decision making	System	Government of Georgia	Annually

6.4 Implementation Timeline

The implementation period of the updated NDC of Georgia covers a time span of 10 years from 2020 to 2030. In order to ensure the efficient allocation of limited human and financial resources to maximize the transformational change brought by the NDC, it is of fundamental importance that these mitigation and adaptation actions be implemented in a gradual manner depending on their priority. Based on the results of this prioritisation, the priority actions will be implemented according to realistic timelines, focussing on the implementation of unconditional and higher priority actions in the short-term and less significant unconditional actions in the medium-term. On the other hand, conditional actions and low-important actions should be implemented in the long-term.

As such, climate finance for NDC implementation should also be procured, secured allocated and mobilized in a gradual manner following the implementation timeline of the NDC actions. This means that it is of urgent manner to close the financial gaps for short-term NDC actions by allocating the necessary domestic budget as well as applying for and securing international support for these actions, including the engagement of the private sector. Nevertheless, the closure of the financial gaps for medium and long-term mitigation actions needs to be planned in advance to ensure that adequate resources are available for their implementation within the envisioned time frame.

6.4.1 Implementation Timeline of Mitigation Actions

The following two tables present the envisioned implementation time spans for all 66 unconditional NDC mitigation actions and 35 conditional NDC mitigation actions. These proposed time spans have been developed in accordance with Georgia´s 2030 Climate Strategy and the 2021-2023 Action Plan of Georgia´s 2030 Climate Strategy.

Table 32. Estimated timeline of implementation for unconditional NDC mitigation actions in Georgia.

Sector		Action	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Generation and Transmission	UE1.1	Technical and procedural support for wind power (WP) generation.											
	UE1.2	Technical and procedural support for solar power (SP) generation.											
	UE1.3	Technical and procedural support for hydro power (HP) generation.											
	UE2.1	Implementation of technical work of thermal power plants.											
	UE3.1	Implementation of Ten-year network development plan of Georgia for electricity distribution companies.											
	UE4.1	Development of a long-term comprehensive multisectoral strategy document for Georgia's energy policy.											
Transport	UT1.1.	Implementing changes in existing regulation related to the technical inspection of vehicles.											
	UT1.2.	More efficient execution of fines foreseen under the Administrative Offences Code of Georgia in terms of technical inspection of the vehicles.											
	UT1.3.	Control of the exhaust fumes from the vehicles on the roads.											
	UT1.4.	For the promotion of electric vehicles, identification of optimal tax incentive alternatives based on the cost-benefit analysis.											
	UT1.5.	Improve infrastructure for electric vehicles in Tbilisi.											

Sector	Action		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	UT1.6.	Discussion on the possibility of increase in import duty for old vehicles based on (economic) feasibility study.											
	UT1.7.	Emission standards on the import of vehicles based on the cost-effectiveness analysis (EUR4 / EUR5).											
	UT2.1.	Discuss the increase in taxes for fuels.											
	UT2.2.	Support and encouragement of the biodiesel production.											
	UT3.1.	Implement the measures included in Tbilisi's Green Transport Policy Plan.											
	UT3.2.	Implement the measures listed in Batumi's Sustainable Urban Mobility Plan (SUMP).											
	UT4.1.	Develop international climate finance proposals for the improved public, intercity, and non-motorised transport means.											
	UT4.2.	Develop cost-benefit analysis and feasibility study to identify best options for shifting road freight to rail.											
Buildings	UB1.1.	Elaborate the methodology for certification of buildings.											
	UB1.2.	Elaborate, approve, and implement secondary legislation on the energy efficiency of buildings.											
	UB2.1.	Development of standards, norms, and labelling schemes for appliances.											
	UB2.2.	Implementation of energy efficiency awareness raising programmes for the public.											

Sector	Action		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	UB2.3.	Implementation of information campaign about incandescent bulbs											
	UB2.4.	Implementation of information campaigns for solar water heater systems in buildings.											
	UB3.1.	Introducing tax regulations on incandescent bulbs.											
	UB3.2.	Installation of energy efficient lighting in buildings owned/used by public institutions.											
	UB3.3.	Establish energy efficiency information systems for public buildings.											
	UB3.4.	Improvement of exterior enclosure of school buildings, installation of energy-efficient bulbs, retrofit/replacement of solid fuel heaters.											
	UB4.1.	Elaboration of financial incentives mechanism for installation of solar water heater systems in buildings.											
	UB4.2.	Encourage using of energy-efficient firewood stoves.											
	UB5.1.	Development of qualification, accreditation, and certification schemes for energy sector experts.											
	UB5.2.	Development of educational programs and trainings for energy consultants.											

Sector		Action	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Industry	UI1.1.	Substitute wet with the dry method in cement production.											
	UI1.2.	Supporting the low-emission production of Nitric Acid with modern technologies.											
	UI2.1.	Develop individual emission factors per production.											
Agriculture	UA1.1.	Reduce emissions generated by enteric fermentation of cattle, by developing a methodology for changing cattle feed and running a recommendation campaign.											
	UA1.2.	Increase the quality of livestock nutrition and conservation of pasture biodiversity.											
	UA1.3.	Rehabilitate and transform windbreaks to minimize climate-related land degradation.											
	UA2.1.	Develop cost-benefit analysis and feasibility study to identify best options to increase further change in livestock feed for the next iteration of the Climate Action Plan.											
	UA2.2.	Develop cost-benefit analysis and feasibility study to identify best options in which manure management systems can be implemented.											
	UA2.3.	Support existing and emerging cooperatives to implement sustainable pasture management practices and replicate the success factors of successful cooperatives for other cooperatives.											
	UA2.4.	Research and consultation to define economic and socially feasible Climate- Smart Agriculture (CSA) actions in the context of Georgia.											
	UA2.5.	Promote the introduction of climate friendly agricultural practices through extension and awareness raising campaigns.											

Sector		Action	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Waste Management	UW1.1.	Close official (unauthorized) non-hazardous landfills.											
	UW1.2.	Close dumpsites.											
	UW1.3.	Construct regional non-hazardous landfills.											
	UW1.4.	Upgrade and improve Tbilisi's landfill.											
	UW1.5.	Utilize landfill gas in Kutaisi's non-hazardous waste landfill.											
	UW1.6.	Utilize landfill gas in Batumi's non-hazardous waste landfill.											
	UW2.1.	Introduce the practice of separating paper waste from the source by the municipalities and encourage paper recycling.											
	UW2.2.	Biodegradable (organic and garden waste) recycling by municipal composting facilities.											
	UW2.3.	Education and awareness raising on waste management.											
	UW3.1.	Construct municipal wastewater treatment plants.											
	UW3.2.	Capture and recover GHGs in Tbilisi's wastewater treatment plants.											
	UW3.3.	Capture and recover GHGs in Batumi's wastewater treatment plants.											

Sector		Action	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	UW3.4.	Capture and recover GHGs in Kobuleti's wastewater treatment plant.											
	UW4.1.	Establish a consolidated process for generating waste sector statistics.											
Forestry	UF1.1.	Restore 625 ha of degraded forest area (including fire-sites) through forestation											
	UF1.2.	Restore degraded forests through supporting natural restoration.											
	UF2.1.	Introduce sustainable forest management practices through the implementation of sustainable forest management plans.											
	UF2.2.	Introduce sustainable forest management practices through supervision and capacity development.											
	UF2.3.	Promote sustainable management of forests by supporting the multifunctionality of forests, raising public awareness, and supporting public involvement in the forest reform processes.											
	UF2.4.	Develop Emerald Network management plans for the territory of the forest of Georgia within the approved emerald network sites.											
	UF2.5.	Enhance the protection and/or sustainable management of forest areas within the new protected territories.											
	UF3.1.	Integrate climate change issues, including mitigation, into management plants of the protected areas.											

Table 33. Estimated timeline of implementation for conditional NDC mitigation actions in Georgia.

Sector		Action	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Energy Generation and Transmission	CE1.1.	Exploring geothermal and solar energy potential in Georgia.											
	CE1.2.	Further utilisation of water and wind energy.											
	CE1.3.	Exploring incentives to attract investments in renewable energy.											
	CE2.1.	Conducting a feasibility study for a biogas power station.											
Transport	CT1.1.	Renew and upgrade public transport infrastructure and services.											
	CT1.2.	Renew and upgrade infrastructure for non-motorised transport.											
	CT2.1.	Purchase of new and modern train for passenger rail services.											
	CT2.2.	Improve the quality of the intercity railway system.											
	CT3.1.	Explore incentives to improve the energy efficiency of light-duty vehicles.											
	CT4.1.	Explore incentives to support the shift for freight transport from road to rail.											
Buildings	CB1.1.	Creating information system for energy efficiency of residential buildings.											
	CB1.2.	Improving energy efficiency of residential buildings.											

Sector	Action		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	CB2.1.	Conduct a feasibility study for the identification of economic and climate change potential for autonomous heating systems in existing multiapartment buildings.							●	—	—	—	●
	CB3.1.	Updating technical regulations and climatic standards in the construction sector.				●	—	—	—	—	—	—	●
	CB4.1.	Introduce financial instruments for the development of carbon-free buildings in the resorts of Georgia.			●	—	—	—	●				
Industry	CI1.1.	Support the low-emission production of steel with modern technologies.					●	—	—	—	—	—	●
	CI2.1.	Develop mandatory energy audits and certification schemes at industrial facilities.				●	—	—	—	●			
	CI3.1.	Introduce systems for efficient use of industrial waste for heat production.					●	—	—	—	—	—	●
Agriculture	CA1.1.	Establish a consolidated process for collecting and updating data for the agriculture sector.			●	—	—	—	●				
	CA2.1.	Improve irrigation infrastructure using climate-smart technologies and systems.		●	—	—	—	—	●				
	CA2.2.	Develop and implement regulations for irrigation water.		●	—	—	●						
	CA3.1.	Regulate agricultural burning practices to reduce GHG emissions and degradation of agricultural fields and surrounding areas.							●	—	●		
	CA3.2.	Promote sustainable post-harvest agricultural residue management practices through incentives and awareness raising to facilitate the ban on field burning.									●	—	●
	CA3.3.	Replant windbreaks to recover from damages caused by unsustainable agricultural burning practices.						●	—	—	—	—	●

Sector	Action		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	CA4.1.	Regulate pasture management to limit overgrazing and trampling.											
	CA5.1.	Foment research and innovation to further enhance the climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE).											
Waste Management	CW1.1.	Increase the number of composting facilities through capacity building and incentives campaign.											
	CW1.2.	Pilot composting project for biodegradable wine and agricultural residues.											
	CW2.1.	Establish maximum permissible limits (MPLs) for wastes.											
	CW3.1.	Launch awareness-raising campaigns of the five-step waste management hierarchy system.											
	CW3.2.	Improve the data collection capacities of the waste sector.											
Forestry	CF1.1.	Establish a consolidated process for collecting and updating data for the forestry sector.											
	CF2.1.	Reduce demands for firewood for residential heating purposes through energy-efficient building envelopes, as well as increased access to alternative energy sources and technologies.											
	CF2.2.	Limit the incidence of illegal logging.											
	CF3.1.	Establish a comprehensive forest fire prevention and management system.											

6.4.2 Implementation Timeline of Adaptation Actions

While Georgia's updated NDC acknowledges the need for adaptation to adverse effects of climate change, committing to continue fortifying its adaptive capacity of different economic sectors. However, there are not yet any concrete adaptation actions set out to achieve the priority adaptation targets committed in the NDC of Georgia. The identification of such priority adaptation actions is the first step for planning the implementation of the adaptation component of the NDC, including the estimate, procurement, and mobilization of the necessary resources for implementation.

The concrete adaptation actions to be implemented by Georgia within the scope of its NDC will be set out in a National Adaptation Plan (NAP). The development of the NAP is considered an urgent activity for NDC implementation, which should be undertaken within the first two years of the NDC implementation period. That being said, as of March 2022, work on the elaboration of Georgia's NAP has not yet commenced.

As of June 2021, has submitted the following Readiness Proposal to the GCF as part of the Readiness Programme to support the NAP development process:

- Name: "Climate Resilient Rapid Readiness".
- Duration: 12 months.
- Amount: $300 000 USD.
- Delivery partner: FAO.[42]

One of the five areas of support under the Readiness Programme is dedicated to adaptation planning, which includes support for strengthened adaptation planning governance and institutional coordination, such as national, sub-national and/or sectoral plans. Countries can access up to USD 3 million for the formulation of NAPs, with adaptation planning proposals able to be submitted on a rolling basis.[43]

Following the NAP elaboration, and once the strategies and programmes that need to be developed and implemented have been identified, the financing strategy and investment plan for the implementation of individual adaptation actions prioritized through the NAP process can be developed. This will allow Georgia to implement each of the priority adaptation actions in the updated NDC. Ideally the financing strategy and investment plan for the adaptation component of the NDC should be finalized within the first three years of the NDC implementation period.

The following table presents the envisioned implementation time spans for the implementation of the NDC adaptation component. The timeline proposed has been adjusted taking into consideration the delay in the development of Georgia´s NAP.

[42] https://www.greenclimate.fund/sites/default/files/document/readiness-pipeline-20210624_0.pdf
[43] https://www.greenclimate.fund/readiness/naps

Table 34. Estimated timeline of implementation for the NDC adaptation component in Georgia.

Area		Action	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Planning	AP.1	Preparation of the NAP of Georgia.											
	AP.2	Preparation of the finance strategy and investment plan for the NAP of Georgia.											
Implementation	AI.1	Implementation of short-term, high priority adaptation actions as set out in the NAP.											
	AI.2	Implementation of medium-term, medium priority adaptation actions as set out in the NAP.											
	AI.1	Implementation of long-term, low priority adaptation actions as set out in the NAP.											

6.5 Tracking NDC Finance

The NDC Financial Strategy and Investment Plan should be continuously updated to reflect the estimated costs for implementation of each NDC action, the funds secured and mobilized for NDC implementation, and the remaining finance gaps to be addressed. NDC-aligned finance tracking is therefore fundamental for understanding the efficiency and effectiveness of financial flows towards the attainment of the NDC mitigation and adaptation targets. The objective is to track the extent to which Georgia is accessing the necessary resources for NDC implementation and taking the necessary steps for closing the remaining finance gaps. Although this goes beyond the strict measurement of financial flows, it is critical that the MRV system for measuring NDC financial expenditures is also able to identify the development impacts of those resources, in order to feedback lessons to the NDC planning processes in the country. Furthermore, NDC-aligned finance tracking will be of key importance to overcoming the principal barriers to financing climate change actions in Georgia as identified in Section 2 of the present document.

The introduction, harmonization and mainstreaming NDC-aligned finance tracking can thus kick-start a virtuous cycle for the implementation and continuous update of the NDC Financial Strategy and Investment Plan. NDC-aligned finance tracking is fundamental for enhanced fact-based financial planning that will enhance the national budgeting processes, the promotion of private investments, and the efficient acquisition and distribution of international support towards effective NDC implementation. As information on financial flows is gathered, planning decisions on financial needs, sources, and channels can be altered, creating a dynamic planning process that is resilient to the evolution and changes in the climate finance framework in Georgia, all while improving the economic landscape in the country for a just transition towards low-carbon and resilient economic growth.

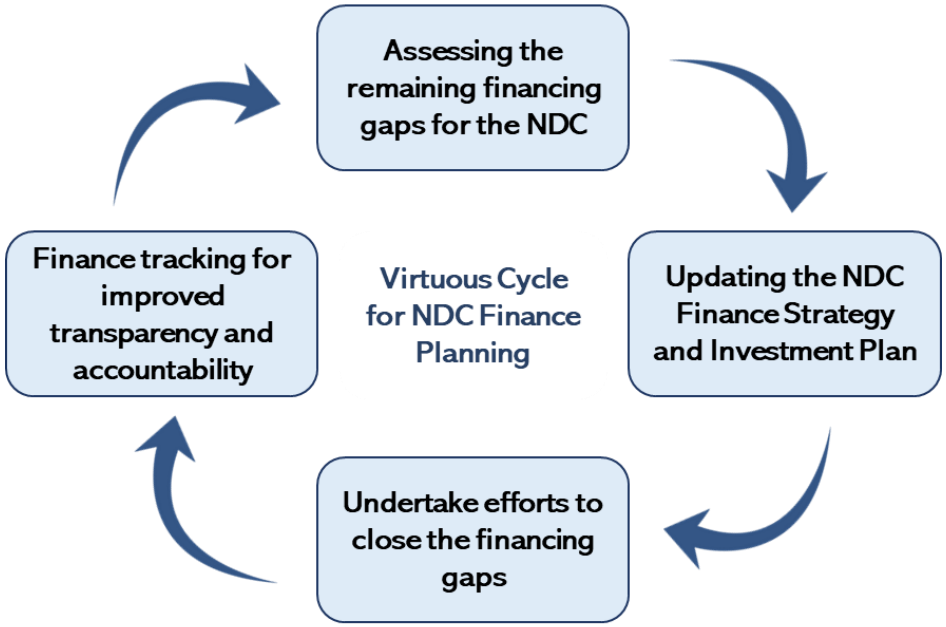


Figure 12. Virtuous cycle for the implementation and continuous update of the NDC Financial Strategy and Investment Plan.

As presented in Section 5 of the present document, nearly 40% of the total estimated implementation costs of Georgia´s updated NDC are conditional to international support. Given the conditional nature of a large amount of NDC targets, Georgia could benefit from specifying progress-tracking frameworks with the aim of enhanced access to such international support. NDC-aligned finance tracking can enhance Georgia´s transparency and accountability aimed at building mutual confidence and promoting both international and private investment in the country´s NDC priority adaptation and mitigation actions. Efficiencies and increased international collaboration can arise from information-sharing, and this in turn can drive down implementation costs, especially those related to capacity-building. At the international level, it can help to build trust that Georgia is delivering on their climate change commitments and so facilitate more ambitious climate action over time by improving the investment appeal of the country to donors and inventors.

Such accountability through NDC finance tracking will also enhance Georgia´s reporting processes under the Enhanced Transparency Framework established by the Paris Agreement which will take effect by December 2024.

To support the effective implementation of the updated NDC of Georgia, the establishment of a robust monitoring, reporting and verification (MRV) system for NDC financial flows is fundamental, comprised of three components as follows:

- **Measurement:** This first component refers to the processes of collecting, analysing, and monitoring information over time and space. This component includes standardisation of accounting methodologies and appropriate protocols and procedures for information management processes.
- **Reporting:** The reporting component refers to the outputs or results of the system, or in other words the presentation of consolidated and analysed information.
- **Verification:** The verification component is a cross-sectional component that refers to the quality assurance and control of the information, calculations, or reports generated by the system.

Despite its importance, there is a lack of a global standard for climate finance tracking is a main barrier to assessing NDC-aligned finance and to understand how climate finance is streamlined towards the attainment of NDC mitigation and adaptation targets. While methodologies exist for bilateral climate-related development finance and multilateral related development finance, important gaps remain to enhance accountability and comparability of climate finance aspects of NDCs. For example, the OECD Development Assistance Committee (DAC) measures development finance flows targeting the objectives of the Rio Conventions on biodiversity, climate change and desertification through the CRS using the so-called “Rio Markers”. The Rio Markers were originally designed to help international reporting processes by identifying activities that mainstream directly or indirectly the dimension of climate change mitigation and adaptation into development co-operation”. While the Rio Markers are commonly used worldwide to identify climate change financial flows, they precede the NDCs and, hence, further steps are needed for joint methodologies to consider how these climate flows contribute to NDC implementation and the attainment of NDC targets. The ideal scenario is a standard finance tracking methodology that aligns or considers NDC priorities and progress.

Georgia has already undertaken significant strides in developing a National MRV System for Climate Finance based on the Rio Markers for tracking national expenditure and international support for climate change action in the country.[44]

This section therefore proposes a methodology for aligning the National MRV System with NDC climate finance tracking, while proposing a set of performance indicators to monitor the evolution of the NDC Financial Strategy and Investment Plan. Finally, this section summarises the principal NDC finance reporting requirements under the Enhanced Transparency Framework of the Paris Agreement.

6.5.1 Proposed Methodology for NDC-Aligned Climate Finance Tracking

NDC-aligned climate finance tracking in Georgia should strive to strengthen existing MRV frameworks in the country in order to adequately monitor, report, and verify the resources needed and mobilized for NDC implementation based on the following five-prong approach aimed at evaluating and updating the NDC Financial Strategy and Investment Plan on a continuous basis and producing accurate and up-to-date information to key audience groups both on a national and international level.

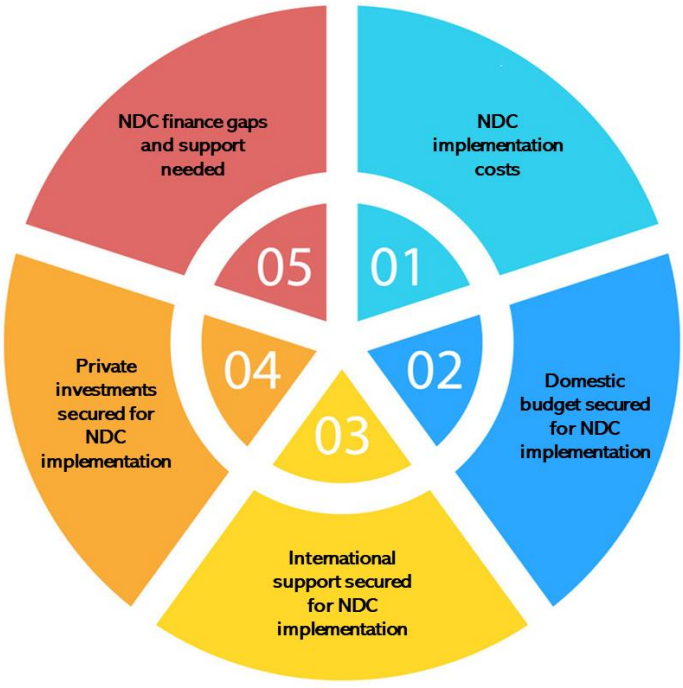


Figure 13. Five-prong tracking of the NDC Financial Strategy and Investment Plan.

[44] A Climate Finance MRV System has been proposed in the year 2021 to Georgia the project "International consultant to support Georgia in enhancing its national capacities to track and report on climate finance" framed within the overall "Global Support Programme for Preparation of National Communications and Biennial Update Reports of non-Annex I Parties under the UNFCCC".

As previously mentioned, the NDC Financial Strategy and Investment Plan on an annual basis in order to dispose of updated values for the climate finance secured and the climate finance gaps remaining for each NDC action, including updated information on:

- Total implementation costs
- Finance secured from domestic sources, the private sector, and international support
- Finance gaps
- Efforts taken to close the finance gaps

The following table presents a proposed format for tracking the evolution of this information, enabling the identification of those actions with remaining finance gaps and the steps undertaken to close those gaps, facilitating the virtuous cycle for enhanced financial planning by helping to localized priority actions where further efforts should be undertaken to close the remaining financial gaps.

For illustrative purposes, the table has been pre-filled with the current status of finance for each priority NDC conditional and unconditional mitigation action, as of June 2022.

Table 35. NDC Financing Strategy and Investment Plan tracking – Table populated with the financial status for mitigation actions as of June 2022.

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Energy	UE1.1. Technical and procedural support for wind power (WP) generation.	2,178,000,000.00	0.00	2,178,000,000.00	0.00	0.00	-	-
Mitigation	Unconditional	Energy	UE1.2. Technical and procedural support for solar power (SP) generation.	209,880,000.00	0.00	209,880,000.00	0.00	0.00	-	-
Mitigation	Unconditional	Energy	UE1.3. Technical and procedural support for hydro power (HP) generation.	1,980,000,000.00	0.00	1,980,000,000.00	0.00	0.00	-	-
Mitigation	Unconditional	Energy	UE2.1. Implementation of technical work of thermal power plants.	531,200,000.00	0.00	332,000,000.00	0.00	199,200,000.00	No	None taken
Mitigation	Unconditional	Energy	UE3.1 Implementation of Ten-year network development plan of Georgia for electricity distribution companies.	771,804,000.00	109,692,000.00	0.00	662,112,000.00	0.00	-	-
Mitigation	Unconditional	Energy	UE4.1 Development of a long-term comprehensive multisectoral strategy document for Georgia's energy policy.	198,000.00	0.00	0.00	198,000.00	0.00	-	-
Mitigation	Unconditional	Transport	UT1.1. Implementing changes in existing regulation related to the technical inspection of vehicles.	Admin costs	Admin costs	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Transport	UT1.2. More efficient execution of fines foreseen under the Administrative Offences Code of Georgia in terms of technical inspection of the vehicles.	120,000.00	120,000.00	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Transport	UT1.3. Control of the exhaust fumes from the vehicles on the roads.	498,000.00	0.00	0.00	0.00	498,000.00	No	None taken

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Transport	UT1.4. For the promotion of electric vehicles, identification of optimal tax incentive alternatives based on the cost-benefit analysis.	Admin costs	0.00	0.00	0.00	Admin costs	No	None taken
Mitigation	Unconditional	Transport	UT1.5. Improve infrastructure for electric vehicles in Tbilisi.	Admin costs	0.00	0.00	Admin costs	0.00	-	-
Mitigation	Unconditional	Transport	UT1.6. Discussion on the possibility of increase in import duty for old vehicles based on (economic) feasibility study.	300,000.00	0.00	0.00	0.00	300,000.00	No	None taken
Mitigation	Unconditional	Transport	UT1.7. Emission standards on the import of vehicles based on the cost-effectiveness analysis (EUR4 / EUR5).	1,203,840.00	0.00	0.00	213,840.00	990,000.00	No	None taken
Mitigation	Unconditional	Transport	UT2.1. Discuss the increase in taxes for fuels.	300,000.00	0.00	0.00	0%	300,000.00	No	None taken
Mitigation	Unconditional	Transport	UT2.2. Support and encouragement of the biodiesel production.	Admin costs	0.00	0.00	0%	Admin costs	No	None taken
Mitigation	Unconditional	Transport	UT3.1. Implement the measures included in Tbilisi's Green Transport Policy Plan.	1,762,200,000.00	0.00	0.00	1,762,200,000.00	0.00	-	-
Mitigation	Unconditional	Transport	UT3.2. Implement the measures listed in Batumi's Sustainable Urban Mobility Plan (SUMP).	8,800,000.00	0.0	0.0	8,800,000.00	0.00	-	-
Mitigation	Unconditional	Transport	UT4.1. Develop international climate finance proposals for the improved public, intercity, and non-motorised transport means.	178,200.00	0.00	0.00	0.00	178,200.00	No	None taken
Mitigation	Unconditional	Transport	UT4.2. Develop cost-benefit analysis and feasibility study to identify best options for shifting road freight to rail.	257,400.00	0.00	0.00	0.00	257,400.00	No	None taken
Mitigation	Unconditional	Buildings	UB1.1. Elaborate the methodology for certification of buildings.	88,715,880.00	1,136,520.00	0.00	87,579,360.00	0.00	-	-

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Buildings	UB1.2. Elaborate, approve, and implement secondary legislation on the energy efficiency of buildings.	33,264,000.00	0.00	0.00	33,264,000.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB2.1. Development of standards, norms, and labelling schemes for appliances.	411,840.00	411,840.00	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB2.2. Implementation of energy efficiency awareness raising programmes for the public.	299,376.00	299,376.00	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB2.3. Implementation of information campaign about incandescent bulbs	Admin costs	Admin costs	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB2.4. Implementation of information campaigns for solar water heater systems in buildings.	Admin costs	Admin costs	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB3.1. Introducing tax regulations on incandescent bulbs.	Admin costs	Admin costs	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB3.2. Installation of energy efficient lighting in buildings owned/used by public institutions.	621,720.00	621,720.00	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB3.3. Establish energy efficiency information systems for public buildings.	178,200.00	0.00	0.00	0.00	178,200.00	No	None taken
Mitigation	Unconditional	Buildings	UB3.4. Improvement of exterior enclosure of school buildings, installation of energy-efficient bulbs, retrofit/replacement of solid fuel heaters.	9,808,920.00	154,440.00	0.00	9,654,480.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB4.1. Elaboration of financial incentives mechanism for installation of solar water heater systems in buildings.	178,200.00	0.00	0.00	0.00	178,200.00	No	None taken

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Buildings	UB4.2. Encourage using of energy-efficient firewood stoves.	33,660,000.00	0.00	0.00	33,660,000.00	0.00	-	-
Mitigation	Unconditional	Buildings	UB5.1. Development of qualification, accreditation, and certification schemes for energy sector experts.	1,073,160.00	0.00	0.00	0.00	1,073,160.00	No	None taken
Mitigation	Unconditional	Buildings	UB5.2. Development of educational programs and trainings for energy consultants.	Admin costs	0.00	0.00	0.00	Admin costs	No	None taken
Mitigation	Unconditional	Industry	UI1.1. Substitute wet with the dry method in cement production.	15,687,936.00	0.00	15,687,936.00	0.00	0.00	-	-
Mitigation	Unconditional	Industry	UI1.2. Supporting the low-emission production of Nitric Acid with modern technologies.	17,820,000.00	0.00	8,910,000.00	8,910,000.00	0.00	-	-
Mitigation	Unconditional	Industry	UI2.1. Develop individual emission factors per production.	99,600.00	0.00	0.00	99,600.00	0.00	-	-
Mitigation	Unconditional	Agriculture	UA1.1. Reduce emissions generated by enteric fermentation of cattle, by developing a methodology for changing cattle feed and running a recommendation campaign.	574,200.00	0.00	0.00	0.00	574,200.00	No	None taken
Mitigation	Unconditional	Agriculture	UA1.2. Increase the quality of livestock nutrition and conservation of pasture biodiversity.	237,600.00	0.00	0.00	0.00	237,600.00	No	None taken
Mitigation	Unconditional	Agriculture	UA1.3. Rehabilitate and transform windbreaks to minimize climate-related land degradation.	498,000.00	0.00	0.00	498,000.00	0.00	-	-

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Agriculture	UA2.1. Develop cost-benefit analysis and feasibility study to identify best options to increase further change in livestock feed for the next iteration of the Climate Action Plan.	237,600.00	0.00	0.00	0.00	237,600.00	No	None taken
Mitigation	Unconditional	Agriculture	UA2.2. Develop cost-benefit analysis and feasibility study to identify best options in which manure management systems can be implemented.	237,600.00	0.00	0.00	0.00	237,600.00	No	None taken
Mitigation	Unconditional	Agriculture	UA2.3. Support existing and emerging cooperatives to implement sustainable pasture management practices and replicate the success factors of successful cooperatives for other cooperatives.	996,000.00	0.00	0.00	0.00	996,000.00	No	None taken
Mitigation	Unconditional	Agriculture	UA2.4. Research and consultation to define economic and socially feasible Climate-Smart Agriculture (CSA) actions in the context of Georgia.	356,400.00	0.00	0.00	0.00	356,400.00	No	None taken
Mitigation	Unconditional	Agriculture	UA2.5. Promote the introduction of climate friendly agricultural practices through extension and awareness raising campaigns.	356,400.00	0.00	0.00	0.00	356,400.00	No	None taken
Mitigation	Unconditional	Waste	UW1.1. Close official (unauthorized) non-hazardous landfills.	6,520,000.00	2,520,000.00	0.00	4,000,000.00	0.00	-	-
Mitigation	Unconditional	Waste	UW1.2. Close dumpsites.	2,800,000.00	0.00	0.00	0.00	2,800,000.00	No	None taken
Mitigation	Unconditional	Waste	UW1.3. Construct regional non-hazardous landfills.	47,520,000.00	0.00	0.00	47,520,000.00	0.00	-	-
Mitigation	Unconditional	Waste	UW1.4. Upgrade and improve Tbilisi's landfill.	4,000,000.00	0.00	0.00	4,000,000.00	0.00	-	-
Mitigation	Unconditional	Waste	UW1.5. Utilize landfill gas in Kutaisi's non-hazardous waste landfill.	4,000,000.00	0.00	0.00	4,000,000.00	0.00	-	-

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Waste	UW1.6. Utilize landfill gas in Batumi's non-hazardous waste landfill.	4,000,000.00	0.00	0.00	4,000,000.00	0.00	-	-
Mitigation	Unconditional	Waste	UW2.1. Introduce the practice of separating paper waste from the source by the municipalities and encourage paper recycling.	Admin costs	0.00	0.00	Admin costs	0.00	-	-
Mitigation	Unconditional	Waste	UW2.2. Biodegradable (organic and garden waste) recycling by municipal composting facilities.	1,188,000.00	0.00	0.00	1,188,000.00	0.00	-	-
Mitigation	Unconditional	Waste	UW2.3. Education and awareness raising on waste management.	188,000.00	0.00	0.00	188,000.00	0.00	-	-
Mitigation	Unconditional	Waste	UW3.1. Construct municipal wastewater treatment plants.	183,120,618.00	34,214,344.00	0.00	148,906,274.00	0.00	-	-
Mitigation	Unconditional	Waste	UW3.2. Capture and recover GHGs in Tbilisi's wastewater treatment plants.	21,000.00	0.00	21,000.00	0.00	0.00	-	-
Mitigation	Unconditional	Waste	UW3.3. Capture and recover GHGs in Batumi's wastewater treatment plants.	17,500.00	0.00	17,500.00	0.00	0.00	-	-
Mitigation	Unconditional	Waste	W3.4. Capture and recover GHGs in Kobuleti's wastewater treatment plant.	17,500.00	0.00	17,500.00	0.00	0.00	-	-
Mitigation	Unconditional	Waste	UW4.1. Establish a consolidated process for generating waste sector statistics.	62,500.00	0.00	0.00	62,500.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF1.1. Restore 625 ha of degraded forest area (including fire-sites) through forestation	6,585,000.00	2,625,000.00	0.00	3,960,000.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF1.2. Restore degraded forests through supporting natural restoration.	4,758,260.00	1,125,000.00	0.00	3,633,260.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF2.1. Introduce sustainable forest management practices through the implementation of sustainable forest management plans.	12,512,960.00	2,510,000.00	0.00	10,002,960.00	0.00	-	-

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Unconditional	Forestry	UF2.2. Introduce sustainable forest management practices through supervision and capacity development.	411,123.00	0.00	0.00	411,123.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF2.3. Promote sustainable management of forests by supporting the multifunctionality of forests, raising public awareness, and supporting public involvement in the forest reform processes.	1,445,400.00	0.00	0.00	1,445,400.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF2.4. Develop Emerald Network management plans for the territory of the forest of Georgia within the approved emerald network sites.	60,000.00	0.00	0.00	60,000.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF2.5. Enhance the protection and/or sustainable management of forest areas within the new protected territories.	185,845.00	185,845.00	0.00	0.00	0.00	-	-
Mitigation	Unconditional	Forestry	UF3.1. Integrate climate change issues, including mitigation, into management plants of the protected areas.	Admin costs	Admin costs	0.00	Admin costs	0.00	-	-
Mitigation	Conditional	Energy	CE1.1. Exploring geothermal and solar energy potential in Georgia.	1,127,560,000.00	0.00	0.00	0.00	1,127,560,000.00	No	None taken
Mitigation	Conditional	Energy	CE1.2. Further utilisation of water and wind energy.	1,127,560,000.00	0.00	0.00	0.00	1,127,560,000.00	No	None taken
Mitigation	Conditional	Energy	CE1.3. Exploring incentives to attract investments in renewable energy.	6,000,000.00	0.00	0.00	0.00	6,000,000.00	No	None taken
Mitigation	Conditional	Energy	CE2.1. Conducting a feasibility study for a biogas power station.	1,155,000.00	0.00	0.00	0.00	1,155,000.00	No	None taken
Mitigation	Conditional	Transport	CT1.1. Renew and upgrade public transport infrastructure and services.	93,741,921.00	0.00	0.00	0.00	93,741,921.00	No	None taken

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Conditional	Transport	CT1.2. Renew and upgrade infrastructure for non-motorised transport.	570,000,000.00	0.00	0.00	0.00	570,000,000.00	No	None taken
Mitigation	Conditional	Transport	CT2.1. Purchase of new and modern train for passenger rail services.	1,076,014,400.00	0.00	0.00	0.00	1,076,014,400.00	No	None taken
Mitigation	Conditional	Transport	CT2.2. Improve the quality of the intercity railway system.	724,860.00	0.00	0.00	0.00	724,860.00	No	None taken
Mitigation	Conditional	Transport	CT3.1. Explore incentives to improve the energy efficiency of light-duty vehicles.	2,000,000.00	0.00	0.00	0.00	2,000,000.00	No	None taken
Mitigation	Conditional	Transport	CT4.1. Explore incentives to support the shift for freight transport from road to rail.	8,054,000.00	0.00	0.00	0.00	8,054,000.00	No	None taken
Mitigation	Conditional	Buildings	CB1.1. Creating information system for energy efficiency of residential buildings.	7,630,600.00	0.00	0.00	0.00	7,630,600.00	No	None taken
Mitigation	Conditional	Buildings	CB1.2. Improving energy efficiency of residential buildings.	72,109,170.00	0.00	0.00	0.00	72,109,170.00	No	None taken
Mitigation	Conditional	Buildings	CB2.1. Conduct a feasibility study for the identification of economic and climate change potential for autonomous heating systems in existing multiapartment buildings.	1,155,000.00	0.00	0.00	0.00	1,155,000.00	No	None taken
Mitigation	Conditional	Buildings	CB3.1. Updating technical regulations and climatic standards in the construction sector.	17,931,910.00	0.00	0.00	0.00	17,931,910.00	No	None taken
Mitigation	Conditional	Buildings	CB4.1. Introduce financial instruments for the development of carbon-free buildings in the resorts of Georgia.	190,765,000.00	0.00	0.00	0.00	190,765,000.00	No	None taken
Mitigation	Conditional	Industry	CI1.1. Support the low-emission production of steel with modern technologies.	198,128,400.00	0.00	0.00	0.00	198,128,400.00	No	None taken

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Conditional	Industry	CI2.1. Develop mandatory energy audits and certification schemes at industrial facilities.	24,000,000.00	0.00	0.00	0.00	24,000,000.00	No	None taken
Mitigation	Conditional	Industry	CI3.1. Introduce systems for efficient use of industrial waste for heat production.	48,000,000.00	0.00	0.00	0.00	48,000,000.00	No	None taken
Mitigation	Conditional	Agriculture	CA1.1. Establish a consolidated process for collecting and updating data for the agriculture sector.	8,000,000.00	0.00	0.00	0.00	8,000,000.00	No	None taken
Mitigation	Conditional	Agriculture	CA2.1. Improve irrigation infrastructure using climate-smart technologies and systems.	289,944,000.00	0.00	0.00	0.00	289,944,000.00	Yes	In December 2020, a Project Proposal has been submitted to the ADB under the name "Climate Smart Irrigation Sector Development Project" for an initial implementation period of 2021-2026. Two of which will suport this NDC action. If approved, the ADB would provide 80,540,000.00 GEL as a regular loan, with a co-financing amount of 144,972,000.00 GEL. The remaining 64,432,000.00 GEL would need to be provided by local beneficiaries. The project proposal is currently under review by the ADB, awaiting board approval.

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Conditional	Agriculture	CA2.2. Develop and implement regulations for irrigation water.	161,080,000.00	0.00	0.00	0.00	161,080,000.00	Yes	In December 2020, a project Proposal has been submitted to the ADB under the name "Climate Smart Irrigation Sector Development Project" for an initial implementation period of 2021-2026. The proposed project has 3 components, one of which comprises the implementation of the necessary institutional, governance, management, and finance changes to support the irrigation reform strategy with a total budgeted ammount of 161080000 GEL, which would cover the entire finance gap for this NDC action. The project proposal is currently under review by the ADB, awaiting board approval.
Mitigation	Conditional	Agriculture	CA3.1. Regulate agricultural burning practices to reduce GHG emissions and degradation of agricultural fields and surrounding areas.	134,000.00	0.00	0.00	0.00	134,000.00	No	None taken
Mitigation	Conditional	Agriculture	CA3.2. Promote sustainable post-harvest agricultural residue management practices through incentives and awareness raising to facilitate the ban on field burning.	12,000.00	0.00	0.00	0.00	12,000.00	No	None taken

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Conditional	Agriculture	CA3.3. Replant windbreaks to recover from damages caused by unsustainable agricultural burning practices.	4,000,000.00	0.00	0.00	0.00	4,000,000.00	No	None taken
Mitigation	Conditional	Agriculture	CA4.1. Regulate pasture management to limit overgrazing and trampling.	2,329,232.91	0.00	0.00	2,329,232.91	0.00	-	-
Mitigation	Conditional	Agriculture	CA5.1. Foment research and innovation to further enhance the climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE).	26,578,200.00	0.00	0.00	0.00	26,578,200.00	No	None taken
Mitigation	Conditional	Waste	CW1.1. Increase the number of composting facilities through capacity building and incentives campaign.	2,300,000.00	0.00	0.00	0.00	2,300,000.00	No	None taken
Mitigation	Conditional	Waste	CW1.2. Pilot composting project for biodegradable wine and agricultural residues.	325,000.00	0.00	0.00	0.00	325,000.00	No	None taken
Mitigation	Conditional	Waste	CW2.1. Establish maximum permissible limits (MPLs) for wastes.	1,130,000.00	0.00	0.00	0.00	1,130,000.00	No	None taken
Mitigation	Conditional	Waste	CW3.1. Launch awareness-raising campaigns of the five-step waste management hierarchy system.	12,000,000.00	0.00	0.00	12,000,000.00	0.00	-	-
Mitigation	Conditional	Waste	CW3.2. Improve the data collection capacities of the waste sector.	8,000,000.00	0.00	0.00	0.00	8,000,000.00	No	None taken
Mitigation	Conditional	Forestry	CF1.1. Establish a consolidated process for collecting and updating data for the forestry sector.	20,717,079.00	0.00	0.00	20,717,079.00	0.00	-	-

Type of Action	Type of Commitment	Sector	Action	Total Cost of Implementation (GEL)	Finance Secured			Finance Gap		
					Domestic budget (GEL)	Private investment (GEL)	International support (GEL)	Total Gap Amount (GEL)	Have Steps been Undertaken to close the gap?	Progress to close the finance gap
Mitigation	Conditional	Forestry	CF2.1. Reduce demands for firewood for residential heating purposes through energy-efficient building envelopes, as well as increased access to alternative energy sources and technologies.	108,125,602.00	0.00	0.00	108,125,602.00	0.00	-	-
Mitigation	Conditional	Forestry	CF2.2. Limit the incidence of illegal logging.	27,470,160.00	0.00	0.00	0.00	27,470,160.00	-	-
Mitigation	Conditional	Forestry	CF3.1. Establish a comprehensive forest fire prevention and management system.	7,056,000.00	0.00	0.00	0.00	7,056,000.00	No	None taken

In order to annually update and track the NDC Finance Strategy and Investment Plan, it is of fundamental importance that the National Climate Finance MRV System of Georgia be aligned with NDC finance tracking in order to continuously obtain high-quality updated information of the financial flows secured for NDC implementation.

The objective of the National Climate Finance MRV System of Georgia is to identify the climate finance flows mobilized by national expenditure and from international sources towards climate-change related activities, based on the following two information sources:

- **The electronic Aid Information Management System (eAIMS)** managed by the Donor Coordination Unit within the Government Administration of Georgia which consists of an online database containing all the information on ODA projects in the country which are financed by international development partners.
- **The Electronic Budget Management System (E-Budget)** managed by the Department of State Budget within the Ministry of Finance (MoF) which monitors national expenditure. It classifies all the budgetary spending according to economic classification, functional classification, and programme classification, including budget lines related to climate change.

These information sources are analysed under National Climate Finance MRV System of Georgia following the Rio Markers to identify the direct and indirect link of each financial flows towards climate change adaptation and mitigation objectives. In order to align the system with NDC finance tracking, the identified climate finance flows should further be classified by their contribution to specific NDC actions, as illustrated in the following figure.

It will also be necessary to adjust and strengthen the current national government data platforms by including the necessary measurement parameters linked to NDC implementation and establishing comprehensive mandatory coverage of all international support activities in the country, as explored in Section 6.2.3 of the present document. Furthermore, it would be necessary to build robust reporting frameworks to recurrently collect data from private enterprises undertaking investments in NDC-related actions.

All the reported data on NDC finance in Georgia requires to be verified to ensure the collected data is timely, transparent, accurate, consistent, comparable, and complete within a continuous improvement framework. Internal routine quality control activities should be implemented to assess and maintain the quality of the NDC finance measurements during the compilation. A planned system of external review procedures should also be adopted to provide a third unbiased technical perspective of the accuracy of the data and propose possible areas of improvement for NDC finance tracking.

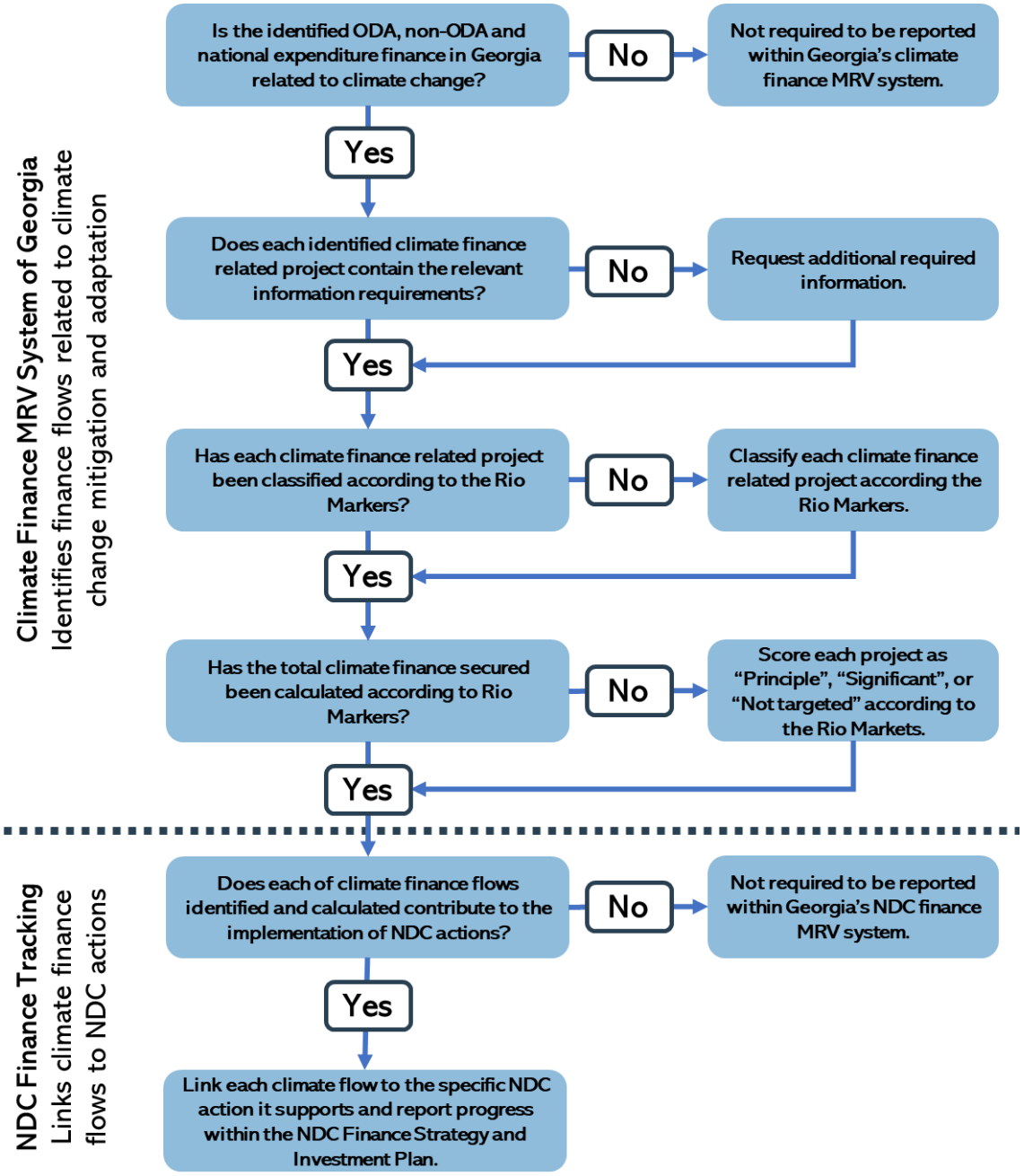


Figure 14. Methodology for aligning the climate finance MRV system in Georgia with NDC finance tracking.

6.5.2 Performance Indicators for the NDC Financial Strategy and Investment Plan

Within the virtuous cycle for NDC finance planning, a set of performance indicators have been proposed to monitor the evolution of the NDC Financial Strategy and Investment Plan. These indicators are based on a two-step traffic light system that enables to track the progression over time in closing the finance gaps for all NDC actions in a simplified and visual manner. The traffic light system aims to quickly identify the NDC actions that still do not have secured the necessary funds for implementation, as well as the level of progress achieved towards closing these financial gaps.

The first step of the traffic light system is to identify the status of financing of the NDC actions compared to their total costing. Actions are classified as "financed", "partially financed" or "unfinanced" following the "Funding Status Indicator" criteria below:

- **Financed**: A financed action is that for which funding has been fully secured for the entire estimated implementation cost of the action. In other words, the necessary national budget has been allocated, international projects have been signed, and/or private investment contracts have been signed to cover the implementation cost of the action in full.
- **Partially financed**: A partially financed action is that for which funding has been secured for some, but not the complete estimated implementation cost of the action. In other words, some national budget has been allocated, international projects have been signed, and/or private investment contracts have been signed to partially cover the implementation cost of the action.
- **Unfinanced**: An unfinanced action is that for which no funding sources have been secured, whereby the finance gap covers the entirety of the estimated implementation cost of the action.

The second step of the traffic light system concerns the evaluation of the progress of closing the finance gaps for the actions which have been identified as partially financed and undefaced. The objective is to classify the status of efforts for closing the finance gaps as "potential funding sources identified", "funding proposals under development" and "funding proposals submitted" following the "Gap Closure Indicator" criteria below:

- **Potential funding sources identified**: This step concerns the partially financed and unfinanced NDC actions for which potential funding sources have been identified for closing the finance gap. The Investment Plan included in Section 5 of the present document identifies a range of the most appropriate funding sources for partially financed and unfinanced NDC mitigation actions, including domestic funds, private sector investment, and international bilateral and multilateral support.
- **Project proposals under development**: This step concerns the partially financed and unfinanced NDC actions for which project and funding proposals are being developed.

- **Project proposals submitted**: This step concerns the partially financed and unfinanced NDC actions for which project and funding proposals have been submitted to the potential funding sources and under review for approval.

The aim is to progressively secure the necessary funding for all NDC actions following the Guidelines for Resource Mobilization and Mainstreaming Climate Change Budgets presented in Sections 3 and 4 of the present document such that all NDC actions may be classified as "financed" as soon as feasibly possible.

For illustrative purposes, the following set of images presents the current status of the performance indicators as of June 2022 for the priority conditional and unconditional mitigation actions of the updated NDC of Georgia.

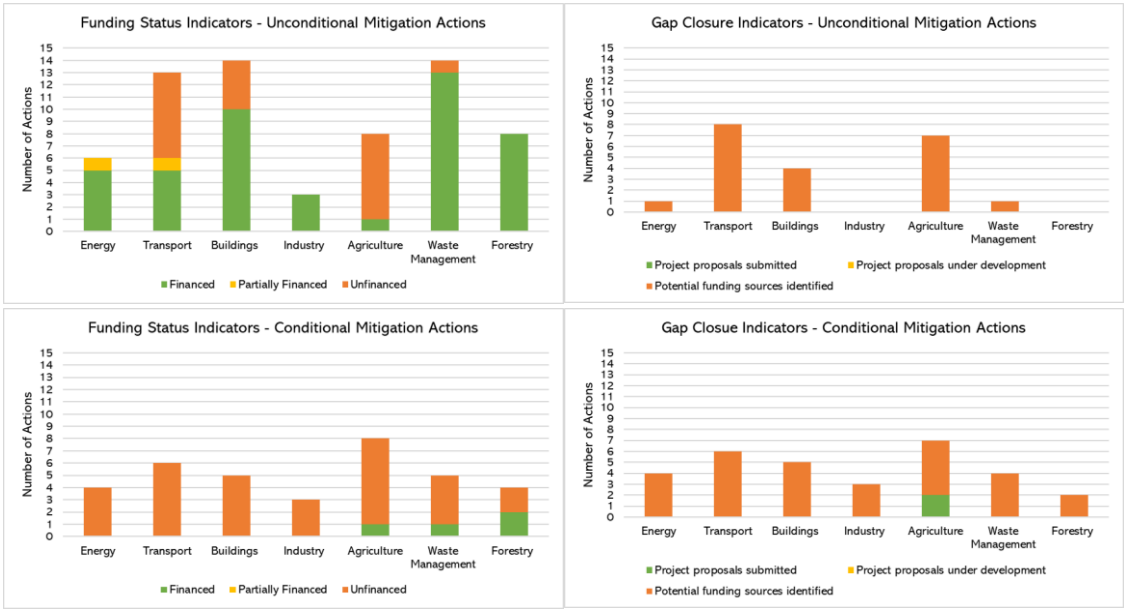


Figure 15. Performance Indicators for the NDC Financial Strategy and Investment Plan – Images populated with the status for mitigation actions as of June 2022.

6.5.3 Reporting on NDC Finance

It is of fundamental importance to report information to multitude of national and international stakeholders regarding the costs of NDC implementation, the finance secured from domestic budget, private sources, and international support, as well as the finance gaps for NDC implementation, is important for. Reports should therefore be developed and made available to key stakeholders, appropriate to the interests and level of involvement of each, as follows:

- **UNFCCC:** Being a Party to the UNFCCC and having ratified the Paris Agreement, Georgia should report information on the support needed and received for climate action in the country under the Enhanced Transparency Framework. This information should be reported though upcoming Biennial Transparency Report (BTRs) which will be submitted biennially to the UNFCCC starting at the latest by 31 December 2024.
- **National government:** Reporting information on NDC climate finance will support the virtuous cycle for the NDC Financial Strategy and Investment Plan by enabling the national government of Georgia to assess, among other things, whether climate finance is being channelled towards their priority NDC actions and the necessary steps to be taken to close remaining finance gaps and improve the climate finance framework in the country.
- **Domestic and international donors and investors:** Reporting information on NDC climate finance will improve transparency, boost donor confidence and will increase the accountability of the government of Georgia for enhanced climate action.
- **General public:** Releasing information on NDC finance in Georgia will raise awareness of the ongoing activities in the country and increase the transparency and accountability of the government to constituents.

The adoption of the Paris Agreement in December 2015 marked a historic event in global efforts to combat climate change, as it is the first comprehensive and legally binding international treaty on climate change among Parties of the UNFCCC having ratified the agreement. Efforts under the Paris Agreement are guided by its aim of making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. It additionally places emphasis on the transparency and enhanced predictability of financial support.

In order to build mutual confidence and promote effective implementation of mitigation and adaptation actions in the face of climate change threats, Article 13 of the Agreement establishes an Enhanced Transparency Framework (ETF) that will enter into force in December 2024. Among other purposes, the ETF aims to increase clarity and facilitate monitoring of each Party's progress in implementing its NDC. A core element of the ETF are the Biennial Transparency Reports (BTRs), which will be submitted by all Parties to the UNFCCC Secretariat every two years starting in 2024, with the aim of transparently tracking progress in NDC implementation

Decision 18/CMA.1 was adopted during the COP 24 at Katowice, concerning on the modalities, procedures, and guidelines (MPGs) of the Enhanced Transparency Framework. The MPGs establish the reporting requirements of the BTRs, including the information to be reported on the financial, technology development and transfer and capacity-building support needed and received under Articles 9 11 of the Paris Agreement, as detailed below.

Information on financial support needed by developing country Parties under Article 9 of the Paris Agreement

132. Developing country Parties should provide information on financial support needed under Article 9 of the Paris Agreement in textual format, including, to the extent possible and as available and as applicable:
(a) Sectors for which the Party wishes to attract international finance, including existing barriers to attracting international finance;
(b) Description of how the support will contribute to its NDC and to the long-term goals of the Paris Agreement.

133. Developing country Parties should provide, in a common tabular format, information on financial support needed, including the following, to the extent possible, and as available and as applicable:
(a) Title (of activity, programme or project);
(b) Programme/project description;
(c) Estimated amount (in domestic currency and in United States dollars);
(d) Expected time frame;
(e) Expected financial instrument (grant, concessional loan, non-concessional loan, equity, guarantee or other);
(f) Type of support (mitigation, adaptation or cross-cutting);
(g) Sector and subsector;
(h) Whether the activity will contribute to technology development and transfer and/or capacity-building, if relevant;
(i) Whether the activity is anchored in a national strategy and/or an NDC;
(j) Expected use, impact and estimated results.

Information on financial support received by developing country Parties under Article 9 of the Paris Agreement

134. Developing country Parties should provide, in a common tabular format, information on financial support received, including, to the extent possible, and as available and as applicable:
(a) Title (of activity, programme or project);
(b) Programme/project description;
(c) Channel;
(d) Recipient entity;
(e) Implementing entity;
(f) Amount received (in domestic currency and in United States dollars);
(g) Time frame;
(h) Financial instrument (grant, concessional loan, non-concessional loan, equity, guarantee or other);
(i) Status (committed or received);
(j) Sector and subsector;
(k) Type of support (mitigation, adaptation or cross-cutting);
(l) Whether the activity has contributed to technology development and transfer and/or capacity-building;
(m) Status of activity (planned, ongoing or completed);
(n) Use, impact and estimated results.

Information on technology development and transfer support needed by developing country Parties under Article 10 of the Paris Agreement

135. Developing country Parties should provide, in textual format, information on technology development and transfer support needed under Article 10 of the Paris Agreement, including on, to the extent possible, and as available and as applicable:
(a) Plans, needs and priorities related to technology development and transfer, including those identified in technology needs assessments, where applicable;

(b) Technology development and transfer related needs for the enhancement of endogenous capacities and technologies.

136. Developing country Parties should provide, in a common tabular format, information on technology development and transfer support needed, including, to the extent possible and as available and as applicable:
(a) Title (of activity, programme or project);
(b) Programme/project description;
(c) Type of support (mitigation, adaptation or cross-cutting);
(d) Type of technology;
(e) Expected time frame;
(f) Sector;
(g) Expected use, impact and estimated results.

Information on technology development and transfer support received by developing country Parties under Article 10 of the Paris Agreement

137. Developing country Parties should provide, in textual format, information on technology development and transfer support received under Article 10 of the Paris Agreement, including on, to the extent possible, and as available and as applicable:
(a) Case studies, including key success and failure stories;
(b) How the support contributes to technology development and transfer, endogenous capacities and know-how;
(c) The stage of the technology cycle supported, including research and development, demonstration, deployment, diffusion and transfer of technology.

138. Developing country Parties should provide, in a common tabular format, information on technology development and transfer support received, including on, to the extent possible, and as available and as applicable:
(a) Title (of activity, programme or project);
(b) Programme/project description;
(c) Type of technology;
(d) Time frame;
(e) Recipient entity;
(f) Implementing entity;
(g) Type of support (mitigation, adaptation or cross-cutting);
(h) Sector;
(i) Status of activity (planned, ongoing or completed);
(j) Use, impact and estimated results.

Information on capacity-building support needed by developing country Parties under Article 11 of the Paris Agreement

139. Developing country Parties should provide, in textual format, information on capacity-building support needed under Article 11 of the Paris Agreement, including on, to the extent possible and as available and as applicable:
(a) The approach a Party seeks to take to enhance capacity-building support;
(b) Country-specific capacity-building needs, constraints and gaps in communicating those needs, and an explanation of how the capacity-building support needed would improve the provision of such information;
(c) Processes for enhancing public awareness, public participation and access to information in relation to capacity-building.

140. Developing country Parties should provide, in a common tabular format, information on capacity-building support needed, including the following, to the extent possible, and as available and as applicable:
(a) Title (of activity, programme or project);
(b) Programme/project description;
(c) Expected time frame;
(d) Type of support (mitigation, adaptation or cross-cutting);
(e) Expected use, impact and estimated results.

Information on capacity-building support received by developing country Parties under Article 11 of the Paris Agreement

141. Developing country Parties should provide, in textual format, information on capacity-building support received under Article 11 of the Paris Agreement, including on, to the extent possible, and as available and as applicable:
(a) Case studies, including key success and failure stories;
(b) How support received
(c) Capacity-building support received at the national and, where appropriate, subregional and regional level, including priorities, participation and the involvement of stakeholders.

142. Developing country Parties should provide, in a common tabular format, information on capacity-building support received, including the following, to the extent possible and as available and as applicable:
(a) Title (of activity, programme or project);
(b) Programme/project description;
(c) Implementing entity;
(d) Recipient entity;
(e) Type of support (mitigation, adaptation or cross-cutting);
(f) Time frame;
(g) Status of activity (planned, ongoing or completed);
(h) Use, impact and estimated results.

While reporting this information is not mandatory for developing country Parties such as Georgia, it is of great interest that Georgia consistently report high-quality data in its upcoming BTRs in its path towards joining the European Union. The EU and Georgia signed an Association Agreement in 2014, which entered fully into force in July 2016, providing the foundations for political association and economic integration. On June 17, 2022, the European Commission recommended that Georgia be given the perspective to become a member of the European Union but deferred recommending it be given candidate status until after certain conditions were met. On June 23, 2022, the European Council expressed readiness to grant Georgia the status of a candidate for accession to the European Union after a set of recommended reforms, including economic reforms concerning more investment in education, renewable energy generation, and transportation.[45] Systematically reporting reliable information on NDC-aligned climate finance will help build the necessary transparency and demonstrate Georgia´s efforts towards decarbonized economic growth.

During COP 26 in Glasgow, further guidance was adopted for operationalizing the modalities, procedures and guidelines for the enhanced transparency framework referred to in Article 13 of the Paris Agreement. Decision 5/CMA.3 established the structure of the BTRs and the common tables for electronic reporting, including Common tabular formats for the electronic reporting of the information on financial, technology development and transfer and capacity-building support provided and mobilized, as well as support needed and received, under Articles 9–11 of the Paris Agreement. These tables are provided in Annex IV.

[45] European Council conclusions on Ukraine, the membership applications of Ukraine, the Republic of Moldova and Georgia, Western Balkans and external relations, 23 June 2022. Available at: https://www.consilium.europa.eu/en/press/press-releases/2022/06/23/european-council-conclusions-on-ukraine-the-membership-applications-of-ukraine-the-republic-of-moldova-and-georgia-western-balkans-and-external-relations-23-june-2022/

Annex I – Climate Finance Sources

Investor	Investor type	Main investment objective	Regional focus	Types of funding mechanisms	Key eligibility criteria	Application procedure
Green Climate Fund (GCF)	Multilateral Climate Funds – UNFCCC Climate Funds	This fund provides a 50:50 balance between mitigation and adaptation investments over eight strategic result areas: energy generation and access; transport; buildings, cities, industries, and appliances; forests and land use; health, food and water security; livelihoods of people and communities; ecosystems and ecosystem services; and infrastructure and the built environment.	The GCF has no regional focus. All developing country Parties to the Convention are eligible for funding.	Grants, loans, equity, result-based payments, guarantees	To be eligible to the GCF a country requires to be a developing country (non-Annex I) Party to the UNFCCC. Accredited entities are eligible for support.	Private, public, non-governmental, sub-national, national, regional, or international organisations may apply to become GCF Accredited Entities, having shown proven capacity in driving transparent climate finance resource management. An Accredited Entity can apply for funds in cooperation with the GCF National Designated Authority or Focal Point. Accredited Entities must formulate and submit a project proposal to the GCF, which is then revised on three levels before receiving approval by the Board. The Project proposal must include a signed "no-objection letter" from the National Designated Authority of Focal Point of each country in order for the review to start. The letter indicates an official approval of the national authority for the project. Proposals are accepted on a continuous basis.
Special Climate Change Fund (SCCF)	Multilateral Climate Funds – UNFCCC Climate Funds	The Special Climate Change Fund (SCCF) prioritises adaptation projects related to water resources management, land management, agriculture, health, infrastructure development, fragile ecosystems (including mountainous ecosystems), integrated coastal zone management, and early warning systems. Mitigation projects are also supported in selected sectors including energy, transport, industry, agriculture, forestry and waste management, and economic diversification. Furthermore, this fund promotes technology transfer, including research demonstration and deployment projects for climate change adaptation and mitigation. The SCCF is managed by the GEF and operates in parallel with the Least Developed Countries Fund (LDCF).	The SCCF funds national and regional projects for all developing countries to address climate change.	Grants	Unlike the LDCF, all developing country Parties to the UNFCCC are eligible to obtain financing from the SCCF.	Project proposals are developed by an Implementing Agency or the GEF, which must be endorsed by a National Focal Point prior to submission to and endorsement by the GEF CEO. Furthermore, the grants need to be matched by co-financing, provided by the grant-seeker.

Investor	Investor type	Main investment objective	Regional focus	Types of funding mechanisms	Key eligibility criteria	Application procedure
Least Developed Countries Fund (LDCF)	Multilateral Climate Funds – UNFCCC Climate Funds	The Least Developed Countries Fund (LDCF) addresses the special needs of the Least Developed Countries (LDCs) that are especially vulnerable to the adverse impacts of climate change and reduces the vulnerability of sectors and resources that are central to development and livelihoods, such as water, agriculture and food security, health, disaster risk management and prevention, infrastructure, and fragile ecosystems. The LDCF is the only existing fund whose mandate is to finance the preparation and implementation of the NAPAs. The LDCF is managed by the GEF.	The LDCF does not have a regional focus, with all LDCs being eligible for funding.	Grants	All LDCs that are part of the UNFCCC are eligible for funding as long as it is also eligible to borrow from the World Bank. Eligible countries need to appoint a national focal point.	LDCs develop the concept for a project as a Project Identification Form (PIF), with the assistance of one of the GEF agencies. For NAPA preparations, this would involve an initial scoping of existing activities and awareness raising amongst key stakeholders. The PIF is submitted to the GEF for approval by the LDCF Council and can be accompanied by a request for a project preparation grant (PPG). Once the PIF is approved, the country embarks on the development of a full project document, and PPG funding is provided to the country if requested. Once completed, the full project document is submitted to the GEF for endorsement, to finally trigger the disbursement of the requested support to the country for the full project implementation.
Adaptation Fund (AF)	Multilateral Climate Funds – UNFCCC Climate Funds	The Adaptation Fund prioritises adaptation and resilience projects tailored to local needs, ranging from disaster risk management, sustainable urban and rural development, and sustainable management of coastal areas, agriculture, forests, and food and water security.	No specific regional focus but focusses on developing countries particularly vulnerable to the adverse effects of climate change.	Grants	To access the AF it is required to be a developing country that is a Party to the Kyoto Protocol, and is particularly vulnerable to the adverse effects of climate change. Applicants are usually national government agencies, but civil society organisations can be included in the project implementation.	To apply for funding, countries must submit proposal through an accredited entity, either a National Implementing Entity (NIE), Regional Implementing Entity (RIE), or Multilateral Implementing Entity (MIE). The proposals must be endorsed by the designated national authority and receive approval by the AF Board upon review according to a set specific AF approval criteria. Proposals are accepted three times a year.
Global Environment Facility (GEF) – General Trust Fund	Multilateral Climate Funds – UNFCCC Climate Funds	This fund supports projects in five Focal Areas which are directly or indirectly related to climate change mitigation and adaptation, namely: Biological Diversity; Climate Change Mitigation; Land Degradation; International Waters; and Chemicals and Waste	There is no regional focus as it is available to all developing countries and countries with economies in transition.	Grants	All developing countries Parties to the UNFCCC with an economy in transition that (i) has ratified the international conventions that the GEF serves and conforms with the eligibility criteria established by the COP, and (ii) is eligible to receive World Bank financing or UNDP technical assistance.	The Operational Focal Point decides which of the 18 partner agencies of the GEF would be best suited to develop and implement the project idea. There are full-sized projects medium-sized projects, enabling activities, and programmes, which have different levels of detail in terms of application and approval process.
International Fund for Agricultural Development (IFAD)	Multilateral Climate Funds – UNFCCC Climate Funds	The International Fund for Agricultural Development (IFAD) is an international financial institution and specialized United Nations agency. This fund promotes agricultural growth that is environmentally sustainable and integrated into ecosystems with a focus on adaptation and increasing resilience, in addition to agricultural mitigation actions, as well as cross-cutting aspects including rural development, water, youth, gender, and indigenous people, among others.	There is no regional focus as it is available to all developing countries.	Grants, concessional loans, blend, loans, debt sustainability framework	The resources of the Fund are available for financing for developing Member States.	The projects and programmes financed by the Fund are evaluated by the Executive Board based on a series of policies and criteria before receiving endorsement, depending on the nature of the grants and/or loan.

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Eastern Europe Energy Efficiency and Environment Partnership Fund (E5P)	Multilateral Climate Funds – Non-UNFCCC Climate Funds	The E5P merges financial contributions from the European Union and a group of 24 nations, including countries which are benefiting from the fund. This fund encourages municipal investments in energy efficiency and environmental projects in the Eastern Partnership Region over eight eligible sectors: district heating; energy efficiency in public buildings (schools, kindergartens, hospitals); energy saving measures in residential housing; renewable energy (including biomass); street lighting; water and wastewater treatment; solid waste management; urban transport. The grants from E5P are used as an incentive for municipal clients to take loans provided by participating Implementing Agencies.	The Eastern partnership region.	Grants	Municipal clients are eligible for the fund. Size of CO_2 emission reductions and other environmental benefits.	The Steering Group addresses the preparation of projects as many times as necessary, once or twice a year, in preparation of the Assembly of Contributors.
European Fund for Sustainable Development (EFSD)	Multilateral Climate Funds – Non-UNFCCC Climate Funds	The European Fund for Sustainable Development (EFSP) was developed and is managed by the European Commission as a European Union (EU) initiative to scale up sustainable finance in countries neighbouring the EU and in Africa. It is implemented through two Regional Investment Platforms: The African Investment Platform (AIP) and the Neighbourhood Investment Facility (NIF). NIF funding is focused on the Eastern Partnership countries as well as the southern and eastern Mediterranean region. It supports infrastructure projects in the transport, energy, social and environmental sectors by combining EU grant resources with loans from European development financing institutions.	Supports finance in countries neighbouring the EU and in Africa.	Grants, loans, equities, technical assistance, guarantees	Both public and private actors are eligible for the Fund although they must undergo a pillar assessment' to verify that they have procedures which are as equally robust as those of the European Commission and can therefore be entrusted with budget implementation tasks.	The EFSD operate as a 'one-stop-shop', receiving financing proposals from financial institutions and public or private investors, and delivering a wide range of financial support to eligible investments.

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Green for Growth Fund (GGF)	Multilateral Climate Funds – Non-UNFCCC Climate Funds	The Green for Growth Fund (GGF) is an impact investment fund operating through a blended finance structure as a public-private partnership that leverages risk-capital provided by public institutions with additional private capital to substantially increase investment volumes to regions and sectors that do not normally attract such flows. The fund channels this dedicated financing to businesses and households through local financial institutions, and through direct investments to eligible projects and companies. It supports initiatives regarding climate change mitigation and sustainable economic growth with a special focus on reducing energy consumption, resource use, and CO_2 emissions through the promotion of energy efficiency and renewable energy measures. The fund also features a dedicated Technical Assistance Facility to provide capacity building and technical expertise in these initiatives.	Southeast Europe, including Turkey, as well as in the nearby European Eastern Neighbourhood region and in the Middle East and North Africa (MENA).	Grants, Market-rate loans	GGF's investments seek to achieve a 20% reduction in energy consumption and/or a 20% reduction in CO2 emissions, by: (i) Refinancing financial institutions (local commercial banks, non-bank financial institutions such as microfinance institutions and leasing companies and other selected financial institutions) providing loans to households, businesses, municipalities and public sector for energy efficiency measures or renewable energy projects. (ii) Providing direct financing to Non-Financial Institutions (companies, energy service companies, renewable energy companies or projects, small scale renewable energy and energy efficiency service and supply companies) that meet GGF energy saving and/or emissions targets, and comply with the technical criteria and GGF exclusion list.	To receive GGF services, financial and non-financial institutions must become a GGF partner institution.
International Bank for Reconstruction and Development (IBRD)	Multilateral Finance Institutions – World Bank Group	The IBRD s an international organization with a strong global presence and mandate to reduce poverty by promoting sustainable economic development. I t is engaged in climate change mitigation across all sectors and regions. Its work in mitigation covers renewable energy generation, energy efficiency and access, forestry and sustainable transport projects and programmes. In addition, it has supported the least developed countries, small island developing States and other vulnerable countries in climate change adaptation by financing projects in disaster risk reduction and ecosystem services in sectors such as fisheries and water resources management.	There is no regional focus with IBRD providing financing globally.	Equity, grants, loans, concessional loans, guarantees, and risk management products	Eligibility for IBRD support depends first and foremost on a country's relative poverty, defined as GNI per capita below an established threshold and updated annually ($1,185 in the fiscal year 2021). Middle and some creditworthy Lower Income countries qualify for IBRD Loans.	The borrower and the Bank Group produce a strategy, called Country Partnership Framework, to identify the country's highest priorities for reducing poverty and improving living standards. The World Bank and the government agree on an initial project concept and its beneficiaries, and the Bank's project team outlines the basic elements in a Project Concept Note. Projects defined as eligible for the World Bank's Green Bond program are selected by World Bank environment specialists and support the transition to low-carbon and climate resilient development and growth in client countries.

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International Development Association (IDA)	Multilateral Finance Institutions – World Bank Group	IDA is a multi-issue institution supporting a range of development financing and cross-sector support. Part of this is supporting countries to adapt to climate change by bringing new solutions and helping them mitigate the impacts of climate change through innovative technologies.	There is no regional focus with IDA providing financing globally.	Grants, zero to low-interest loans, and concessional loans	To be eligible for funds, countries must first meet the following criteria: (i) Relative poverty defined as GNI per capita must be below an established threshold (updated annually) (in fiscal year 2022, this was $1,205), and (II) lack creditworthiness to borrow on market terms and therefore have a need for concessional resources to finance the country's development program.	The main factor that determines the allocation of IDA resources among eligible countries is a country's performance in implementing policies that promote economic growth and poverty reduction. This is assessed by the Country Policy and Institutional Assessment (CPIA), which for the purposes of resource allocation is referred to as the IDA Resource Allocation Index (IRAI). The IRAI and portfolio performance together constitute the IDA Country Performance Rating (CPR). In addition to the CPR, population and per capita income also determine IDA allocations.
International Finance Corporation (IFC)	Multilateral Finance Institutions – World Bank Group	This bank supports projects with a strong focus on climate change mitigation, as well as initiatives aimed at opening investment markets in renewable energy, resource efficiency, energy efficiency, and green buildings. Focus is being provided in distributed renewable energy, urban infrastructure, clean technology venture capital, and sustainable agribusinesses.	There is no regional focus with IFC providing financing globally.	Loans, equity investments, blended finance, venture capital, risk management	To be eligible for IFC funding, a project must be located in a developing country that is a member of IFC, be in the private sector, be technically sound, being profitable, benefit the local economy, and being environmentally and socially sound.	A company or entrepreneur seeking to establish a new venture or expand an existing enterprise can approach IFC directly by submitting an investment proposal to the IFC field office that is closest to the location of the proposed project. After this initial contact and a preliminary review, IFC may proceed by requesting a detailed feasibility study or business plan to determine whether or not to appraise the project. No lending is directly provided to micro, small or medium enterprises.
Multilateral Investment Guarantee Agency (MIGA)	Multilateral Finance Institutions – World Bank Group	The Multilateral Investment Guarantee Agency (MIGA) is a member of the World Bank Group, whose mandate is to promote cross-border investment in developing countries by providing guarantees to investors and lenders. IGA only supports investments that are developmentally sound and meet high social and environmental standards. One of its four strategic pillars is to demonstrate leadership on applicable global issues such as climate change, gender, and advocacy on the power of guarantees.	There is no regional focus with MIGA providing financing globally.	Guarantees, equity, shareholder loans, shareholder loan guarantees, and non-shareholder loans	MIGA insures cross-border investments made by investors in a MIGA member country into a developing member country. Corporations and financial institutions are eligible for coverage if they are either incorporated in, and have their principal place of business in, a member country or if they are majority-owned by nationals of member countries. A state-owned company is eligible if it operates on a commercial basis. An investment made by a non-profit organization may be eligible if it is carried out on a commercial basis.	Clients submit a preliminary application which will be reviewed to determine whether the project meets the eligibility criteria. MIGA will contact the client to discuss the project. The next step is for the client to submit a Definitive Application, after which MIGA begins a thorough review of the project.

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European Investment Bank (EIB)	Multilateral Finance Institutions – Other	Activities of the EIB focus on six priority areas, namely climate change and environmental sustainability, innovation and skills, infrastructure, cohesion, small and medium-sized enterprises, and development, including the promotion of sustainable growth, poverty reduction, addressing inequality and improving global quality of life. Priority climate change areas supported by this Bank include renewable energy, low carbon and energy efficient generation, production of fuels from low carbon energy sources, energy efficiency, agriculture, forestry, and land use, non-energy GHG reductions, waste and wastewater, transport, low-carbon technologies, and cross-cutting climate change issues.	There is no regional focus with EIB providing financing globally.	Loans, equity, guarantees, blends, advisory services	To be eligible projects must contribute to EU economic policy objectives.	No special formalities are involved for the submission of applications to the EIB for individual loans. Intermediated loans (credit lines) to local, regional, and national banks are provided for projects below 25 million euros. Direct loans for mid-capacity companies are also provided for projects between 7.5 and 25 million euros.
European Bank for Reconstruction and Development (EBRD)	Multilateral Finance Institutions – Other	The European Bank for Reconstruction and Development (EBRD) supports a Green Economy Transition approach focused on energy and resource efficiency, circular economy, renewable energy, and climate resilience. Targeted climate change programmes also exist, including the Green Cities Programme, the Finance and Technology Transfer Centre for Climate Change (FINTECC) programme, and the Green Economy Financing Facilities (GEFFs). Planning to become a majority green bank by 2025, all EBRD activities will be aligned with the Paris Agreement from the end of 2022.	The EBRD invests in economies across three continents, namely, Central Asia, Central Europe and Baltic States, Cyprus and Greece, Eastern Europe and the Caucasus, Russia, South-eastern Europe, Southern and Eastern Mediterranean, and Turkey	Loans, equity, guarantees	To be eligible for EBRD funding, the project must be located in an EBRD country of operations, have strong commercial prospects, involve significant equity contributions in-cash or in-kind from the project sponsor, benefit the local economy and help develop the private sector, satisfy banking and environmental standards	The client presents project concepts to the EBRD. Project concepts and overall structure undergo a concept review by EBRD management, including the proposed financing structure and obligations, after which a mandate latter is signed including the project plan, development expenses, and responsibilities. A final review is then conducted on the specific details prior to Board approval, upon which the client signs the deal with EBRD, and the project becomes legally binding.

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Council of Europe Development Bank (CEB)	Multilateral Finance Institutions – Other	The Council of Europe Development Bank (CEB) is a multilateral development bank with an exclusively social mandate, supporting social development projects through the following three sectoral lines of action: (i) inclusive growth, (ii) support for vulnerable groups, and (iii) environmental sustainability. This Bank supports economically and socially viable projects that promote social cohesion across several sectors. Concerning natural disasters and environment, the CEB has been placing an increasing emphasis on sustainable development including reduction and treatment of solid and liquid waste; clean-up and protection of surface and underground water; energy-saving and efficiency measures; protection and development of biodiversity; and cleaner transport means and networks. Disaster risk reduction and recovery are also of increasing priority within the banks´ project portfolio.	Its main focus area is funding any of its 42 member states.	Loans, guarantees, grants, and interest rate subsidies	The CEB can provide loans to any of its member states, in accordance with its mandate. The Bank may also receive voluntary contributions from its members, through fiduciary accounts. All countries that are members of the Council of Europe are eligible to join the CEB.	Potential borrowers include government entities, local/regional authorities, public/private financial institutions or any other public/private legal entity that is first approved by a CEB Member State. In order to determine a borrower's eligibility for financing, a systemic evaluation of its solvency, institutional set-up and management capacity is carried out by the CEB. Loan applications are tailored to the characteristics of each project, prepared jointly by the CEB and the borrower state.
Asian Development Bank (ADB)	Multilateral Finance Institutions – Other	The vision of the Asian Development Bank (ADB) is to achieve prosperity, inclusion, resilience, and sustainability. Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability is one of the bank´s seven operational priorities. While the bank supports projects on climate change mitigation, climate and disaster resilience, and environmental sustainability, primarily in Asia and the Pacific Region, it supports sustainable development projects across the world. The ADB administers a series of funds for its projects, including special funds it has established to facilitate greater investments in developing member countries.	Asea Pacific region including the Europe and Central Asia Region	Loans, technical assistance, grants, and equity	All ADB developing member countries (DMCs) are eligible for funding except those that have graduated from regular ADB assistance. DMCs are classified based on their gross national income (GNI) per capita, and creditworthiness, in accordance with ADB's classification and graduation policy.	The beneficiary public entity submits a proposal to the ADB, which undergoes a five-step approval process including concept clearance, due diligence check, negotiation of terms and conditions, final review by the Investment Committee, and board of Director Approval.

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Black Sea Trade and Development Bank (BSTDB)	Multilateral Finance Institutions – Other	The Black Sea Trade and Development Bank (BSTDB) is an international financial institution that aims to accelerate development and promote co-operation among shareholder countries towards economic prosperity. BSTDB aims to promote environmental and social (E&S) sustainability through: (i) pollution prevention and mitigation; (ii) respect for fundamental human rights in the working environment; (iii) protection of the Black Sea against pollution; (iv) addressing climate change; and (v) promoting sustainable use of natural resources, protection, and conservation of biodiversity.	Black Sea Region and supporting investors and companies in the 11 member countries.	Mid-term to long-term loans, equity investments and guarantees	Eligible for member countries to the BSTDB with membership open to the BSEC Participating States, directly or through their designated representatives and other multilateral banks and financial institutions.	Requests for the Bank's assistance may come from private companies and financial institutions as well as governmental, public and non-profit entities. Initial contacts may be established through the Bank's website. All projects undergo a thorough appraisal process, after which they are presented to the Board of Directors. Approval by the Board represents a formal commitment by the Bank.
Nordic Investment Bank (NIB)	Multilateral Finance Institutions – Other	The Nordic Investment Bank (NIB) is the international financial institution of the Nordic and Baltic countries, providing sustainable, long-term financing to customers in both the private and public sectors on competitive market terms to complement commercial lending. Although NIB's mission is to finance projects that improve productivity and benefit the environment of the Nordic and Baltic countries, it supports sustainable development in other countries through special lending programs. Currently, the NIB has a loan programme agreed with the Black Sea Trade and Development Bank (BSTDB) for financing investments and environmental projects in the Black Sea regions in the fields of renewable energy, energy efficiency and public transportation.	The majority of NIB's operations are located in the Nordic–Baltic region. Outside the membership area, NIB may finance projects that involve member country interests. The Bank may extend loans in countries that have signed agreements on financial cooperation with NIB. In certain cases, loans may be provided in other OECD countries.	Corporate loans, sovereign loans, and bonds	All projects financed by NIB should improve competitiveness and/or the environment. Furthermore, outside the membership area, projects financed by NIB should be of mutual interest to the country of the borrower and the member countries.	An initial loan initiative and mandate assessment will be conducted to assess whether the project improves the productivity and/or benefits the environment in the Bank's member countries. This is followed by a credit and sustainability analysis. If positive, the project will be approved by the Board of Directors or NIB's President and the loan documentation will be negotiated and agreed.

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Nordic Environment Finance Corporation (NEFCO)	Multilateral Finance Institutions – Other	The Nordic Environment Finance Corporation (NEFCO) is an international financial institution funded in 1990 by the five Nordic countries of Denmark, Finland, Iceland, Norway, and Sweden to take concrete actions to accelerate the green transition. NEFCO finances small and medium sized, public-sector projects in Eastern Europe using concessionary loan financing, and blending loan financing with grant funding from Nordic governments, the EU and other countries. Special green transition funds for international development initiatives. Furthermore, it supports results-based or grant programmes at a global level in partnership with the Green Climate Fund.	Supports finance in Eastern Europe.	Loans, Equities, buyer credits, grants, results-based financing, technical assistance, concessional loans	NEFCO only finances projects that will generate positive environmental and climate-related impact.	The normal process for public sector procurement involves the following steps: (i) notification of opportunities for tendering; (ii) prequalification when appropriate; (iii) invitation to tender and issuance of tender documents; (iv) receipt of tenders, evaluation of tenders and contract award; and (v) contract administration.
United Nations Program on Reducing Emissions from Deforestation and Forest Degradation (UN REDD Program)	Multilateral Finance Institutions – Other	The United Nations Program on Reducing Emissions from Deforestation and Forest Degradation (UN REDD Program) aims to reduce emissions from deforestation and to enhance carbon sinks from forests while contributing to sustainable development at the national level. It supports nationally led REDD+ processes promotes the informed and meaningful involvement of all stakeholders.	The UN REDD does not have a specific regional focus and supports developing countries globally.	Grants	Countries are required to being a partner country of the UN-REDD Programme, achieving regional balance, enhanced coordination with other initiatives, ability of UN agencies to assist the country, ability to demonstrate progress/results in the short term based on REDD+ early action, REDD+ potential, and commitment to applying the principles of the UN-REDD Programme.	National governments, regional development banks and NGOs can receive funding through participating UN organizations, acting as executing agencies. An applicant usually applies at the UNDP country office. If there is no UNDP country office, then the application can be made to FAO or UNEP country offices. The UN-REDD Programme is not an exclusive UN mechanism. National governments, regional development banks and non-governmental organisations (NGOs) can receive funding through one of the participating UN organisations by acting as executing agencies.
Austrian Development Agency (ADA)	Bilateral Finance Institutions	The Austrian Development Agency (ADA) works towards combating poverty, ensuring peace and preserving the environment. ADA is primarily engaged in sectors: water supply and sanitation, renewable energy, climate protection, agriculture and forestry, private sector and development as well as human security, human rights and rule of law.	Africa, Asia, Southeast Europe and the South Caucasus	Grants	Funding from ADA is available for projects/programmes under country and regional strategies, civil-society engagement, private sector & development, and humanitarian aid.	A number of projects and programmes are implemented following a public call to tender. Furthermore, ADA also provides funding for projects/programmes that organisations plan and apply for on their own initiative.
Denmark´s Investment Fund for Developing Countries (IFU)	Bilateral Finance Institutions	IFU is an independent government-owned fund offering risk capital to companies in developing countries and emerging markets. It aims to contribute to green transition, economic and social development. This includes areas such as climate,	There is no regional focus with IFU providing financing globally.	Equity, loans, and guarantees	Enterprises require to be deemed commercially viable, the investment must contribute to green and social development, the company must be in a developing country that IFU can invest in, and the host country must be on the list of developing countries eligible for IFU investment.	Financial proposals are assessment according to the financial sustainability of the investment and how it meets IFU's impact criteria. It then receives first-step approval.

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Swedish International Development Agency (SIDA)	Bilateral Finance Institutions	The Swedish International Development Agency (SIDA) is a government agency aimed at the reduction of poverty and the implementation of the Swedish Policy for Global Development. Climate change and the environment is a priority area for SIDA. It works with civil society organisations, multilateral organisations, public sector, private sector, and research institutions.	There is no regional focus with SIDA providing financing globally.	Grants, Loans, Guarantees	All SIDA funding interventions must be relevant to a humanitarian/development strategy of the Swedish government, and should be aligned with SIDA's principal values.	All SIDA procurements are advertised on Kommers Annons, where you can register interest in a procurement. Based on the proposals SIDA identifies relevant cooperation partners. It is also possible to submit unsolicited proposals.
German Reconstruction Credit Bank (KfW)	Bilateral Finance Institutions	The KfW Bank is Germany's national development bank with topic areas related to climate mitigation and adaptation, climate development, climate protection, climate financing, and forests and climate change.	There is no regional focus with KfW providing financing globally.	Grants, concessional loans, blended finance products, equity and guarantees.	Depending on the program, eligibility ranges from governmental (national, subnational) to nongovernmental entities, including private sector and NGOs.	KfW usually does not accept unsolicited proposals but instead works with partners to identify possible funding opportunities. Entry points would therefore be KfW country/regional program or the specialised program managers.
German Society for International Cooperation (GIZ)	Bilateral Finance Institutions	GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Cooperation) mainly implements the technical cooperation projects of the Federal Ministry for Economic Cooperation and Development (BMZ), it is mainly a commissioning party, although it also works with the private sector and other organizations on a public benefit basis. GIZ aims to follow the paradigm of sustainable development and climate change is central to the work of GIZ.	There is no regional focus with GIZ providing financing globally.	Grants and concessional loans. An own contribution is usually expected.	Depending on the program, eligibility ranges from governmental (national, sub-national) to nongovernmental entities, including the private sector and NGOs. Recipients of funding include the implementing partners of GIZ projects in partner countries or German and international public-benefit organisations and institutions.	Project applications may be submitted by state institutions. NGOs can get support as cooperating partners.
Germany's Federal Ministry of Economic Cooperation and Development of Germany (BMZ)	Bilateral Finance Institutions	The Federal Ministry for Economic Cooperation and Development (BMZ) is the lead ministry for German official development cooperation. Climate change and sustainable energy have become central issues within German Development Cooperation, prioritising NDC support, energy and climate, energy efficiency, low-carbon transportation, mitigation and climate, cities and climate, water and climate, agriculture and climate, forests and climate, oceans and climate, climate risk management, climate risk insurance, and climate finance.	There is no regional focus with BMZ providing financing globally.	Grants and concessional loans	Eligibility depends on the program however, it ranges from governmental (national, subnational) to non-governmental entities, including the private sector and NGOs.	Depends on the program. Main partners are governments, but NGOs can also receive financial support.

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Germany's International Climate Initiative (IKI)	Bilateral Finance Institutions	The International Climate Initiative (IKI) is the most important instrument utilised by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) to support international climate action and biodiversity. It finances projects run by organisations that implement measures together with developing, emerging and transitional countries in four areas, namely, mitigating greenhouse gas emissions, adapting to the impacts of climate change, conserving natural carbon sinks, and conserving biological diversity.	There is no regional focus with IKI providing financing globally to developing, emerging and transitional countries.	Grants	Non-governmental organisations, commercial enterprises, universities and research institutions from Germany and abroad, implementing organisations in the Federal Republic of Germany, institutions in cooperation countries as well as international intergovernmental organisations and institutions, such as development banks or United Nations organisations and programmes.	Firstly, the BMU pre-selects promising projects from the submissions that meet the mandatory requirements. Based on this, the BMU decides which project outlines to pursue in the second stage of the selection process. The lead implementing organisations with successful project outlines are then invited to submit a detailed project proposal.
Swiss Agency for Development and Cooperation (SDC)	Bilateral Finance Institutions	The Swiss Agency for Development and Cooperation (SDC) aims to contribute to a world that is free from poverty and is peaceful. SDC seeks sustainable development pathways and is guided by several themes, including agriculture and food security, disaster risk reduction, emergency relief, reconstruction and protection, climate change and the environment, and water. Within the thematic area of climate change and the environment, the priority sectors are sustainable forestry, energy supply, climate change adaptation, mountainous regions, and funding climate protection.	SDC has a list that identifies partner countries and regions including countries in Central America, Africa, Middle East, and the South Caucasus.	Grants and concessional loans	State and non-state entities, including NGOs are eligible for funding.	Apart from direct support or project implementation under SDC's mandate, NGOs from developing countries may get support from SDC through partnerships with Swiss NGOs.
Dutch Entrepreneurial Development Bank (FMO)	Bilateral Finance Institutions	The Dutch Entrepreneurial Development Bank (FMO) supports sustainable private sector growth in developing and emerging markets.	There is no regional focus with FMO providing financing globally in developing and emerging markets.	Loans, syndicated loans, private equity, guarantees, capacity development	All countries on the OECD DAC country list, which contains all countries and territories eligible to receive official development assistance.	Initial assessment focussed on country, investment plan, development impact and FMO's role as financier. If the financing opportunity meets the investment criteria, FMO continues to analyse potential risks and challenges.
United States Agency for International Development (USAID)	Bilateral Finance Institutions	The United States Agency for International Development (USAID) is the U.S. governmental agency for development cooperation. Climate Change is one of the fourteen thematic priorities of USAID. This includes key issues such as renewable energy, forest and landscapes management, respond to climate-related disasters, climate-smart and resilient agriculture, climate-resilient drinking water and sanitation, and reducing greenhouse gas emissions and air pollutants.	There is no regional focus with USAID providing financing globally.	Grants and concessional loans	Governmental and non-governmental entities.	USAID usually works with a Country Development Cooperation Strategy as a basis for project and program design, leading to an acquisition and assistance plan. USAID then decides on results to be accomplished, which may be obtained via an assistance or acquisition award. Furthermore, open calls are posted daily on Grants.gov and SAM.gov and are accepted on a rolling basis.

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Norwegian Agency for Development Cooperation (NORAD)	Bilateral Finance Institutions	The Norwegian Agency for Development Cooperation (NORAD) grants funding to organisations within civil society, research, higher education and industry that work with partners in poor countries. Climate change and the environment, and clean energy are two of the seven main thematic areas of NORAD.	Africa, Asia-Pacific and Latin America	Grants	NORAD grants funding to organisations within civil society, research, higher education and private sector development that work with partners in poor countries.	All procurement of goods and services made by NORAD are announced on Doffin/TED databases. Applicants will first be asked to submit a short concept note and confirm that they meet the grants scheme's minimum criteria to qualify for support. Successful applicants will then subsequently be invited to submit full applications, and fully document the business case.
Czech Development Agency (CzechAid)	Bilateral Finance Institutions	The Czech Development Agency (CzechAid) focusses on bilateral projects of development cooperation between the Czech Republic and other countries. Its main themes include general environmental protection, disaster prevention and preparedness, and sustainable energy generation, among others.	The Czech Republic has determined six priority partner countries where development cooperation is pursued over the long term, namely Bosnia and Herzegovina, Cambodia, Ethiopia, Georgia, Moldova, Zambia.	Grants	Bilateral projects with priority partners countries, with some programmes open to all developing countries.	It specifies areas of development cooperation with selected institutions and partners in the priority countries. Subsequently, it identifies problems required to be solved and then formulates the particular measures and interventions.
French Development Agency (AFD)	Bilateral Finance Institutions	The French Development Agency (AFD) aims its funding at accelerating the transitions to a fairer and more sustainable world by focussing on climate, biodiversity, peace, education, urban development, health, and governance.	It operates in Africa, Latin America, Orients, and Three Oceans.	Loans, grants, and Guarantees.	Governmental and non-governmental entities.	It posts call for proposals and call for projects. Panel members process and review applications once a call for projects has ended. applications are short-listed by the project partners, which are then submitted for review by the panel members.
Japan International Cooperation Agency (JICA)	Bilateral Finance Institutions	Japan International Cooperation Agency (JICA) is a governmental agency that coordinates ODA for Japan and has exerted to address climate change as one of its main pillars. There are four priority issues in climate change, namely, promote low-carbon, climate-resilient urban development and infrastructure development, support climate policy and institutional development, enhance climate risk assessment and countermeasures, and enhance conservation and management of forests and other ecosystems.	There is no regional focus with JICA providing financing globally.	Grants and concessional loans	Governmental (national, sub-national), international/regional and non-governmental entities.	Applicants use a form to apply. The application requires information on the respective development policies of the particular sector, existing practices, information on the proposed project area, input from the recipient government, prospects of further plans, environmental and social considerations and risk management issues etc

Investor	Investor type	Main investment objective	Regional focus	Types of funding mechanisms	Key eligibility criteria	Application procedure
Georgian Energy Development Fund (GEDP)	National Finance Institutions	Georgian Energy Development Fund (GEDP) aims to provide funding for clean and renewable energy in support of the economic and social development of the country by development of the abundant energy resources.	Georgia	Grants	Partners in the energy sector.	Projects may be initiated by both stakeholders (investor and/or GEDF).
Georgia's JSC Partnership Fund	National Finance Institutions	The JSC Partnership Fund is Georgia's state-owned investment fund that together with the private sector invests in projects in five key sectors in Georgia, namely agribusiness, energy, manufacturing, logistics, and real estate and tourism.	Georgia	Equity, mezzanine	The main investment criteria are that the project is commercially viable, the Fund's participation (up to 49% of the project's total equity), and the partner is experienced or availability of an operator.	Project initiation starts with Business Plan and/or Feasibility Study presented by the interested investor.
Georgia's Municipal Development Fund (MDF)	National Finance Institutions	The Municipal Development Fund (MDF) of Georgia assists in the enhancement of institutional and financial capacities of local self-governmental bodies, making investments in local infrastructure and services, and improvement of main economic and social conditions for the local population.	Georgia	Equity	Local self-governmental bodies.	Local self-governmental bodies must submit funding proposals.
Georgia Regional Development Fund (GRDF)	National Finance Institutions	The Georgia Regional Development Fund (GRDF) invests in small and medium enterprises (SMEs) in the Republic of Georgia. GRDF focuses on businesses outside the capital of Tbilisi and those operating in tourism and agribusiness.	Central & Eastern Europe	Debt and equity investments	Small and medium enterprises (SMEs) in the regions of Georgia.	Small and medium enterprises (SMEs) have to submit funding proposals.
Georgian Co-Investment Fund	National Finance Institutions	The Georgian Co-Investment Fund Considers investment opportunities across sectors and industries which significantly contribute to the development of the Georgian economy, including Energy and Infrastructure, Hospitality and Real Estate, Agriculture and Logistics, and Manufacturing.	Georgia	Equity and hybrid financial instruments	Medium and large-sized enterprises (MLEs) in Georgia, which can demonstrate significant growth potential.	Companies interested in getting financing from GCF should submit a detailed business plan.

Annex II – Unconditional Priority Mitigation Actions

Energy Generation and Transmission

The overarching goal is to limit GHG emissions in the energy generation and transmission sector in 2030 by 15% compared to the reference level.

UE1. Support renewable energy (wind, solar, hydro, biomass) generation

The actions aim to increasing the share of renewable energy (wind, solar, hydro) in Georgia's electricity production by up to 87% by 2030. The JSC Georgian Energy Development Fund under the Ministry of Economy and Sustainable Development will be responsible.

UE1.1. Technical and procedural support for wind power (WP) generation.	
Description	This action will support the construction of the following wind power plants (WPPs) until 2024: Imereti (104 MW), Rikoti-Phona (20 MW), Tbilisi (54 MW), Dirbula (21 MW), Ruisi (12.6 MW), Samgori (8 MW), Zestaponi (50 MW), Nigoza (50 MW), Kaspi (54 MW).
Costing	2,178,000,000.00 (2021-2023 Action Plan)
Funding Status	There is no funding gap as this action is readily financed by the companies running the power plants, namely: • Imereti: Ltd. Usasrulo Energia • Rikoti-Phona: Ltd. Taba • Tbilisi: JSC Caucasian Wind Company • Dirbula: Ltd. Sinte • Ruisi: Ltd. Ruisi Wind Power Plant • Samgori: Ltd. Vento • Zestaponi: Ltd. Zestaponi Wind Power Plant • Nigoza: JSC Chalik Georgia Wind • Kaspi: JSC Caucasian Wind Company
Funding Options	N/A
UE1.2. Technical and procedural support for solar power (SP) generation.	
Description	This action will support the construction of the following solar power plants until 2024: Udabno (5 MW), Plavi (7 MW), Gardabani (50 MW), Marneuli (20 MW), Geosolar (9 MW), Sagarejo (25 MW), Unspecified solar plant (1 MW).
Costing	209,880,000.00 (2021-2023 Action Plan)
Funding Status	There is no funding gap as this action is readily financed by the companies running the power plants, namely: • Udabno: Ltd. Georgia Solar Company

	• Gardabani: EBRD • Marneuli: Ltd. New Generation • Sagarejo: JSC Georgian Energy Development Fund
Funding Options	N/A
UE1.3. Technical and procedural support for hydro power (HP) generation.	
Description	This action will support the construction of the following hydropower plants until 2024 (with more than 13 MW capacity): Kirnati (51.25 MW), Khobi (46.7 MW), Mtkvari (53 MW), Mestiachala 1 (20 MW), Stori 1 (20.03 MW), Samkuritskali 2 (26.28 MW), Metekhi 1 (36.73 MW), Ghebi (14.34 MW), Chiora (14.15 MW), Zoti (44.31 MW).
Costing	1,980,000,000.00 (2021-2023 Action Plan)
Funding Status	There is no funding gap as this action is readily financed by the companies running the power plants, namely: • Kirnati: Ltd. Adjara Energy 2007 • Khobi: Ltd. Kartli Investment Group Energy • Mtkvari: Ltd. Mtkvari HPP • Mestiachala 1: JSC Svaneti Hydro • Stori 1: Ltd. Gota 21 • Samkuristskali 2: Ltd. Peri • Metekhi 1: Ltd. Phazisi Energy and Yenigun • Ghebi: Phazisi Energy and Yenigun • Chiora: Ltd. Chiora HPP • Zoti: JSC Georgian Renewable Energy Company
Funding Options	N/A

UE2. Improve average efficiency of thermal power plants

The action will involve the improvement of the average efficiency of thermal power plants by increasing the efficiency of electricity generation in thermal power plants with more than 50% by 2030.

UE2.1. Implementation of technical work of thermal power plants.	
Description	Technical works will be carried out at all the thermal power plants in Georgia to improve the average efficiency and strengthen the infrastructure of national transmission systems. In addition, new combined-cycle thermal plants will be equipped with new technologies to improve their energy efficiency. By 2023, the Gardabani 3 – combined-cycle gas thermal power plant will be constructed.
Costing	531,200,000.00 (2021-2023 Action Plan)
Funding Status	The JSC Georgian Oil and Gas Corporation (GOGC) will provide financing worth 332,000,000.00 GEL. There is therefore a funding gap of 199,200,000.00 GEL.

Funding Options	Considering the size and national aspect of the action, Georgia could apply for international funding from multilateral organisations or institutions, such as the EBRD, WB, and ADB.

UE3. Strengthen the capacities of renewable energy integration in the transmission network of Georgia

The action aims to implement the ten-year plan of Georgia's transmission network development for power transmission companies, which will increase the share of renewable energy in the installed capacity of the Georgian energy system to 18.2% by 2030.

UE3.1. Implementation of Ten-year network development plan of Georgia for electricity distribution companies.	
Description	The national transmission system infrastructure will be reinforced, existing problems will be addressed, and potential future problems will be responded to, while implementing identified opportunities.
Costing	771,804,000.00 (2021-2023 Action Plan)
Funding Status	Georgia will receive a loan/grant of 662,112,000.00 GEL from EBRD, WB, KfW, and EU-NIF. Furthermore, national financing of 109,692,000.00 GEL will be provided through budget line 2414. There is therefore no funding gap.
Funding Options	N/A

UE4. Develop new policy documents and legislation for the energy sector

The action aims to develop a long-term vision for the energy sector and additionally initiate the development of other new policy documents, laws, and secondary legal acts based on this vision. Furthermore, a long-term state vision will be formulated which will serve as the basis for short-, medium-, and long-term strategies for Georgia's renewable energy utilisation.

UE4.1. Development of a long-term comprehensive multisectoral strategy document for Georgia's energy policy.	
Description	This action will develop a long-term (2030) comprehensive state energy policy strategic document, which will later become the basis for the development of short, medium, and long-term strategies with a particular emphasis on the utilization of Georgia's renewable energy resources.
Costing	198,000.00 (2021-2023 Action Plan)
Funding Status	Georgia will obtain a grant of 198,000.00 from EU, Government of Sweden, and UNDP. There is therefore no funding gap.
Funding Options	N/A

Transport

The overarching goal is to limit GHG emissions in the transport sector in 2030 by 15% compared to the reference level.

UT1. Increase the share of low- and zero-emission and roadworthy private vehicles in the vehicle fleet

The actions aim to increase the share of electric and hybrid vehicles of the total registered vehicles in Georgia with 5% and 20%, respectively, by 2030, and encourage the use of electric transport and reduce the activity of gasoline and diesel engine vehicles and imports of older, environmentally inefficient vehicles. Furthermore, they aim to increase the share of roadworthy vehicles by reducing the share of vehicles failing the first technical inspection from the current 55% to 30% by 2030.

UT1.1. Implementing changes in existing regulation related to the technical inspection of vehicles.	
Description	This action will implement legal and administrative measures for reducing the tendency of bypassing the technical inspection of vehicles.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is present for this action as it is inscribed within action *UT1.2. More efficient execution of fines foreseen under the Administrative Offences Code of Georgia in terms of technical inspection of the vehicles*. Administrative costs for the refinement of vehicle technical inspection regulation will be inscribed within the 120,000.00 GEL of national financing that will be provided through budget line 3008.
Funding Options	N/A
UT1.2. More efficient execution of fines foreseen under the Administrative Offences Code of Georgia in terms of technical inspection of the vehicles.	
Description	Legislative and/or administrative measures will be taken to reduce the tendency of bypassing the technical inspection of vehicles, as well as installing video cameras on the main highways, urban and rural roads for controlling vehicles that haven't passed the technical inspection. To accomplish this, it is planned to purchase and install a total of 150 video cameras. These measures serve to increase referrals for technical inspections, remove the least efficient vehicles from the roads/market, and renew the fleet, which will increase its average efficiency.
Costing	120,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as national financing of 120,000.00 GEL will be provided through budget line 3008.
Funding Options	N/A
UT1.3. Control of the exhaust fumes from the vehicles on the roads.	
Description	This action will establish and implement the technical mechanism for actively controlling vehicle exhaust fumes on streets in Georgia.
Costing	498,000.00 GEL (2021-2023 Action Plan)

Funding Status	There is a funding gap of 498,000.00 GEL.
Funding Options	Given the aim of the action and the scale of the funding required it would be appropriate to apply for funding from bilateral funding sources such as KfW, which have also been active in funding other transport actions in Georgia.
UT1.4. For the promotion of electric vehicles, identification of optimal tax incentive alternatives based on the cost-benefit analysis.	
Description	A cost-benefit analysis will be conducted to estimate the fiscal effect and identify how imposing additional tax incentives (except for excise tax) for electric vehicles will increase the entry rate of electric vehicles in the market to gradually replace the fleet.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is explicitly present for this action as it is inscribed within action *UT1.6. - Discussion on the possibility of increase in import duty for old vehicles based on (economic) feasibility study* as a mean to further promote electric vehicles. Administrative costs for the identification of optimal tax incentive will be covered by the 300,000.00 GEL to be budgeted for the economic feasibility studies to be conducted under action *UT1.6*.
Funding Options	N/A
UT1.5. Improve infrastructure for electric vehicles in Tbilisi.	
Description	This action will construct charging spots, parking lines, and other supporting infrastructure for the electric vehicles.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is explicitly present for this action as it is inscribed within action *UT3.1. - Implement the measures included in Tbilisi's Green Transport Policy Plan.* Administrative costs for the improvement of infrastructure for electric vehicles in Tbilisi will be covered by the 1,762,200,000.00 GEL loan/grant Georgia will receive from EBRD, ADB, KfW, and AFD to implement *UT3.1*.
Funding Options	N/A
UT1.6. Discussion on the possibility of increase in import duty for old vehicles based on (economic) feasibility study.	
Description	This action will assess and impose a high import progressive tax in case of economic feasibility, which will build on the double import tax rate for vehicles over 10 years and a triple import tax for vehicles over 14 year that is in force since 2017 and which reduces imports of old, inefficient vehicles and the active entry of new models, hybrids, and electric vehicles into the market.
Costing	300,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 300,000.00 GEL.
Funding Options	Considering that the action relates to government administration processes, it would be appropriate for Georgia to seek for financing from national financing sources.
UT1.7. Emission standards on the import of vehicles based on the cost-effectiveness analysis (EUR4 / EUR5).	

Description	Imported vehicles will be restricted according to their emissions rates which will dramatically improve emissions intensities in new vehicle stocks and gradually replace the existing vehicle fleet with more efficient models.
Costing	1,203,840.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a grant of 213,840.00 from UNEP. There is therefore a funding gap of 990,000.00 GEL.
Funding Options	Given the scope of the project, it would be advisable that Georgia apply for grants to be provided by UNFCCC funds dedicated to climate change with the UNEP as an implementing agency.

UT2. Encourage the reduced demand on fossil fuel and the use of biofuels

The actions aim to reduce the fuel consumption and promote the use of environmentally friendly fuels in the transport sector. More specifically, they will aim to increase the share of renewable fuel sources, including biofuels, in the total fuel consumption in the sector to 10% by 2030.

UT2.1. Discuss the increase in taxes for fuels.	
Description	The possibility to increase taxes for fuels will be discussed and prepared to decrease the activity of gasoline and diesel-driven cars which will include a proportion of drivers making the shift to using public transport systems as their primary mode of transport.
Costing	300,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 300,000.00 GEL.
Funding Options	Considering that the action relates to government administration processes, it would be appropriate for Georgia to seek for financing from national financing sources.
UT2.2. Support and encouragement of the biodiesel production.	
Description	The action will promote the production of biodiesel, collect biodiesel production and sales data, monitor trends to reduce carbon dioxide emissions, and prepare an informational brochure about biodiesel to encourage its utilisation. This will generate support for the current production and sale of B5, i.e., 5% biodiesel and 95% diesel mixture (blend), and B7, or 7% biodiesel and 93% diesel mixture (blend), by the private sector since 2019, and the planned construction of a largescale biodiesel factory by 2023.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	As part of the action *UE4.1. - Development of a long-term comprehensive multisectoral strategy document for Georgia's energy policy*, Georgia will need to ensure the encouragement of the biodiesel production through the awareness-raising and capacity building campaigns for the strategy.
Funding Options	It is fundamental that the administrative costs of action UT2.2 be budgeted within the 198,000.00 GEL grant that Georgia will obtain

	from EU, Government of Sweden, and UNDP to ensure the support and encouragement of the biodiesel production.

UT3. Promote non-motorised means of mobility and public transport

The objective includes encouraging alternative forms of transportation/mobility such as walking, cycling and public transport (bus, metro, and minibus) to reach 30% of transportation by non-motorized transport (cycling and walking) and 45% by public transport (metro, bus, minibus) by 2030. This will automatically reduce the use of private vehicles by up to 20%.

UT3.1. Implement the measures included in Tbilisi's Green Transport Policy Plan.	
Description	The Sustainable Urban Mobility Plan of Tbilisi (SUMP) will be developed, a bus reform will be conducted in Tbilisi, the metro will be modernised and have increased capacity, cable-car/rope will be constructed, smart transport systems and zonal-hour parking will be introduced, and streets will be rehabilitated in accordance with the principles of multimodal planning.
Costing	1,762,200,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a loan/grant of 1,762,200,000.00 GEL from EBRD, ADB, KfW, and AFD.
Funding Options	N/A
UT3.2. Implement the measures listed in Batumi's Sustainable Urban Mobility Plan (SUMP).	
Description	The action will improve the efficiency of bus routes, increase bus capacity and the number of passengers, introduce zonal-hour parking in central districts, plan and implement reduced vehicle activity, purchase buses operating on modern standard diesel and fully electrical buses, and renew/replenish the municipal transport company fleet with new adapted buses.
Costing	8,800,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a loan/grant of 8,800,000.00 GEL from EBRD and E5P.
Funding Options	N/A

UT4. Implement innovative, evidence-based initiatives in the transport sector

The objective involves conducting analysis and studies and raising financial resources to implement additional, evidence-based initiatives for reducing greenhouse gas emissions in the transport sector, which will identify new measures based on a cost-benefit analysis of existing alternatives.

UT4.1. Develop international climate finance proposals for the improved public, intercity, and non-motorised transport means.

Description	The action envisages seeking financial resources for the implementation of specific new policies and measures for the next iteration of the Climate Action Plan.
Costing	178,200.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 178,200.00 GEL.
Funding Options	It would be most recommendable to apply for bilateral technical support form European Countries/Agencies actively supporting the transport sector in Georgia in order to develop the international climate finance proposals for improved transport infrastructure.
UT4.2. Develop cost-benefit analysis and feasibility study to identify best options for shifting road freight to rail.	
Description	The action envisages conducting a cost-benefit analysis to facilitate the identification of the most attractive measures to pursue in the next iteration of the Climate Action Plan.
Costing	257,400.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 257,400.00 GEL.
Funding Options	There are several financial institutions that are active or have been active in Georgia in supporting the development of the railway sector. Given their previous presence in Georgia relating to the modernisation of railway transport, the country could apply for funding at the EBRD, EIB, or ADB.

Buildings

The overarching goal is to develop low carbon approaches in the building sector, including public and touristic buildings, through encouraging the climate-goals oriented energy efficient technologies and services.

UB1. Develop a system for energy efficiency certification of buildings

The actions aim to develop, approve, and ensure implementation of the necessary methodology, relevant standard and secondary normative acts for the certification of buildings for energy efficiency to have 100% of the newly constructed buildings in Georgia being subject to certification and being certified for energy efficiency by 2030.

UB1.1. Elaborate the methodology for certification of buildings.	
Description	The methodology for the certification of buildings on their energy efficiency will be elaborated, which will enable the state to create exemplary thermal insulation projects of the exterior enclosures of buildings for different climate conditions per region and in accordance with energy efficiency standards, and make the results available for the wider public.
Costing	88,715,880.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a loan/grant of 87,579,360.00 GEL from EBRD, DANIDA, KfW, and EU. Furthermore, national financing of

	1,136,520.00 GEL will be provided through budget line 250306. There is therefore no funding gap.
Funding Options	N/A
UB1.2. Elaborate, approve, and implement secondary legislation on the energy efficiency of buildings.	
Description	The action will elaborate and approve relevant secondary legislation on the energy efficiency of buildings.
Costing	33,264,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a loan/grant of 33,264,000.00 GEL from EU and KfW.
Funding Options	N/A

UB2. Raising consumer awareness about energy efficiency

The objective of the actions is to standardise and label energy-efficient appliances and provide more information to customers to increase awareness and the share of energy-efficient appliances on the market. This will also involve implementing information campaigns on incandescent light bulbs and solar powered water heating. As a result, 80% of consumers will identify the energy-efficiency of buildings and household appliances as an important factor in decision-making by 2030.

UB2.1. Development of standards, norms, and labelling schemes for appliances.	
Description	This action will provide more information to customers on the energy-efficiency of home appliances through the adoption of the energy labelling regulations package and information campaigns on energy-efficiency labelling.
Costing	411,840.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as national financing of 411,840.00 GEL will be provided through budget line 2401.
Funding Options	N/A
UB2.2. Implementation of energy efficiency awareness raising programmes for the public.	
Description	This action involves informing the public about financially effective and easily achievable changes in the energy consumption process and/or dissemination of information about energy-efficient measures to encourage energy-effective home appliances.
Costing	299,376.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as national financing of 299,376.00 GEL will be provided through budget line 2401.
Funding Options	N/A
UB2.3. Implementation of information campaign about incandescent bulbs.	
Description	Information and awareness campaigns targeting will be implemented targeting 100% replacement of incandescent light bulbs with energy-efficient bulbs in commercial buildings by 2023.
Costing	Administrative costs (2021-2023 Action Plan)

Funding Status	No funding gap is present for this action as it is inscribed within action *UB2.2. Implementation of energy efficiency awareness raising programmes for the public*. Administrative costs for the information campaign will be covered within the 299,376.00 GEL of national financing through budget line 2401.
Funding Options	N/A
UB2.4. Implementation of information campaigns for solar water heater systems in buildings.	
Description	Information campaigns will be implemented for solar water heater systems and energy efficiency in buildings to raise users' awareness.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is present for this action as it is inscribed within action *UB2.2. Implementation of energy efficiency awareness raising programmes for the public*. Administrative costs for the information campaign will be covered within the 299,376.00 GEL of national financing through budget line 2401.
Funding Options	N/A

UB3. Encourage energy-efficient approaches and installation of energy-efficient lighting in residential, commercial, and public buildings

The actions aim to introduce tax regulations for energy-efficiency lighting which will result in the replacement of 100% of incandescent light bulbs with energy-efficient light bulbs in residential and commercial buildings by 2023. It will also include the installation of energy-efficient lighting in buildings owned/used by public institutions. The aim is to ultimately upgrade 1% of the total area of buildings over 500 m^2 occupied and owned by central and municipal governments according to energy-efficient standards and have more than 70% of the public buildings, including public schools, using energy-efficient light bulbs.

UB3.1. Introducing tax regulations on incandescent bulbs.	
Description	Tax regulations on incandescent light bulbs will be introduced with the target to 100% increase the share of new energy-efficient light bulbs in the procured light bulbs for residential and commercial buildings by 2023.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is present for this action as it is inscribed within action *UB2.1. Development of standards, norms, and labelling schemes for appliances.* Administrative costs for the information campaign will be covered within the 411,840.00 GEL of national financing through budget line 2401.
Funding Options	N/A
UB3.2. Installation of energy efficient lighting in buildings owned/used by public institutions.	
Description	This action envisages the 100% increase of the share of energy-efficient light bulbs in the newly procured light bulbs for all public buildings.

Costing	621,720.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as national financing of 621,720.00 GEL will be provided through budget line 250306.
Funding Options	N/A
UB3.3. Establish energy efficiency information systems for public buildings.	
Description	Information on buildings characteristics and energy consumption will be compiled for national and municipal public sector buildings, excluding kindergartens and schools.
Costing	178,200.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 178,200.00 GEL.
Funding Options	International finance institutions such as the ADB are currently investing in Georgia to create a broad set of data tools and techniques to measure and track different areas of society and economy. This can also facilitate the establishment of an information system for energy efficiency. This can be further supported by national financing as it will include cooperation of public entities.
UB3.4. Improvement of exterior enclosure of school buildings, installation of energy-efficient bulbs, retrofit/replacement of solid fuel heaters.	
Description	This action will involve the improvement of the exterior enclosure of school buildings, installation of energy-efficient light bulbs, and retrofitting/replacement of solid fuel heaters.
Costing	9,808,920.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a grant/loan of 9,654,480.00 GEL from E5P and NEFCO. Furthermore, national financing of 154,440.00 GEL will be provided through budget line 250306. There is therefore no funding gap.
Funding Options	N/A

UB4. Support use of solar energy for water heating and use of energy-efficient stoves

The actions aim to introduce incentives for individuals and legal entities for purchasing solar-powered water heating systems in individual residential and commercial buildings to replace non-energy-efficient stoves with solar-powered heating systems and energy-efficient stoves

UB4.1. Elaboration of financial incentives mechanism for installation of solar water heater systems in buildings.	
Description	This action involves the elaboration of a financial incentives mechanism for using solar for heating water to reduce pressure on forests and present an energy-efficient alternative.
Costing	178,200.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 178,200.00 GEL.
Funding Options	Considering the financial requirements of the action it would be appropriate to apply for bilateral support from European countries that are active in the building sector in Georgia, such as KfW, which is actively elaborating the methodology for certification of buildings

	and elaborating legislation on the energy efficiency of buildings in Georgia. Furthermore, given the tendency of actions in the building sector being financed by national financing, this could be combined with the bilateral financing.
UB4.2. Encourage using of energy-efficient firewood stoves.	
Description	Financial stimulus/incentives mechanisms for energy-efficient firewood stoves will be elaborated and introduced by the state and financial institutions until 2027 and information campaigns will be implemented to encourage the use of energy-efficient stoves.
Costing	33,660,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a grant of 33,660,000.00 GEL from the GCF, and the Governments of Germany and Sweden
Funding Options	N/A

UB5. Train high professional standard personnel in energy efficiency

The actions aim to develop a certification system of energy service providers working on installation of energy appliances in the buildings sector (e.g., auditors, managers and developers). This will include the development of education and training programs for energy consultants and will result in certified and degree-holding specialists in energy efficiency of heating, cooling and ventilation systems of buildings and electrical appliances.

UB5.1. Development of qualification, accreditation, and certification schemes for energy sector experts.	
Description	This action involves the development of a certification system for energy service providers, energy auditors, energy managers, and assemblers, working on the installation of energy appliances in buildings sector.
Costing	1,073,160.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 1,073,160.00 GEL.
Funding Options	Given the link of this action with the unconditional actions under the area to develop a system for energy efficiency certification of buildings, Georgia could opt to apply for similar bilateral support, such as from KfW, which can be combined with national financing.
UB5.2. Development of educational programs and trainings for energy consultants.	
Description	This action involves the development of programmes to improve the skills and competency of energy engineers, energy auditing companies, and energy service providers.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is present for this action as it is inscribed within action *UB5.1. Development of qualification, accreditation, and certification schemes for energy sector experts.* Administrative costs for the information campaign will be covered within received financing from the impending funding options.
Funding Options	N/A

Industry

The overarching goal is to limit GHG emissions in the industry sector in 2030 by 5% compared to the reference level and support the low carbon development of the industry sector through encouraging the climate friendly innovative technologies and services.

UI1. Reduce the level of greenhouse gas emissions from industrial processes and from energy consumption of industrial facilities by introducing modern technologies

The actions aim to reduce the energy consumption by industrial facilities by replacing the current method of cement production with the energy-saving dry method of production and equipping the nitric acid producing enterprise with modern technologies, which will remove approximately 95% of N_2O from the production cycle. These activities will reduce emissions from cement and nitric acid production to 571 $ktCO_2e$ by 2030, of which 352 $ktCO_2e$ is accounted to cement production and 416 $ktCO_2e$ to nitric acid.

UI1.1. Substitute wet with the dry method in cement production.	
Description	This action will switch the cement production method to the dry production method.
Costing	15,687,936.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive 15,687,936.00 GEL from the private company Ltd. Heidelberg.
Funding Options	N/A
UI1.2. Supporting the low-emission production of Nitric Acid with modern technologies.	
Description	This action will equip the nitric acid production factory Ltd "Rustavi Azoti" with modern technologies to reduce N_2O from its production cycle.
Costing	17,820,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a grant of 8,910,000.00 GEL from the Government of Germany and private investment of 8,910,000.00 GEL from Ltd. Rustavi Azoti.
Funding Options	N/A

UI2. Develop a system for studying the emission factors in the industry sector and for data management

The action involves creating data management system that includes sector-specific emission factors in the industrial sector for production to identify the emissions and mitigation potential of the sector.

UI2.1. Develop individual emission factors per production.	
Description	A data management system will be introduced that includes plant-specific emission factors to better estimate sector's emissions and mitigation potentials.
Costing	99,600.00 GEL (2021-2023 Action Plan)

Funding Status	There is no funding gap as Georgia will receive a grant of 99,600.00 GEL from GEF/UNEP.
Funding Options	N/A

Agriculture

The overarching goal is to support the low carbon development of the agriculture sector through the encouragement of climate-smart agriculture technologies and services.

UA1. Implement sustainable management of soil and pastures and support the introduction of sustainable domestic animal feeding practices

The actions aim to reduce greenhouse gas emissions from the agriculture sector and to establish a climate-resilient multifunctional windbreak and agroforestry ecosystem, while improving cattle nutritional quality, preserving the biodiversity of pastures, reducing costs of cattle maintenance, reducing soil degradation, increasing soil and agricultural productivity, and fostering diversification.

UA1.1. Reduce emissions generated by enteric fermentation of cattle, by developing a methodology for changing cattle feed and running a recommendation campaign.	
Description	The objective of this action is to maximize feed quality for up to 20% of cattle by 2021, leading to lower emissions from enteric fermentation. With this aim, optimal feed mixes will be identified and communicated to cattle farmers through a manual, including the use of grape peels as an alternative low-cost dietary supplement for tackling ruminant emissions, as well the promotion of Georgia´s diverse forage plants enabling the limitation of rumination while keeping or increasing livestock productivity. Further, the Georgian grape map will be explored.
Costing	574,200.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 574,200.00 GEL.
Funding Options	Considering the subject matter of the action and its large scope, Georgia may apply for international funding from IFAD and FAO. Building strategic partnerships with academia and research institutions within Georgia is also fundamental to execute the research and innovation component of this action, given the research-oriented nature of its objectives.
UA1.2. Increase the quality of livestock nutrition and conservation of pasture biodiversity.	
Description	Development of a bill on pasture management and preparation of a project proposal with the aim of increasing the quality of livestock nutrition for cattle and improving the conservation of pasture biodiversity while reducing maintenance costs for cattle livestock by handing over intensive grass production equipment to beneficiaries.
Costing	237,600.00 GEL (2021-2023 Action Plan)

Funding Status	There is a funding gap of 237,600.00 GEL.
Funding Options	Historically, Georgia has received FAO and GEF funding towards the implementation of sustainable pastureland management projects. It may be most appropriate to apply for a medium-size GEF Project on sustainable pasture management seeking to attain both the objectives of this action (UA1.2.) with those of action *UA2.3. - Support existing and emerging cooperatives to implement sustainable pasture management practices and replicate the success factors of successful cooperatives for other cooperatives*.
UA1.3. Rehabilitate and transform windbreaks to minimize climate-related land degradation.	
Description	The overarching goal of this action is to establish a climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE) aiming to reduce land degradation, while increasing diversification, as well as soil and agricultural productivity. This includes the preparation and adoption of pertinent legislative regulation on the windbreak zone.
Costing	498,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap, as Georgia will receive a grant of 498,000.00 GEL from GEF, IFAD.
Funding Options	N/A

UA2. Build capacities of generating scientific evidence for development of climate-smart approaches in the agriculture sector

The actions aim to increase the share of climate-smart technologies and practices within the agriculture sector, developed on the grounds of the cost-benefit analysis and other scientific evidence, while building awareness and capacities to implement prioritised strategies that are most economically and socially relevant for Georgia.

UA2.1. Develop cost-benefit analysis and feasibility study to identify best options to increase further change in livestock feed for the next iteration of the Climate Action Plan.	
Description	Under this action, a cost-benefit analysis and a feasibility study will be conducted in order to identify the most attractive alternatives for further improving feed quality.
Costing	237,600.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 237,600.00 GEL.
Funding Options	Given the specificity of this action and its relatively small scope, it would be most appropriate to apply for bilateral support from European countries and cooperation institutions active in Georgia´s agriculture sector. Building strategic partnerships with academia and research institutions within Georgia is also fundamental to execute the research and innovation component of this action, given the research-oriented nature of its objectives.

UA2.2. Develop cost-benefit analysis and feasibility study to identify best options in which manure management systems can be implemented.	
Description	Under this action, a cost-benefit analysis and a feasibility study will be conducted in order to identify the most attractive options to pursue concerning manure management systems per region in Georgia
Costing	237,600.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 237,600.00 GEL.
Funding Options	Given the specificity of this action and its relatively small scope, it would be most appropriate to apply for bilateral support from European countries and cooperation institutions active in Georgia´s agriculture sector. Building strategic partnerships with academia and research institutions within Georgia is also fundamental to execute the research and innovation component of this action, given the research-oriented nature of its objectives.
UA2.3. Support existing and emerging cooperatives to implement sustainable pasture management practices and replicate the success factors of successful cooperatives for other cooperatives.	
Description	Support will be provided to the existing and emerging cooperatives in implementing sustainable practices in pasture and hay-land management. Of the 37 existing cooperatives, 23 have transferred pastures from the State for 25 years, although, in many cases, sustainable pasture management is not implemented. Therefore, capacity of the representatives of existing cooperatives will be strengthened in terms of sustainable pasture management. Success factors of the successful sustainable cooperatives will be identified and replicated in others of their kind.
Costing	996,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 996,000.00 GEL.
Funding Options	Historically, Georgia has received FAO and GEF funding towards the implementation of sustainable pastureland management projects. It may be most appropriate to apply for a medium-size GEF Project on sustainable pasture management seeking to attain both the objectives of this action (UA2.3.) with those of action *UA 1.2. - Increase the quality of livestock nutrition and conservation of pasture biodiversity.* At a national level, the Georgia Regional Development Fund (GRDF) may be mobilized since it aims to invest in growing and dynamic small and medium enterprises (SMEs) in agribusiness to promote domestic growth and self-sustainability, compatible with the goals of this action.
UA2.4. Research and consultation to define economic and socially feasible Climate-Smart Agriculture (CSA) actions in the context of Georgia	
Description	Research and consultations will be conducted to identify Climate-Smart Agricultural (CSA) activities that are economically and socially relevant for Georgia, focusing on the crops and regions that have not

	yet been covered by such practices. By 2024, a good agricultural practice guide will be developed for at least 5 agricultural crops.
Costing	356,400.00 GEL
Funding Status	There is a funding gap of 356,400.00 GEL.
Funding Options	Considering the subject matter of the action, Georgia may apply for funding to IFAD and FAO. Building strategic partnerships with academia and research institutions within Georgia is also fundamental to execute the research and innovation component of this action, given the research-oriented nature of its objectives.
UA2.5. Promote the introduction of climate friendly agricultural practices through extension and awareness raising campaigns.	
Description	This action aims to support implementation of CSA practices through extension and awareness-raising campaigns.
Costing	356,400.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 356,400.00 GEL.
Funding Options	Given the specificity of this action and its relatively small scope, it would be most appropriate to apply for bilateral support from European countries and cooperation institutions active in Georgia´s agriculture sector. Building strategic partnerships with academia and research institutions within Georgia is also fundamental to execute the research and innovation component of this action, given the research-oriented nature of its objectives.

Waste Management

The overarching goal is to support the low carbon development of the waste sector through the improvement of solid municipal waste management and wastewater treatment systems.

UW1. Reduce GHG emissions from existing unauthorised dumpsites and non-hazardous landfills

The objective involves replacing a number of unauthorized dumpsites in Tbilisi and in the regions with non-hazardous waste landfills and equipping existing landfills with modern technologies, which will reduce emissions from landfills in the year 2030 by approximately 251 Gg CO_2e compared to 2020 levels.

UW1.1. Close official (unauthorized) non-hazardous landfills.	
Description	The objective of this action involves the closure of existing unauthorized non-hazardous municipal landfills, including the closure of at least four (4) sites by 2024.
Costing	6,520,000.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a loan of 4,000,000.00 GEL from EBRD. Furthermore, national financing of 2,520,000.00 GEL will be provided through budget line 250501. There is therefore no funding gap.

Funding Options	N/A
UW1.2. Close dumpsites.	
Description	This action aims to close 100% of existing dumpsites in the regions by 2024, including the closure of up to 400 individual sites.
Costing	2,800,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is a funding gap of 2,800,000.00 GEL.
Funding Options	International finance institutions such as the EBRD are currently investing heavily in improving waste sector infrastructure in Georgia, which would facilitate the gain of further finance for closing dumpsites. Alternatively, other financial institutions and banks active in the Black Sea Region may also extend loans to municipalities for closing dumpsites at a local level.
UW1.3. Construct regional non-hazardous landfills.	
Description	By the end of 2030, seven (7) regional non-hazardous landfills will be constructed according to approved standards in Adjara, Kvemo Kartli, Samegrelo, Imereti, Kakheti and Central Georgia.
Costing	47,520,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap, as Georgia will receive a loan of 47,520,000.00 GEL from EBRD and KfW.
Funding Options	N/A
UW1.4. Upgrade and improve Tbilisi's landfill.	
Description	This action involves the construction of a gas collection system and the improvement of the leachate management system at the Tbilisi Landfill that fully complies with the technical regulation on "landfill construction, operation, closure and further maintenance" approved by the Government of Georgia. Furthermore, the existing fleet of waste disposal vehicles will be upgrades and the existing solid waste unloading stations will be modernized.
Costing	4,000,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap, as Georgia will receive a loan of 4,000,000.00 GEL from EBRD.
Funding Options	N/A
UW1.5. Utilize landfill gas in Kutaisi's non-hazardous waste landfill.	
Description	A gas capture and recovery system will be installed at the Kutaisi Landfill that fully complies with the technical regulation on "landfill construction, operation, closure and further maintenance" approved by the Government of Georgia.
Costing	4,000,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap, as Georgia will receive a loan/grant of 4,000,000.00 GEL from KfW and EU/NIF.
Funding Options	N/A
UW1.6. Utilize landfill gas in Batumi's non-hazardous waste landfill.	
Description	A gas capture and recovery system will be installed at the Batumi Landfill that fully complies with the technical regulation on "landfill construction, operation, closure and further maintenance" approved by the Government of Georgia.

Costing	4,000,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap, as Georgia will receive a loan of 4,000,000.00 GEL from EBRD.
Funding Options	N/A

UW2. Support waste recycling

With the aim of reducing approximately 150 Gg CO_2e of GHG emissions by 2030, the actions are centred on encouraging and supporting paper and biodegradable waste recycling initiatives, including raising public awareness on waste management.

UW2.1. Introduce the practice of separating paper waste from the source by the municipalities and encourage paper recycling.	
Description	The objective of this action is to achieve a minimum annual paper waste recycling rate of 30% by introducing paper waste separation practices at the source in municipalities, encouraging paper recycling by municipalities, and increasing the capacities of paper recycling through information collection and the preparation and dissemination of brochures.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is present for this action as it is inscribed within action *UW2.3. Education and awareness raising on waste management*. Administrative costs will be covered within the grant of 188,000.00 GEL Georgia will receive from the Governments of Sweden, Norway, and Great Britain.
Funding Options	For enhanced efforts, Georgia may incorporate administrative costings into the state budget.
UW2.2. Biodegradable (organic and garden waste) recycling by municipal composting facilities.	
Description	This action involves the promotion of biodegradable (organic and garden) waste composting at the Marneuli and Kutaisi municipalities through municipal composting facilities in order to achieve a minimum annual composing rate that is able to recycle at least 600 tons of biodegradable waste and produce at least 40 tons of compost each year.
Costing	1,188,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap, as Georgia will receive a grant of 1,188,000.00 GEL from the EU.
Funding Options	N/A
UW2.3. Education and awareness raising on waste management.	
Description	This action comprises the implementation of an awareness-raising campaign implemented by the municipalities for the general population and other stakeholders, aiming at raising knowledge and awareness on waste management that will further contribute to recycling and composting efforts.
Costing	188,000.00 GEL (2021-2023 Action Plan)

Funding Status	There is no funding gap, as Georgia will receive a grant of 188,000.00 GEL from the Governments of Sweden, Norway, and Great Britain.
Funding Options	N/A

UW3. Reduce greenhouse gas emissions from wastewater

The actions aim to reduce greenhouse gas emissions through improved wastewater management, including the construction of new municipal wastewater treatment plants and the introduction of gas collection and treatment systems at the Tbilisi, Batumi and Kobuleti wastewater treatment plants.

UW3.1. Construct municipal wastewater treatment plants.	
Description	This action comprises the construction and planification of thirteen (13) new municipal wastewater treatment facilities. The aim is to construct six (6) new municipal wastewater treatment plants by the year 2024 at Abastumani, Zugdidi, Poti, Marneuli, Mestia, and Gudauri. Seven (7) additional facilities will be planned at Kvareli, Mukhrani, Martvili, Dusheti, Zhinvali, Pasanauri, Khashuri.
Costing	183,120,618.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a loan of 148,906,274.00 GEL from ADB. Furthermore, national financing of 34,214,344.00 GEL will be provided through budget line 250401. There is therefore no funding gap.
Funding Options	N/A
UW3.2. Capture and recover GHGs in Tbilisi's wastewater treatment plants.	
Description	A gas capture and recovery system will be installed in Tbilisi's wastewater treatment plant.
Costing	21,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as this action is readily financed by the company running the treatment plant, namely: Ltd "Georgian Water and Power".
Funding Options	N/A
UW3.3. Capture and recover GHGs in Batumi's wastewater treatment plants.	
Description	A gas capture and recovery system will be installed in Batumi's wastewater treatment plant.
Costing	17,500.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as this action is readily financed by the company running the treatment plant, namely: Ltd "Batumi Water".
Funding Options	N/A
UW3.4. Capture and recover GHGs in Kobuleti's wastewater treatment plant.	
Description	A gas capture and recovery system will be installed in Kobuleti's wastewater treatment plant.
Costing	17,500.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as this action is readily financed by the company running the treatment plant, namely: Ltd "Kobuleti Water".

Funding Options	N/A

UW4. Develop a data-based waste management system

The action involves the development of a waste management database enabling more reliable calculations on waste generation, management, and emissions, as well as the effective monitoring and evaluation of the waste sector´s policies and measures.

UW4.1. Establish a consolidated process for generating waste sector statistics.	
Description	The existing waste management database will be improved through the systematization of methodologies and the production of waste statistics by the National Statistics Office of Georgia (GeoStat), which will enable to make more reliable calculations on waste generation and management practices in the country enabling a more comprehensive and accurate GHG emissions inventory as well as the enhanced monitoring and evaluation of waste policies in the country.
Costing	62,500.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a grant of 62,500.00 GEL from the EU through the Twinning Programme.
Funding Options	N/A

Forestry

The overarching goal is to increase the carbon capture capacity of forests in 2030 by 10% compared to 2015 levels.

UF1. Restore degraded forests

This objective of the actions includes both reforesting 625 ha and supporting the natural regeneration of 2,411 ha of degraded forest areas, including those that have been damaged by fire.

UF1.1. Restore 625 ha of degraded forest area (including fire-sites) through forestation.	
Description	By 2024, a total of 625 ha of degraded forest areas will be restored through forestation, at an approximate rate of 125 ha per annum.
Costing	6,585,000.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a grant of 3,960,000.00 GEL from GCF and the Government of Germany. Furthermore, national financing of 2,625,000.00 GEL will be provided through budget line 310902. There is therefore no funding gap.
Funding Options	N/A
UF1.2. Restore degraded forests through supporting natural restoration.	
Description	Approximately more than 2411 ha of degraded forest area will be restored through natural regeneration including efforts by the

	National Forest Agency (800 ha), the Adjara Forest Agency (600 ha), and the Akhmeta Municipality (991 ha).
Costing	4,758,260.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a grant of 3,633,260.00 GEL from GCF and the Government of Germany. Furthermore, national financing of 1,125,000.00 GEL will be provided through budget line 310902. There is therefore no funding gap.
Funding Options	N/A

UF2. Support sustainable forest management

The objective of the action encompasses the development and implementation of sustainable forest management plans, supervision, and capacity development, while promoting multifunctional forestry, public awareness-raising and supporting community involvement in the forest reform processes, including the development and implementation of management plans for the Emerald Network in Georgia. Further support to sustainable forest management is also included through activities such as arranging the necessary infrastructure, maintenance, logging, reforestation, and sanitary cuts, among others.

UF2.1. Introduce sustainable forest management practices through the implementation of sustainable forest management plans.	
Description	This action comprises the introduction and implementation of sustainable forest management practice by 2027 on 402,209 ha of forest territory by building the necessary legislative framework, supporting supervision, fortifying the management of knowledge and capacities, strengthening the measurement, reporting, and verification (MRV) system, supporting the supply of sustainably produced and obtained firewood, and supporting the development of necessary infrastructure, equipment and practices for maintenance, cutting, and restoration.
Costing	12,512,960.00 GEL (2021-2023 Action Plan)
Funding Status	Georgia will receive a grant of 10,002,960.00 GEL from GCF and the Government of Germany. Furthermore, national financing of 2,510,000.00 GEL will be provided through budget line 310904. There is therefore no funding gap.
Funding Options	N/A
UF2.2. Introduce sustainable forest management practices through supervision and capacity development.	
Description	This action comprises the introduction and implementation of sustainable forest management practice by 2027 on 270,807 ha of forest territory by building the necessary legislative framework, managing knowledge, developing capacities, supporting the MRV system, and suppling sustainably harvested and produced firewood.
Costing	411,123.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a grant of 411,123.00 GEL from GCF and the Government of Germany.

Funding Options	N/A
UF2.3. Promote sustainable management of forests by supporting the multifunctionality of forests, raising public awareness, and supporting public involvement in the forest reform processes.	
Description	The aim of this action is to reduce pressure on the forests by supporting the multifunctional use of forests, raising public awareness, and supporting public involvement in the forest reform processes. To do so, an assessment will be conducted on non-timber forest potential, including touristic and recreational potential to set the priorities and develop and implement the action plan for forest multifunctionality. This action also comprises the development and implementation of a Communication Strategy and Action Plan on multifunctional use of forests, technologies, and benefits of its sustainable use by the local population.
Costing	1,445,400.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a grant of 1,445,400.00 GEL from GCF and the Governments of Germany, Sweden and Switzerland.
Funding Options	N/A
UF2.4. Develop Emerald Network management plans for the territory of the forest of Georgia within the approved emerald network sites.	
Description	This action consists of the development and implementation by 2030 of sustainable management and protection plans for the 643,100 ha of special conservation areas (SCA) within the 590,103 ha of adopted and 52,997 ha of nominated Emerald Network Sites. This includes supporting activities such as constructing the necessary infrastructure, maintenance, logging, forestation, and sanitary cuttings, among others.
Costing	60,000.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will receive a grant of 60,000.00 GEL from the Governments of Germany.
Funding Options	N/A
UF2.5. Enhance the protection and/or sustainable management of forest areas within the new protected territories.	
Description	This action involves the protection and sustainable management of 162,895 ha of forest area within the new protected territories as follows: Erusheti National Park (7,393 ha), Racha National Park (17, 230 ha), Racha-Lechkhumi Protected Areas (28,835 ha), Aragvi Protected Landscape (41,759 ha), Svaneti Protected Areas (22,325 ha), Trialeti Protected Areas (8,208 ha), Dzama Protect Areas (16,571 ha), Samegrelo Protected Areas (12,366 ha), and Ateni protected Areas (8,208 ha).
Costing	185,845.00 GEL (2021-2023 Action Plan)
Funding Status	There is no funding gap as Georgia will provide national financing of 185,845.00 GEL through budget line 310802.
Funding Options	N/A

UF3. Develop a forest management system adequate to climate change challenges

For ensuring the sustainable management of protected areas the discussion, development, and gradual integration of climate change issues, into sustainable forest management plans must be carried out.

UF3.1. Integrate climate change issues, including mitigation, into management plants of the protected areas.	
Description	This action involves the discussion, development, and gradual integration of climate change issues, including mitigation, into 100% of the Sustainable Forest Management Plans half of which must be gender-sensitive by 2030.
Costing	Administrative costs (2021-2023 Action Plan)
Funding Status	No funding gap is present for this action as it is inscribed within action *UF2.1. - Introduce sustainable forest management practices through the implementation of sustainable forest management plans*. Administrative costs will be covered within the grant of 10,002,960.00 GEL Georgia will receive from GCF and the Government of Germany, in addition to the national financing of 2,510,000.00 GEL that will be provided through budget line 310904.
Funding Options	N/A

Annex III – Conditional Priority Mitigation Actions

Energy Generation and Transmission

The overarching goal is to further promote renewable energy to increase energy security, reduce dependence on energy imports, and limit GHG emissions in the sector, conditional to international support.

CE1. Further promotion of renewable energy generation

The actions aim to further utilise national renewable energy sources in Georgia to improve energy security of the country and decrease the dependence on imports, which is in line with the main energy policy direction of the Government of Georgia.

CE1.1. Exploring geothermal and solar energy potential in Georgia.	
Description	This objective of this action is to further utilise Georgia's geothermal and solar energy potential for the generation of renewable energy. Due to the country's geographical location, solar radiation is significant, with the total solar energy potential on average 108 MW per year, and most regions having 250-280 sunny days a year, which is approximately 1,900–2,200 sunlight-hours per year. Furthermore, Georgia has considerable resources of middle and high temperature thermal water.
Costing	Financing for development, construction and operation of medium-sized renewable energy generation projects in Georgia have previously required 1,127,560,000.00 GEL (EBRD)[46]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Several international finance institutions have been actively involved in funding renewable energy in Georgia such as ADB, EBRD, NEFO, and GGF. Given their past experiences and focus, these would be appropriate funding options. This can be paired with national financing from the companies that will run the energy plants.
CE1.2. Further utilisation of water and wind energy.	
Description	This objective of this action is to further utilise Georgia's water and wind energy potential for the generation of renewable energy, as only a small share of the technical potential of the water and wind resources being utilised to date, with a total assumed water energy potential of 1,450 MW, and a total wind energy potential of 4 TWh.

[46] EBRD Project Summary Document of the Georgian Low Carbon Framework. Available at: https://www.ebrd.com/work-with-us/projects/psd/georgian-low-carbon-framework.html

Costing	Financing for development, construction, and operation of medium-sized renewable energy generation projects in Georgia have previously required 1,127,560,000.00 GEL (EBRD)[47]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	International finance institutions such as the ADB are currently investing in hydropower in Georgia, such as the ADB funding proposal 49223-001[48], which, if approved, may contribute to this action. The EBRD has also financed several hydropower projects in Georgia. Other international funds such as NEFCO and GGF have also been actively financing renewable energy in Georgia, and to which the country can apply for funding. This can be paired with national financing from the companies that will run the energy plants.
CE1.3. Exploring incentives to attract investments in renewable energy.	
Description	This action will involve the assessment of elaboration of financial stimulus/incentives mechanisms to further improve investments in renewable energy in Georgia.
Costing	Previous projects aimed at de-risking renewable energy investment in the Balkans have budgeted up to 6,000,000.00 GEL towards the exploration of sustainable business models and financial mechanisms to support investment in renewable energies. (GEF)[49]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	It would be most appropriate to seek bilateral technical support from European countries and/or Agencies to conduct such exploratory work. Alternatively, seeking grants from European funds dedicated to supporting renewable energy and energy efficiency uptake in the Black Sea Region may also be advisable.

CE2. Introduction of a power station operating on biogas

The action aims to expand Georgia's renewable energy sources with the construction of the country's first power station operating on biogas, which is in line with the Georgian Energy Development Fund's mission.

CE2.1. Conducting a feasibility study for a biogas power station.	
Description	The objective of this action is to conduct the first steps in the realisation of the construction of a biogas power station that will use amaranth as fuel. As this technology is not yet developed in Georgia, the initial work will involve assessment of the project feasibility by international experts.

[47] EBRD Project Summary Document of the Georgian Low Carbon Framework. Available at: https://www.ebrd.com/work-with-us/projects/psd/georgian-low-carbon-framework.html
[48] ADB funding proposal #49223-001 - Nenskra Hydropower Project. Available at: https://www.adb.org/projects/49223-001/main
[49] GEF Project Document. "De-risking Renewable Energy Investment". Available at: https://www.thegef.org/projects-operations/projects/9192

Costing	The final cost of construction of a 1,6MW production capacity biogas powerplant in Hungary was estimated at just under 18,000,000.00 GEL, including all phases of feasibility studies, engineering design, procurement, material acquisition, and construction. (EEA)[50] Pre-feasibility studies previously conducted in Eastern Europe for introducing renewable district heating technologies have required between 775,000.00 GEL to 1,155,000.00 GEL to conduct per community case study. (EEA)[51]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	It would be most appropriate to seek bilateral technical support from European countries and/or Agencies to conduct such feasibility studies described in this conditional action.

Transport

The overarching goal is to further shift from polluting modes of transport and environmentally inefficient vehicles to energy-efficient and clean transport opportunities, conditional to international support.

CT1. Further promote non-motorised means of transport and public transport

The actions aim to promote and encourage alternative forms of transportation such as non-motorised means of transport and public transport to decrease the use of environmentally inefficient vehicles.

CT1.1. Renew and upgrade public transport infrastructure and services.	
Description	This action will involve the renewal and upgrade of public transport infrastructure and services based on the developed project proposals of the 2021-2023 Action Plan.
Costing	Cost estimates for the establishment of new and enhancement of existing transport companies requires approximately 93,741,921.00 GEL (EBRD)[52]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Through several funding sources, Georgia is receiving support for the enhancement and renewal of the public transport infrastructure of the country, such as the ADB, EBRD, EIB, and E5P. These therefore provide good opportunities to apply for additional funding for the

[50] Iceland, Liechtenstein, Norwau Grants. Project "Creation of 1,6MW Production Capacity Biogas Power Plant at Balatonszabadi". Available at: https://eeagrants.org/archive/2009-2014/projects/HU02-0013
[51] Iceland, Liechtenstein, Norwau Grants. Project "Pre-feasibility Study of Geothermal Distric Heating in Oradea" and Project "Pre-feasibility Study of Geothermal Distric Heating in Beius". Available at: https://eeagrants.org/archive/2009-2014/projects/RO06-0008 and https://eeagrants.org/archive/2009-2014/projects/RO06-0009
[52] EBRD Project Summary Document of the Georgia Urban Transport Enhancement Programme. Available at: https://www.ebrd.com/work-with-us/projects/psd/50842.html

	further renewal and upgrade of the public transport infrastructure. Through the unconditional action *UT4.1*, Georgia will develop international climate finance proposals for the improved public, intercity, and non-motorised transport means which will help to identify and secure international support for implementing this conditional action *CT1.1*.
CT1.2. Renew and upgrade infrastructure for non-motorised transport.	
Description	This action will involve the renewal and upgrade of the infrastructure of non-motorised transport based on the developed project proposals of the 2021-2023 Action Plan.
Costing	Previous reconstruction and development infrastructure projects in Georgia have required up to 570,000,000.00 GEL to implement (EIB)[53]. Exact costings will become available once the project proposals for non-motorized transport are developed as per the 2021-2023 Action Plan.
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Georgia is receiving significant support from EBRD, ADB, KfW, and AFD to implement unconditional mitigation actions in the transport sector. Given the magnitude of this action, it would be most appropriate to seek grants and loans form international financial institutions and development banks.

CT2. Improve the passenger public and intercity rail services

The actions aim to renew and improve the public and intercity rail services to make it more attractive and beneficial for passengers to use, which will subsequently phase out other polluting means of transport.

CT2.1. Purchase of new and modern train for passenger rail services.	
Description	Passenger rail services will be improved which will include the purchase and introduction of new, modern, and more efficient trains which will remove old and polluting trains from the rail services.
Costing	Previously conducted project financed by the World Bank in Azerbaijan for the upgrade of the railway on the East – West corridor included the financing of 40 new mainline electric locomotives which required approximately 1,076,014,400.00 GEL (WB)[54]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Given the scope of the action and the size of the funding required, Georgia may seek to apply for financing at the WB, EBRD, or ADB,

[53] EIB Project Document " Georgia Urban Reconstruction and Development".Available at: https://www.eib.org/en/projects/all/20150172
[54] WB (P083108) – Rail Trade and Transport Facilitation. Available at: https://documents1.worldbank.org/curated/en/807121468208766866/pdf/ISR-Disclosable-P083108-12-31-2014-1420043872711.pdf

	which is in line with the funding sources for the unconditional transport actions.
CT2.2. Improve the quality of the intercity railway system.	
Description	The intercity railway system will be improved based on the developed project proposals of the 2021-2023 Action Plan and in line with the national priority for climate change mitigation.
Costing	Current assessment of a railway corridor to identify, among others, infrastructure investment needs, requires approximately 724,860.00 GEL[55]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Considering the need for the developments of project proposals to identify the required improvements to the intercity railway system, Georgia will need to seek funding to conduct an assessment. Given the technical assistance currently funded by the EBRD to assess the infrastructure investment needs of a certain railway corridor, Georgia can therefore seek funding from the EBRD for this action.

CT3. Improve the energy efficiency of light-duty vehicles

The action aims to further improve the energy efficiency of private light-duty vehicles due to the old age and low efficiency of the current vehicle fleet in Georgia.

CT3.1. Explore incentives to improve the energy efficiency of light-duty vehicles.	
Description	This action will involve the assessment of elaboration of financial stimulus/incentives mechanisms to further improve the energy efficiency of private light-duty vehicles in the country.
Costing	Feasibility studies, research, and capacity building activities previously implemented to explore new approaches for sustainable low carbon transport in the Asia and Pacific Region have cost between 1,600,000.00 GEL to 2,000,000.00 GEL to implement. (ADB)[56]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	International Development Banks such as the ADB and the EBRD have previously conducted assessments, strategies, and road maps for the sustainable development of the transport sector in Georgia. Therefore, it would be most appropriate to apply for further funding from these institutions to explore incentives for increased energy efficiency of light-duty vehicles. Alternatively, due to the reduced scope of this action, it is recommendable for Georgia to seek bilateral

[55] ADB Porject number 5329-001 - Support to Improve Cross-Border Railway Services between Armenia and Georgia. Available at: https://www.adb.org/projects/55329-001/main
[56] ADB Project Documents. Project "Regional: Implementation of Sustainable Transport in Asia and the Pacific - New Approaches to Implement Sustainable Low Carbon Transport in the Asia and Pacific Region (Subproject 5)" and Project "Mongolia: Strengthening Systems for Promoting Science, Technology, and Innovation". Available at: https://www.adb.org/projects/45105-003/main and https://www.adb.org/projects/51123-001/main

	technical support from European agencies already active in the country regarding energy efficiency in the transport sector.

CT4. Support the shift of road freight transport to rail transport

The action aims to implement the most suitable option to support the shift of freight transport from road to railroad based on the conducted cost-benefit analysis and the (technical and economic) feasibility study of the 2021-2023 Action Plan.

CT4.1. Explore incentives to support the shift for freight transport from road to rail.	
Description	This action will involve the assessment of elaboration of financial stimulus/incentives mechanisms to support the shift for freight transport from road to rail.
Costing	Regional technical assistance provided to several countries including Georgia to, among others, improve the competitiveness of railways in comparison to road transport previously required approximately 8,054,000.00 GEL[57]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	There are several financial institutions that are active or have been active in Georgia in supporting the development of the railway sector. Given the national scope of the action and their previous presence in Georgia relating to the modernisation of railway transport, the country could apply for funding at the EBRD, EIB, or ADB.

Buildings

The overarching goal is to further improve the energy efficiency of buildings through innovative measures to work towards carbon-free buildings, conditional to international support.

CB1. Improving the energy efficiency of residential buildings

The actions aim to assess the current energy-efficiency of residential buildings and monitor this on an ongoing basis and develop the necessary measures to improve the energy-efficiency in buildings that score badly in the assessment.

CB1.1. Creating information system for energy efficiency of residential buildings.	
Description	The action involves the establishment of an information system that will include comprehensive residential building inventory records through systemised data collection and data aggregation. This will allow for an improved evaluation of the climate change mitigation

[57] ADB project number #52137-001 - Railway Sector Development in Central Asia Regional Economic Cooperation Countries. Available at: https://www.adb.org/projects/52137-001/main

	potential of residential buildings in the country and to design an efficient and targeted energy-efficiency policy based on accurate and up-to-date data.
Costing	Technical assistance to create data tools to measure different areas of the society and economy have previously required approximately 7,630,600.00 GEL (ADB)[58]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Considering the scope of the action and the previously provided technical assistance to the country regarding online tools and systems, Georgia can apply for funding from bilateral European partners.
CB1.2. Improving energy efficiency of residential buildings.	
Description	This action will develop national programmes and financing instruments to improve and incentivise energy-efficiency of residential buildings in the country, which have the biggest potential for energy saving and GHG emission reductions in the buildings sector.
Costing	Financing for the energy efficient renovation of entire existing public buildings have previously required approximately 72,109,170.00 GEL (NAMA Registry)[59]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Both bilateral and multilateral funding sources have provided support to Georgia for improving the energy efficiency of buildings in Georgia. For instance, through the Mitigation Momentum project, which is part of the International Climate Initiative (IKI), support was provided for the development of the NAMA on Energy Efficient Refurbishment in the Georgian Public Building Sector, and NEFCO and E5P are funding the Municipal Development Fund of Georgia to implement Energy Efficiency Improvements in Public Buildings and the use of renewables and alternative energy in Georgia. This provides the country with several funding opportunities to apply for funding, depending on the scope of the action.

CB2. Introduce autonomous heating systems in existing residential buildings

The objective of the action is to introduce autonomous heating systems in existing multi-apartment buildings as an additional technology option to reduce energy consumption in the building sector.

[58] ADB project number #55242-001 - Development of New Statistical Resources and Building Capacity in New Data Sources and Technologies. Available at: https://www.adb.org/projects/55242-001/main
[59] NAMA Registry. NS – 228 – Energy Efficient Refurbishment in the Georgian Public Building Sector. Available at: https://www4.unfccc.int/sites/PublicNAMA/_layouts/un/fccc/nama/NamaSeekingSupportForImplementation.aspx?ID=158&viewOnly=1

CB2.1. Conduct a feasibility study for the identification of economic and climate change potential for autonomous heating systems in existing multiapartment buildings.	
Description	Considering that autonomous heating systems, and more specifically waste-to-energy technologies, have not been deployed in the country to date, this action will conduct a technical and economic feasibility study for the identification of the potential of the technology in existing multiapartment buildings.
Costing	Pre-feasibility studies previously conducted in Easter Europe for introducing renewable district heating technologies have required between 775,000.00 GEL to 1,155,000.00 GEL to conduct per community case study. (EEA)[60]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	It would be most appropriate to seek bilateral technical support from European countries and/or Agencies to conduct such feasibility studies described in this conditional action.

CB3. Updating climate-specific standards of construction

The action aims to conduct an overall update of the construction standards in the sector to improve the energy efficiency of buildings to reduce the energy consumption and reduce GHG emissions.

CB3.1. Updating technical regulations and climatic standards in the construction sector.	
Description	The technical regulations, including climate-specific construction standards, will be updated and will be harmonised with the Eurocodes, which will allow for engineering/thermal-technical calculations and reliable evaluation of energy consumption in buildings, and improve the energy-efficiency in buildings.
Costing	Potential work on energy efficiency measures and use of renewables in public buildings in Georgia, which included the applicability and demonstration of new building codes for better energy efficiency requires an estimated 17,931,910.00 GEL (NEFO/E5P)[61]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	There are several financial institutions that are active or have been active in Georgia in supporting the construction sector. Given the national scope of the action and their previous presence in Georgia, the country could apply for funding at the EBRD, EIB, or ADB or apply at a bilateral funding source such as KfW. In addition, this action can

[60] Iceland, Liechtenstein, Norwau Grants. Project "Pre-feasibility Study of Geothermal Distric Heating in Oradea" and Project "Pre-feasibility Study of Geothermal Distric Heating in Beius". Available at: https://eeagrants.org/archive/2009-2014/projects/RO06-0008 and https://eeagrants.org/archive/2009-2014/projects/RO06-0009

[61] NEFO General Procurement Notice - Energy Efficiency Improvements in Public Buildings and Use of Renewable and Alternative Energy, Georgia. Available at: https://www.nefco.int/procurements/energy-efficiency-in-public-buildings-in-georgia/

	strongly benefit from national funding to supplement the international sources.

CB4. Introduce energy-efficient approaches in the tourism sector

The action aims to support the tourism sector, which has been consistently growing in recent years, with the incorporation of sustainable development and energy-efficient approaches.

CB4.1. Introduce financial instruments for the development of carbon-free buildings in the resorts of Georgia.	
Description	This action involves supporting the development of ecotourism in Georgia by providing alternative energy resources, climate-friendly technologies, and improving the energy efficiency of residential houses to ultimately achieve carbon-free buildings in the resorts of Georgia.
Costing	Currently signed project for the energy efficiency upgrade and rehabilitation of 200 buildings across Georgia will approximately require 190,765,000.00 GEL (EBRD)[62]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Considering the scale of the project and the previous and ongoing presence in Georgia related to energy efficient building, the country may seek support from European funds such as the EBRD and EIB.

Industry

The overarching goal is to further limit GHG emissions in the industry sector and support the low carbon development of the sector through the innovative technologies and systems.

CI1. Reduce the level of greenhouse gas emissions from steel production of industrial facilities

The action aims to reduce the energy consumption at industrial facilities producing steel by replacing current methods with a variety of low-emission technologies, which will reduce the GHG emissions from the production of steel.

CI1.1. Support the low-emission production of steel with modern technologies.	
Description	This action will equip steel production facilities with a variety of modern technologies, such as evacuation systems, devices, and methods to reduce emissions from its production cycle.

[62] EBRD Project number 51145 - Green Investments in Buildings (GRIB) – Georgia. Available at: https://www.ebrd.com/work-with-us/projects/psd/51145.html

Costing	In the past, Georgia has received a 198,128,400.00 GEL loan from the EBRD for enhancing the steel industry in the County. (EBRD)[63]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Given the magnitude of the project, it would be most appropriate to apply for loans from international development banks, which have already been active in the Black Sea Region in developing the steel industry. Alternatively, Georgia may opt for technology transfer schemes under UNFCCC funds. It is of fundamental importance to engage the private industry in co-financing this action. Georgia may adopt an innovative incentive scheme by raising awareness among the country´s steel industry of the economic benefits of adopting modern technologies.

CI2. Introduce a system of energy audits and certification schemes at industrial facilities

The action aims to support the development of mandatory energy audits and certification schemes to ensure that industrial facilities in Georgia are accredited and certified according to their energy-efficiency.

CI2.1. Develop mandatory energy audits and certification schemes at industrial facilities.	
Description	This action will involve the assessment and establishment of mandatory energy audits and energy-efficiency certification schemes at industrial facilities such as cement plants, nitric acid producing enterprises, and steel production facilities to reduce the energy consumption and reduce GHG emissions.
Costing	Previous projects implemented in the Black Sea Region indicate that approximately 24,000,000.00 GEL would be needed to introduce energy management system standards for industry at a broad national level, including the development of the regulatory framework, building the institutional capacity, raising awareness. (GEF)[64]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Given the magnitude of the project, it would be most appropriate to apply for GEF funding, which has already been active in the Black Sea Region in establishing energy efficiency standards for industry. Alternatively, Georgia may opt to apply for funding provided by Europe through multilateral or bilateral programs dedicated to energy efficiency.

CI3. Enhance the efficient use of waste heat at industrial facilities

[63] EBRD Project Finder, "Geo Steel". Available at: https://www.ebrd.com/work-with-us/projects/psd/geo-steel.html
[64] GEF Project Document. "Introduction of energy management system standad in Urkranian industry" Available at: https://www.thegef.org/projects-operations/projects/4784

The action aims to tap into the unused and discharged waste heat at energy-intensive industries such as cement manufacturers and introduce systems to use this which will improve the energy-efficiency.

CI3.1. Introduce systems for efficient use of industrial waste for heat production.	
Description	Systems will be introduced at cement plants in the country to use the waste heat from the industrial plants for other purposes such as hot water and warmth for the facility's offices and nearby households.
Costing	Waste heat recovery pilot projects in the cement industry at a national level may require up to 48,000,000.00 GEL investment (GEF)[65]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Given the magnitude of the project, it would be most appropriate to apply for GEF funding, which has already been active in the Black Sea Region in establishing energy efficiency standards for industry. Alternatively, Georgia may opt to apply for funding provided by Europe through multilateral or bilateral programs dedicated to energy efficiency. It is of fundamental importance to engage the private industry in co-financing this action. Georgia may adopt an innovative incentive scheme by raising awareness among the country´s cement industry of the economic benefits of participating and adopting waste heat recovery at their facilities.

Agriculture

The overarching goal is to further support the low carbon development of the agriculture sector through the encouragement of climate-smart agriculture technologies and services, conditional to international support.

CA1. Develop an improved data system for the agriculture sector

The action involves the development of an improved database for agricultural statistics, enabling more reliable calculations on agricultural practices and emissions, as well as the effective monitoring and evaluation of the agriculture sector´s policies and measures.

CA1.1. Establish a consolidated process for collecting and updating data for the agriculture sector.	
Description	The existing database of agriculture-related statistics will be improved through the expansion and systematization of data collection, which will enable to make more reliable calculations on agriculture practices in the country (for example, livestock growth and fertilizer use, among others), enabling a more comprehensive and

[65] GEF Project "TT-Pilot (GEF-4):Waste Heat Recovery for Power Generation (HRPG) in Vietnam's Cement Industry". Available at: https://www.thegef.org/projects-operations/projects/4057

	accurate GHG emissions inventory, as well as the enhanced monitoring and evaluation of agriculture policies in the country.
Costing	From previous projects on environmental information management and monitoring in Georgia, up to 8,000,000.00 GEL may be required to enhance the data system of the agriculture sector. (GEF)[66]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Considering that a large portion of FAO and GEF funding are recently being mobilized towards fortifying climate transparency, FAO and GEF support would be an excellent candidate to finance this conditional action.

CA2. Introduce climate-smart irrigation systems

The actions involve enhanced performance of agricultural irrigation systems through improved infrastructure and regulation with the aim of maintaining soil quality, increasing crop production, preventing environmental degradation, and reducing GHG emissions.

CA2.1. Improve irrigation infrastructure using climate-smart technologies and systems.	
Description	The action involves the improvement of irrigation infrastructure to reduce wate losses due to transpiration via old or malfunctioning ditches and channels. This action will help maintain soil quality and crop production while reducing GHG emissions.
Costing	289,944,000.00 GEL (ADB)[67]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	There is currently a project proposal under the ADB named "Climate Smart Irrigation Sector Development Project" [68]. The proposed project features 3 outputs, one of which will support the modernization of outdated irrigation systems in the eastern part of Georgia. Another output will support water and farmer organizations in further improving and modernizing productive systems. If approved, the ADB would provide 80,540,000.00 GEL as a regular loan, with a co-financing amount of 144,972,000.00 GEL. The remaining 64,432,000.00 GEL would need to be provided by local beneficiaries.
CA2.2. Develop and implement regulations for irrigation water.	
Description	The action involves the development and implementation of irrigation water regulations to establish minimum quality requirements and promote sustainable water use. The objective is to help maintain soil

[66] GEF Project "Harmonization of information management for improved knowledge and monitoring of the global environment in Georgia". Available at: https://www.thegef.org/projects-operations/projects/5467.
[67] Proposed Loans and Technical Assistance Grant Georgia: Water Resources Sector Development Program. Asian Development Bank Concept Paper. Project Number: 54014-001. Available at: https://www.adb.org/sites/default/files/project-documents/54014/54014-001-cp-en.pdf
[68] Proposed Loans and Technical Assistance Grant Georgia: Water Resources Sector Development Program. Asian Development Bank Concept Paper. Project Number: 54014-001. Available at: https://www.adb.org/sites/default/files/project-documents/54014/54014-001-cp-en.pdf

	quality and crop production while reducing environmental degradation and GHG emissions by reducing waterlogging, water erosion, salination of field, and water contamination.
Costing	161,080,000.00 GEL (ADB)[69]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	There is currently a project proposal under the ADB named "Climate Smart Irrigation Sector Development Project" [70]. The proposed project features 3 outputs, one of which comprises the implementation of the necessary institutional, governance, management, and finance changes to support the irrigation reform strategy. If approved, the ADB would provide 161,080,000.00 GEL as a regular policy-based loan.

CA3. Enhance post-harvest field management practices

The actions aim to phase-out agricultural burning practices while promoting sustainable post-harvest residue management techniques to reduce GHG emissions while recovering from associated degradation of agricultural fields and surrounding areas through regulations, incentives, awareness-raising, and windbreak replanting campaigns.

CA3.1. Regulate agricultural burning practices to reduce GHG emissions and degradation of agricultural fields and surrounding areas.	
Description	Field burning is a common practice in Georgia, particularly in the Kakheti region as a low-cost management method for agricultural residues and pest prior to the next tillage leading to GHG emissions and environmental degradation. This action aims to phase out agricultural burning through the development, adoption, and implementation of regulations for post-harvest management practices, including a field burning ban and increased patrolling.
Costing	For the Dedoplistskaro municipality alone, an estimated 12,000 GEL would be needed to develop field burning regulation and distribute awareness and information campaigns. An additional 122,200 GEL would be needed over a 10-year period to implement and enforce this regulation. (Economics of Land Degradation Initiative)[71]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.

[69] Proposed Loans and Technical Assistance Grant Georgia: Water Resources Sector Development Program. Asian Development Bank Concept Paper. Project Number: 54014-001. Available at: https://www.adb.org/sites/default/files/project-documents/54014/54014-001-cp-en.pdf
[70] Proposed Loans and Technical Assistance Grant Georgia: Water Resources Sector Development Program. Asian Development Bank Concept Paper. Project Number: 54014-001. Available at: https://www.adb.org/sites/default/files/project-documents/54014/54014-001-cp-en.pdf
[71] Vanja Westerberg, Luis Costa and Giorgi Ghambashidze (2017). Reducing Wildfires in Georgia: A Cost Benefit Analysis of Agricultural Burning Practices in the Dedoplistskaro Municipality, Georgia. Report for the Economics of Land Degradation Initiative. Available at: https://www.eld-initiative.org/fileadmin/ELD_CaseStudies/Georgia_reports/ELD_georgien-report_en_200219__002_.pdf

Funding Options	Under the Economic of Land Degradation Initiative, a Cost Benefit Analysis of Agricultural Burning Practices in the Dedoplistskaro Municipality, Georgia was conducted with GiZ support and funding by the Austrian Development Cooperation. Georgia could actively seek out further bilateral support from GiZ for implementing the recommended regulation of agricultural burning practices.
CA3.2. Promote sustainable post-harvest agricultural residue management practices through incentives and awareness raising to facilitate the ban on field burning.	
Description	This action aims to support the phase-out of agricultural burning by promoting sustainable agricultural residue management practices through the launch of an incentive framework and a series of awareness-raising campaigns.
Costing	For the Dedoplistskaro municipality alone, an estimated 12,000 GEL would be needed per year to launch and sustain the incentives and awareness-raising campaigns. Farmers could be incentivized through the sale of agricultural residues. (Economics of Land Degradation Initiative)[72]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Under the Economic of Land Degradation Initiative, a Cost Benefit Analysis of Agricultural Burning Practices in the Dedoplistskaro Municipality, Georgia was conducted with GiZ support and funding by the Austrian Development Cooperation. Georgia could actively seek out further bilateral support from GiZ for implementing the recommended incentives for promoting sustainable agricultural residue management practices.
CA3.3. Replant windbreaks to recover from damages caused by unsustainable agricultural burning practices.	
Description	Widespread agricultural burning practices have caused extensive damages to windbreaks, leading to desertification, wind erosion, and GHG emissions. This action comprises an enhanced windbreak replanting campaign aimed at recovering from damages caused by unsustainable agricultural burning practices, within the framework of the climate-resilient multifunctional Windbreak & Agroforestry Ecosystem (mWAE).
Costing	An estimated 19,813.58 GEL/ha would be needed to replant and maintain degraded windbreaks. (WOCAT)[73] Considering 200ha Georgia, up to 4,000,000.00 GEL would be needed.
Funding Status	As a conditional action, Georgia is seeking international support for implementation.

[72] Vanja Westerberg, Luis Costa and Giorgi Ghambashidze (2017). Reducing Wildfires in Georgia: A Cost Benefit Analysis of Agricultural Burning Practices in the Dedoplistskaro Municipality, Georgia. Report for the Economics of Land Degradation Initiative. Available at: https://www.eld-initiative.org/fileadmin/ELD_CaseStudies/Georgia_reports/ELD_georgien-report_en_200219__002_.pdf

[73] Rehabilitation of Windbreaks (Georgia). Wocat SLM Technologies. Cost estimated prepared under the project "Applying Landscape and Sustainable Land Management (LSLM) for Mitigating Land Degradation and Contributing to Poverty Reduction in Rural Areas", implemented by the Regional Environment Centre for the Caucasus. Available at: https://e-c-o.at/files/publications/downloads/D008453_wocat-4274-30002-en-full-screen-2020-02-19-14-55.pdf

Funding Options	Georgia has previously received funding from GEF, EU/UNDP, GiZ and other NGOs for conducting windbreak rehabilitation through the GEF project "Applying Landscape and Sustainable Land Management (L-SLM) for Mitigating Land Degradation and Contributing to Poverty Reduction in Rural Areas" implemented by the Regional Environment Centre for the Caucasus, which included the development of a Windbreaks Management Framework and windbreak rehabilitation pilot projects. Further funding from these institutions may be pertinent.

CA4. Foment sustainable pasture management by regulating overgrazing and trampling

CA4.1. Regulate pasture management to limit overgrazing and trampling.	
Description	This action involves the development, adoption, and implementation of pasture management regulations to limit overgrazing and trampling to reduce GHG emissions while supporting livestock production, soil quality, and pasture biodiversity. This action also encompasses awareness-raising campaigns and the introduction of incentives to maximize the participation and opportunities among livestock owners for sustainable pasture management.
Costing	An approximate 2,329,232.91 GEL will be required to develop the regulative framework, with additional funds required for implementation and enforcement. (FAO-GEF)[74]
Funding Status	Georgia is already receiving international support for implementation of this conditional action. Georgia is seeking additional international support for enhanced implementation.
Funding Options	As part of the FAO-GEF Project entitled "Achieving Land Degradation Neutrality Targets of Georgia through Restoration and Sustainable Management of Degraded Pasturelands" Georgia is already receiving a 2,329,232.91 GEL grant destined for strengthening the country´s regulatory and institutional framework for sustainable management over the 2020-2023 period. Further funding may be required to enforce these regulations.

CA5. Enhance the climate-resilient multifunctional Windbreak & Agroforestry Ecosystem (mWAE)

The action aims to fortify the agroforestry direction of Georgia through research and innovation. The aim is to identify the most economically, socially, and environmentally viable techniques to integrate within the emerging climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE).

[74] FAO-GEF Project Document. "Achieving Land Degradation Neutrality Targets of Georgia through Restoration and Sustainable Management of Degraded Pasturelands". Available at: https://www.thegef.org/projects-operations/projects/10151

CA5.1. Foment research and innovation to further enhance the climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE).	
Description	The overarching goal of this action is to further enhance the establishment of a climate-resilient and multifunctional Windbreak & Agroforestry Ecosystem (mWAE) as a low-emission agriculture approach that increases biodiversity and agricultural productivity while reducing land degradation. This will be achieved through research and consultations to identify how these practices could be best applied in Georgia in an economically, socially, and environmentally optimal manner.
Costing	Previous agricultural research, extension and training projects in Georgia have required an estimated 26,578,200.00 GEL. (GEF)[75]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Considering previous and ongoing presence in Georgia related to mWAE, as well as the magnitude of the funding necessary further support from FAO, IFAD and GEF would be the most suitable funding option to support this conditional action.

Waste Management

Conditional to international support, the overarching goal is to further support the low carbon development of the waste sector by reducing the disposal of biodegradable and recyclable wastes in solid waste disposal sites through awareness-raising, pilot projects, and incentives campaigns, while limiting pollution by setting maximum permissible thresholds, all while enhancing the generation of waste statistics by fortifying data collection capacities.

CW1. Enhance biodegradable waste management practices among non-governmental emitters

The action aims to increase the penetration of composting as a sustainable low-emission management practice for biodegradable waste among non-governmental stakeholders through the awareness-raising and incentive campaigns and pilot projects.

CW1.1. Increase the number of composting facilities through capacity building and incentives campaign.	
Description	Through an awareness-raising and incentives campaign, increase the number of companies and stakeholders with official permit on composting to further increase the annual composting rates through the construction and operation of new non-governmental composting facilities.

[75] Agricultural Research, Extension, Training (ARET) Project. Project Document for WP. Available at: https://www.thegef.org/projects-operations/projects/633

Costing	From similar awareness-raising and incentive campaigns in the Black Sea Region, this action would require an approximate 2,300,000.00 GEL. (GEF)[76]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Georgia is currently receiving funding from the EU and its diverse support programmes/funds, as well as bilateral support from diverse countries across Europe towards waste-related education and the promotion of composting. Further bilateral cooperation from Europe may therefore be sought to support this conditional action.
CW1.2. Pilot composting project for biodegradable wine and agricultural residues.	
Description	This action aims to foment composting as a sustainable agricultural residue management practice through the launch of a pilot composting project for farms and wineries.
Costing	Pilot composting projects may cost approximately 320,000.00 GEL – 325,000.00 GEL per site. (United States Department of Agriculture, USDA)[77]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	International finance institutions such as the EBRD are currently investing heavily in improving waste sector infrastructure in Georgia, which would facilitate the gain of further finance for designing pilot agricultural composting projects across the country. Alternatively, other financial institutions and banks active in the Black Sea Region may also extend individual loans to farmers for private pilot composting projects.

CW2. Establish maximum permissible limits (MPLs) for waste generation, treatment, and disposal

The action aims to limit atmospheric, water, and land pollution from waste generation, treatment, and disposal by establishing maximum permissible threshold values.

CW2.1. Establish maximum permissible limits (MPLs) for wastes.	
Description	The objective of this action is to determine and adopt maximum permissible limits (MPLs) for each specific source of pollution related to waste generation, treatment, and disposal, in line with the guidelines of the Law of Georgia on Environmental Protection. This

[76] GEF Project "Promoting Accelerated Uptake of Environmental Technologies and Promotion of Best Practices for Improved Water, Chemicals, and Waste Management in the Black Sea Basin - Targeted Dialogue" available at: https://www.thegef.org/projects-operations/projects/9571 and GEF Project "Sustainable Bioenergy Value Chain Innovations in Ukraine" available at: https://www.ebrd.com/sites/Satellite?c=Content&cid=1395285370580&d=Touch&pagename=EBRD%2FContent%2FContentLayout

[77] USDA Announces Cooperative Agreements for Community Compost and Food Waste Reduction. Available at: https://www.fsa.usda.gov/news-room/news-releases/2021/usda-announces-cooperative-agreements-for-community-compost-and-food-waste-reduction

	action would establish maximum permitted threshold values for atmospheric, water, and land pollution from waste management.
Costing	Institutional and regulatory strengthening of the waste sector in countries across the Black Sea Region have previously required approximately 1,130,000.00 GEL. (GEF)[78]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Through diverse support programmes/funds, Georgia is currently receiving support from the EU. It is also receiving bilateral support from diverse countries across Europe towards capacity building initiatives across the waste sector. Therefore, seeking further aid from Europe may be recommendable to support this conditional action through either bilateral cooperation or multilateral European funds and programmes.

CW3. Enhance knowledge on waste management

The action aims to limit atmospheric, water, and land pollution from waste generation, treatment, and disposal by establishing maximum permissible threshold values.

CW3.1. Launch awareness-raising campaigns of the five-step waste management hierarchy system.	
Description	This action aims to promote participation of citizens and the private sector for reducing GHG emissions from the waste sector through awareness-raising campaigns on the five-step waste management hierarchy system: 1) prevention, 2) re-use, 3) recycling, 4) recovery, and 5) disposal.
Costing	Under the Keep Georgia Tidy Programme, approximately 10,000,000.00 GEL – 12,000,000.00 GEL will be mobilized to host environmental education, waste management awareness and promotion of a sustainable circular economy in Georgia between 2021 and 2023. (OECD)[79]
Funding Status	While Georgia is already receiving some international support by the Swedish International Development Authority to host awareness raising and waste management promotion campaigns under the "Keep Georgia Tidy Programme" Georgia may require additional funding dedicated specifically to launch awareness-raising on the five-step waste management hierarchy system.

[78] GEF Project "Persistent Organic Pollutant Stockpile Management and Technical/Institutional Capacity Upgrading in Belarus - Institutional and Regulatory Strengthening". Available at: https://www.thegef.org/projects-operations/projects/3281

[79] Climate Change: OECD DAC External Development Finance Statistics. limate-related development finance at the activity level; provider perspective; 2019. Available at: https://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/climate-change.htm

Funding Options	The five-step management system is already an integral part of the ongoing 2021-2023 "Keep Georgia Tidy Programme" [80], financed by the Swedish International Development Authority. Given that this programme is a continuation of "Clean Up Georgia" campaign, implemented in 2010-2018 years, Georgia may seek to either i) incorporate the five-step management system within ongoing programme activities, or ii) seek a continuation of the programme post-2023, with further support of the Swedish International Development Authority. Alternatively, Georgia may seek out additional support from other bilateral channels actively implementing education and capacity building campaigns on waste management across the country, such as support being provided by Sweden, Norway, and Great Britain.
CW3.2. Improve the data collection capacities of the waste sector.	
Description	Enhanced data collection capacity is an enabling condition for generating reliable waste statistics by the National Statistics Office of Georgia (GeoStat), including accurate and comprehensive sectoral GHG emissions estimates and projections that encompass all waste emission sources such as medical waste management, waste incineration, and composting. As a result, this action consists of improving waste indicators and the means to systematically collect data by operationalizing waste collection services at the municipal level and at the site level.
Costing	From previous projects on environmental information management and monitoring in Georgia, approximately 4,000,000.00 – 8,000,000.00 GEL would be required to enhance waste-related data collection. (GEF)[81]
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	International finance institutions such as the EBRD are currently investing heavily in improving waste sector infrastructure in Georgia, which would facilitate the gain of further finance for improving data collection capacities. In the past, Georgia has also received GEF funds to harmonize environmental information management for improved knowledge and monitoring. Considering that a large portion of GEF funding is recently being mobilized towards fortifying climate transparency, this fund would be an excellent candidate to support this conditional action.

[80] The Greens Movement of Georgia/Friends of the Earth – Georgia Georgian Society of Nature Explorers. "Keep Georgia Tidy". Available at: https://greens.ge/en/news/in-georgia-keep-georgia-tidy-campaign-begins#:~:text=The%20project%20%22Keep%20Georgia%20Tidy%E2%80%9D%20is%20a%20continuation%20of%20%22,%2C%20including%20clean%2Dup%20actions.

[81] GEF Project "Harmonization of information management for improved knowledge and monitoring of the global environment in Georgia", available at https://www.thegef.org/projects-operations/projects/5467, and GEF Project "Persistent Organic Pollutant Stockpile Management and Technical/Institutional Capacity Upgrading in Belarus - technical Support Capacity Development", available at https://www.thegef.org/projects-operations/projects/3281

Forestry

Conditional to international support, the overarching goal is to further increase the carbon capture capacity of forests in 2030 compared to 2015 levels by reducing forest degradation due to unsustainable logging practices and inadequate forest fire management processes, all while improving information systems to better develop and monitor policies in the forestry sector.

CF1. Develop an improved data system for the forestry sector

The action involves the development of an improved database for forestry statistics, enabling more reliable calculations on forestry practices and emissions, as well as the effective development, monitoring, and evaluation of the forestry sector´s policies and measures.

CF1.1. Establish a consolidated process for collecting and updating data for the forestry sector.	
Description	The development of a sustainable forest management system adequate to climate change challenges requires comprehensive and reliable data on the condition of the forest sector in Georgia in order to develop a more comprehensive and accurate GHG emissions inventory and enhance the planning, implementation, monitoring and evaluation of forestry policies in the country. The aim of this action is therefore to improve capacities and systematize processes for collecting and managing forestry data.
Costing	An approximate 20,717,079.00 GEL will be required to improve the monitoring, reporting, and verification systems for the forest sector in Georgia. (GEF)[82]
Funding Status	Georgia is already receiving international support for implementation of this conditional action.
Funding Options	As part of the GEF Project entitled "Enabling Implementation of Forest Sector Reform in Georgia to Reduce GHG Emissions from Forest Degradation" Georgia is already receiving a grant of 20,717,079.00 GEL destined for the improvement of monitoring and measurement, reporting and verification (MRV) systems for the forest sector over the 2020-2027 period.

CF2. Reduce unsustainable forest logging for firewood

[82] FAO-GEF Project Document. " Achieving Land Degradation Neutrality Targets of Georgia through Restoration and Sustainable Management of Degraded Pasturelands". Available at: https://www.thegef.org/projects-operations/projects/10151

The actions offer an integrated approach for limiting unsustainable and illegal logging for firewood through a variety of policy incentives including regulations, financial mechanisms and awareness raising, including links to energy efficiency.

CF2.1. Reduce demands for firewood for residential heating purposes through energy-efficient building envelopes, as well as increased access to alternative energy sources and technologies.	
Description	Due to limited access to alternative energy options, firewood is the main source of energy for the Georgian population, leading to increased risk of unsustainable and illegal logging of forests. This action aims to introduce regulations and measures for increasing the efficiency of residential building envelopes to reduce firewood demand for residential heating. Currently, approximately 78% of harvested firewood is used for heating residential houses, leading to increased risk of unsustainable and illegal logging of forests. This action also aims to reduce firewood demand in Georgia by introducing energy-efficient technologies and energy-efficient alternative fuels such as briquettes and pellets. This will be achieved through policy incentives including financial support mechanisms and capacity-building/awareness campaigns.
Costing	An approximate 108,125,602.00 GEL will be required for the market development of energy efficiency and alternative fuels to reduce unsustainable and illegal logging in Georgia. (GEF)[83]
Funding Status	Georgia is already receiving international support for implementation of this conditional action.
Funding Options	As part of the GEF Project entitled "Enabling Implementation of Forest Sector Reform in Georgia to Reduce GHG Emissions from Forest Degradation" Georgia is already receiving a grant of 108,125,602.00 GEL destined for the market development of energy efficiency and alternative fuels to reduce unsustainable and illegal logging in Georgia over the 2020-2027 period.
CF2.2. Limit the incidence of illegal logging.	
Description	This action prioritizes limiting the incidence of sustainable and illegal logging performed by unqualified and inexperienced people, leading to increased GHG emissions and substantial ecosystem degradation. This will be achieved through a didactic multifaceted approach of policy incentives including strengthened regulations, financial support mechanisms and capacity-building/awareness campaigns.
Costing	An approximate 27,470,160.00 GEL will be required to limit the incidence of illegal logging through the introduction of enabling

[83] FAO-GEF Project Document. " Achieving Land Degradation Neutrality Targets of Georgia through Restoration and Sustainable Management of Degraded Pasturelands". Available at: https://www.thegef.org/projects-operations/projects/10151

	policies and regulations and the strengthening of forest supervision. (GEF)[84]
Funding Status	Georgia is already receiving international support for implementation of this conditional action.
Funding Options	As part of the GEF Project entitled "Enabling Implementation of Forest Sector Reform in Georgia to Reduce GHG Emissions from Forest Degradation" Georgia is already receiving a grant of 27,470,160.00 GEL destined for the introduction of enabling policies and regulations and the strengthening of forest supervision over the 2020-2027 period.

CF3. Prevent damages inflicted by forest fires

The action aims to mainstream the direct and indirect threats from Climate Change into integrated forest fire prevention and management processes in Georgia while building the necessary capacity to prevent and control their incidence and damage.

CF3.1. Establish a comprehensive forest fire prevention and management system.	
Description	This action encompasses building capacities to prevent the incidence of forest fires and increase the response capacity when they occur based on data-based approaches. This includes i) the launch of a fire prevention campaign, ii) the development, implementation, and update of fire management plans and programmes, and iii) the acquisition of the necessary technologies, knowledge, and human resources for effective and efficient fire management.
Costing	Cost estimates for the installation and implementation of a comprehensive forest management programme in the Amur-Sikhote-Alin Ecoregion in Russia, approximately 250.00 GEL would be required per km^2 of forest area to be managed. (GEF)[85] Considering Georgia´s forest area of total 28224 km^2, according to 2019 FAO estimates, 7,056,000.00 GEL would thus be required for this action.
Funding Status	As a conditional action, Georgia is seeking international support for implementation.
Funding Options	Given the magnitude and nature of the project, the most appropriate funding option would be to apply for a GEF project with World Wildlife Fund (WWF) co-financing.

[84] FAO-GEF Project Document. " Achieving Land Degradation Neutrality Targets of Georgia through Restoration and Sustainable Management of Degraded Pasturelands". Available at: https://www.thegef.org/projects-operations/projects/10151
[85] GEF Project. "Fire Management in High Biodiversity Value Forests of Amur-Sikhote-Alin Ecoregion". Available at: https://www.thegef.org/projects-operations/projects/1203

Annex IV – Common Tabular Formats

Information on financial support needed by developing country Parties under Article 9 of the Paris Agreement[a, b]

Exchange rate used:_____

Sector[c]	*Subsector*[c]	*Title of activity, programme, project or other*[c, d]	*Programme/ project description*[c]	*Estimated amount (climate-specific)*[c]		*Expected time frame*[c]	*Expected financial instrument*[c]	*Type of support*[c]	*Contribution to technology development and transfer objectives*[c]	*Contribution to capacity-building objectives*[c]	*Whether the activity is anchored in a national strategy and/or an NDC*[c]	*Expected use, impact and estimated results*[c]	*Additional information*[f]
				Domestic currency	*USD*								
Energy Transport Industry Agriculture Forestry Water and sanitation Cross-cutting Other (specify)[d]							Grant Concessional loan Non-concessional loan Equity Guarantee Insurance Other (specify)[d]	Adaptation Mitigation Cross-cutting[e]	Insert 1 for Yes, 0 for No	Insert 1 for Yes, 0 for No	Insert 1 for Yes, 0 for No		

Notation keys: NA = not applicable; UA = information not available at the time of reporting; NR = not reported (to indicate the voluntary character of the information).

[a] Developing country Parties should provide, in a common tabular format, information on financial support needed, to the extent possible, as available and as applicable.

[b] Parties include information on support needed from the reporting year of the BTR.

[c] Parties provide the underlying assumptions, definitions and methodologies, as applicable, used to identify and/or report this reporting parameter in the respective section of the BTR.

[d] If "other", Parties should specify this information.

[e] This refers to funding for activities that have both mitigation and adaptation components.

[f] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

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Custom footnotes

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Information on financial support received by developing country Parties under Article 9 of the Paris Agreement[a, b]

Exchange rate used:_____

Title of activity, programme, project or other[c, d]	*Programme/ project description*[c]	*Channel*[c]	*Recipient entity*[c]	*Implementing entity*[c]	*Amount received (climate-specific)*[c]		*Time frame*[c]	*Financial instrument*[c]	*Status*[c]	*Type of support*[c]	*Sector*[c]	*Subsector*[c]	*Contribution to technology development and transfer objectives*[c]	*Contribution to capacity-building objectives*[c]	*Status of activity*[c]	*Use, impact and results*[c]	*Additional information*[f]
					Domestic currency	*USD*											
		Multilateral Bilateral Regional Other (specify)[d]						Grant Concessional loan Non-concessional loan Equity Guarantee Insurance Other (specify)[d]	Committed Received	Adaptation Mitigation Cross-cutting[e]	Energy Transport Industry Agriculture Forestry Water and sanitation Cross-cutting Other (specify)[d]		Insert 1 for Yes, 0 for No	Insert 1 for Yes, 0 for No	Planned Ongoing Completed		

Notation keys: NA = not applicable; UA = information not available at the time of reporting; NR = not reported (to indicate the voluntary character of the information).

[a] Developing country Parties should provide, in common tabular format, information on financial support received, to the extent possible, as available and as applicable.

[b] Parties include information on support received, ongoing or planned since the previous BTR.

[c] Parties provide the underlying assumptions, definitions and methodologies, as applicable, used to identify and/or report this reporting parameter in the respective section of the BTR.

[d] If "other", Parties should specify this information.

[e] This refers to funding for activities that have both mitigation and adaptation components.

[f] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

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Custom footnotes

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Information on technology development and transfer support needed by developing country Parties under Article 10 of the Paris Agreement[a, b]

Sector[c]	*Subsector[c]*	*Title of activity, programme, project or other[c, d]*	*Programme/project description[c]*	*Type of support[c]*	*Type of technology[c]*	*Expected time frame[c]*	*Expected use, impact and estimated results[c]*	*Additional information[f]*
Energy				Mitigation				
Transport				Adaptation				
Industry				Cross-cutting[e]				
Agriculture								
Forestry								
Water and sanitation								
Cross-cutting								
Other (specify)[d]								

Notation keys: NA = not applicable; UA = information not available at the time of reporting; NR = not reported (to indicate the voluntary character of the information).

[a] Developing country Parties should provide, in a common tabular format, information on technology development and transfer support needed, to the extent possible, as available and as applicable.

[b] Parties include information on support needed from the reporting year of the BTR.

[c] Parties provide the underlying assumptions, definitions and methodologies, as applicable, used to identify and/or report this reporting parameter in the respective section of the BTR.

[d] If "other", Parties should specify this information.

[e] This refers to activities that have both mitigation and adaptation components.

[f] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

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Custom footnotes

The underlying assumptions, definitions and methodologies of the information in this CTF is available at link/page number of the BTR.

Information on technology development and transfer support received by developing country Parties under Article 10 of the Paris Agreement[a, b]

Title of activity, programme, project or other[c, d]	*Programme/project description*[c]	*Type of technology*[c]	*Time frame*[c]	*Recipient entity*[c]	*Implementing entity*[c]	*Type of support*[c]	*Sector*[c]	*Subsector*[c]	*Status of activity*[c]	*Use, impact and estimated results*[c]	*Additional information*[f]
						Mitigation Adaptation Cross-cutting[e]	Energy Transport Industry Agriculture Forestry Water and sanitation Cross-cutting Other (specify)[d]		Planned Ongoing Completed		

Notation keys: NA = not applicable; UA = information not available at the time of reporting; NR = not reported (to indicate the voluntary character of the information).

[a] Developing country Parties should provide, in common tabular format, information on technology development and transfer support received, to the extent possible, as available and as applicable.

[b] Parties include information on support received, ongoing or planned since the previous BTR.

[c] Parties provide the underlying assumptions, definitions and methodologies, as applicable, used to identify and/or report this reporting parameter in the respective section of the BTR.

[d] If "other", Parties should specify this information.

[e] This refers to activities that have both mitigation and adaptation components.

[f] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

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Custom footnotes

The underlying assumptions, definitions and methodologies of the information in this CTF is available at link/page number of the BTR.

Information on capacity-building support needed by developing country Parties under Article 11 of the Paris Agreement[a, b]

Sector[c, d]	*Subsector*[c]	*Title of activity, programme, project or other*[c, d]	*Programme/project description*[c]	*Type of support*[c]	*Expected time frame*[b]	*Expected use, impact and estimated results*[b]	*Additional information*[f]
Energy				Mitigation			
Transport				Adaptation			
Industry				Cross-cutting[e]			
Agriculture							
Forestry							
Water and sanitation							
Cross-cutting							
Other (specify)[d]							

Notation keys: NA = not applicable; UA = information not available at the time of reporting; NR = not reported (to indicate the voluntary character of the information).
[a] Developing country Parties should provide, in common tabular format, information on capacity-building support needed, to the extent possible, as available and as applicable.
[b] Parties include information on support needed from the reporting year of the BTR.
[c] Parties provide the underlying assumptions, definitions and methodologies, as applicable, used to identify and/or report this reporting parameter in the respective section of the BTR
[d] If "other", Parties should specify this information.
[e] This refers to activities that have both mitigation and adaptation components.
[f] Report, to the extent possible, information on the project/programme and implementing agency and provide a link to any relevant documentation and as appropriate, support to activities related to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change.

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Custom footnotes

The underlying assumptions, definitions and methodologies of the information in this CTF is available at link/page number of the BTR.

Information on capacity-building support received by developing country Parties under Article 11 of the Paris Agreement[a, b]

Title of activity, programme, project or other[c, d]	*Programme/project description*[c]	*Time frame*[c]	*Recipient entity*[c]	*Implementing entity*[c]	*Type of support*[c]	*Sector*[c]	*Subsector*[c]	*Status of activity*[c]	*Use, impact and estimated results*[c]	*Additional information*[f]
					Mitigation Adaptation Cross-cutting[e]	Energy Transport Industry Agriculture Forestry Water and sanitation Cross-cutting Other (specify)[d]		Planned Ongoing Completed		

Notation keys: NA = not applicable; UA = information not available at the time of reporting; NR = not reported (to indicate the voluntary character of the information).
[a] Developing country Parties should provide, in common tabular format, information on capacity-building support received, to the extent possible, as available and as applicable.
[b] Parties include information on support received, ongoing or planned since the previous BTR.
[c] Parties provide the underlying assumptions, definitions and methodologies, as applicable, used to identify and/or report this reporting parameter in the respective section of the BTR.
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