Terms of reference (ToR) for the procurement of services

Macroeconomic Modelling Related Data Collection and Update Support on Meteorological Statistics and Corresponding Climate Change Effect Damages in Georgia.	**Project number/ cost centre:16.9017.1-004.00**

Contents

0. List of abbreviations

GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
CRED	Climate Resilient Economic Development Programme
IKI	International Climate Initiative
BMUV	German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection
MoESD	The Ministry of Economy and Sustainable Development of Georgia
WMO	World Meteorological Organization
NEA	National Environmental Agency of Georgia
GWS	Gesellschaft für Wirtschaftliche Strukturforschung
CBA	Cost-Benefit Assessment
CRED	Climate Resilient Economic Development
e3.ge	Economy, Environment, and Energy - Georgia
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GEOSAT	National Statistics Office of Georgia
EWE	Extreme Weather Events
OECD	The Organization for Economic Co-operation and Development
UN	United Nations
ToRs	Terms of Reference

1. General information

GIZ, on behalf of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), is executing the global programme “Policy Advice for Climate Resilient Economic Development” with a duration from 01/2019 to 06/2025.

Climate change is one of the greatest threats facing humanity, with far-reaching and devastating impacts on people, the environment, and the economy. Accelerating climate change adaptation is a human, environmental, and economic imperative. Planning and investing in systematic adaptation actions, and in the innovations that come with it, can unlock new opportunities, and provide a triple dividend: they avoid economic losses, support economic growth, and deliver additional social and environmental benefits.

Therefore, the Climate Resilient Economic Development (CRED) programme develops and disseminates methods and tools for Climate Economic Modelling. It enables partners to independently model the economic impacts of climate change and translate results into policy advice. Evidence-based adaptation actions can be incorporated into long-term economic, and adaptation planning, and thereby unlock climate-resilient economic development in the partner countries.

The CRED programme activities in Georgia are conducted in coordination with its partner institution, the Ministry of Economy and Sustainable Development of Georgia (MoESD). They are directed towards the following application areas focusing on climate adaptation:

a. Developing methods and tools for modelling the economic impacts of climate change;

b. Supporting the lead executing agencies and implementing partners to become independent users of macroeconomic models (capacity building through training and coaching);

c. Supporting the lead executing agencies and relevant stakeholders in integrating the results in policy-making processes and adaptation planning.

2. Context

The CRED programme helps building country-specific models based primarily on the needs of the national ministries of economy and the subordinate authorities. Sectoral effects on productivity, the profitability of adaptation measures and inter-sectoral interactions within the national economies are to be modeled and prepared for political decision-making processes. For economic modeling and capacity development, the CRED project is supported with technical expertise from Gesellschaft für Wirtschaftliche Strukturforschung (GWS).

Under the current programmatic activities in Georgia, a macroeconomic dynamic Input-Output model named e3.ge (e3.ge stands for Economy, Environment, and Energy - Georgia) has been developed. The e3.ge model estimates economic values of the impacts of climate change and climate change adaptation measures at different macroeconomic sectoral levels in Georgia. The central role of the e3.ge model application is the macroeconomic and sectoral analysis of climate change and adaptation options. The model is run for different adaptation scenarios and measures identified for a specific sector, and the results can be used to compare each

adaptation measure in terms of their macroeconomic impacts. Results from the scenario analysis can help determine which measures are likely to have a positive or negative macroeconomic impact in the long term and the least or the highest macroeconomic impacts (in terms of GDP, employment, and economy-wide effects). More information on e3.ge model and the modelling results for Georgia can be found here.

At the present stage, CRED is focusing on developing new and translating already set climate-informed macroeconomic modelling results into relevant development strategies and adaptation policies in Georgia. Therefore, for respective economic modeling, suitable data sets are required on the expected changes in meteorological hazards that can cause economic damages (impacts), depending on the exposure and sensitivity of economic assets and processes (according to AR5 framework/ GIZ Vulnerability Sourcebook).

GIZ shall hire the contractor for the anticipated contract term, from 27.06.2024 to 27.07.2024.

3. Tasks to be performed by the contractor.

The contractor shall provide the following work/service:

- ### 3.1.1. Objective1

The consultant shall conduct review of already collected meteorological information (will be provided by CRED), perform gap analysis and new data collection and systematization with regards to 2019-2024 updated meteorological statistics in Georgia. This information will be used to identify indicators for future climate change on the basis of past data. Data on future climate change will in turn serve as an input for applying to macro-economic modelling of climate change impacts to the economy of Georgia.

Methodology and tasks:

The consultant is requested to conduct a desk research to compile a statistics for registered extreme climate events' data in the past (last 30-40 years) in Georgia.

The compilation on weather events' statistics shall be done in accordance with the attached Excel template form and data description and units shall be according to international standards (e.g. World Meteorological Organization (WMO)). A brief summary word report is expected.

The compilation on climate change damages should be done in accordance with the attached Excel template form for "Climate Change Effects Details Georgia".

Possible data sources might be e.g. GEOSAT and/or National Environmental Agency (NEA) database, other legal state of private institutions/establishments, or any recognized international organization (e.g. WMO).

- ### 3.1.2. Objective 2

The consultant is requested to conduct an analysis of already collected overview of climate change effect damages in the past (last 20-30 years) in Georgia (will be provided by CRED), perform gap analysis and new data collection and systematization with regards to updated corresponding meteorological statistics in Georgia (Objective 1 above).

The compilation on climate change damages should be done in accordance with the attached Excel template form for “Template Top-down Damage Estimations”, “Template Bottom-up Damage Estimations” and “Damage Data Concept” word document and shall comprise the following climate change effects:

- Gradual changes in temperature and precipitation
- Extreme weather events (EWE), e.g. droughts, strong wind, heavy rain, strong blizzard, mudslides, heat waves, glacial melt, flood, landslides, mudflows, coastal storm or coastal flood, drought, etc.

For all climate change events, the compilation shall contain:

- Year / Data when the climate change event occurred
- If possible monetary damages (e.g. A drought causes production loss of 75 Million GEL which equals to 9% of gross agricultural output)
- Otherwise, physical damages (e.g. How many houses were destroyed by a flood?)
- Duration of damage (e.g. For how long can the bridge not been used?)
- Economic losses (For example, losses corresponding to increases in travel time and higher operating costs incurred by road users when forced to lengthen their journeys because of broken bridge)
- Recovery needs (in monetary terms; e.g. How much does it cost to rebuild the bridge?)
- Which economic sector(s) is (are) affected by the climate change event? (e.g. agriculture, energy, transport)
- Data source

Possible data sources might be e.g. GEOSAT and/or National Environmental Agency (NEA) database, other legal state of private institutions/establishments, newspaper articles, reports from national and international institutions (OECD, UN) with regard to climate change, statistics.

To refine the findings from the desk study the consultant should conduct interviews with the data providers from the relevant institutions. The consultant will closely coordinate the work with GIZ project team.

4. Timeline and deliverables

The work takes place in Georgia with up to a total of 17 work-days from 27.06.2024 until 27.07.2024.

Item	Tentative Timeframe	Tentative work-days
Kick-off call to discuss task	27.06. 2024	1
Workplan on delivery of task	28.06. 2024	1
Draft excel list “Bottom-up damages data”	01.07.2024 – 08.07.2024	5
Final Excel list “Bottom-up data”	09.07.2024	1

Draft Excel lists: "Damage data categorization" and "Top-down estimations"	11.07.2024- 18.07.2024	5
Final Excel lists: "Damage data categorization" and "Top-down estimations"	19.07.2024	1
Word report summarizing climate change effects and damage data	20.07.2024– 24.07.2024	3

5. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 3 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

- **Technical-methodological concept**

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 2, Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 3, 3.1.1, 3.1.2. Tasks to be performed) (1.1.2).

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) (chapter 4) that describes how the services according to Chapter 3 (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 3 (Tasks to be performed) (1.4.2).

The tenderer is required to describe its contribution to knowledge management for the partner (1.5.1) and GIZ and to promote scaling-up effects (1.5.2) under learning and innovation.

- **Project management of the contractor**

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 3 (Tasks to be performed by the contractor) must be explained in detail.

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert months) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

6. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, based on their CVs (see Chapter **Error! Reference source not found.**), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

- **Team leader**

Tasks of the team leader

- Develop and manage a detailed project timeline and workflow.
- Coordinate interactions between the key expert, short-term experts, and stakeholders.
- Conduct compilation on climate change damages in accordance with the provided Excel template form for “Template Top-down Damage Estimations”, “Template Bottom-up Damage Estimations” and “Damage Data Concept” word document.
- Review and approve drafts and final reports.
- Act as the primary point of contact for stakeholders, providing project updates.
- Organize and lead meetings to discuss project progress and integrate feedback.

Qualifications of the team leader

- Education/training: university degree (German ‘Diplom’/Master) in Environmental Science, Environmental Economics, or economic policy (or any other course of study relevant to management and climate change and environmental assessment).
- Language: C1-level language proficiency in English, Georgian native.
- General professional experience (2.1.3): 6 years of professional experience in the in the Economics, environmental policy, Environmental Economics or climate action sector, focusing on projects related to sustainability, environmental impact assessment, or greenhouse gas emissions.

Note: Team Leader and Key Expert can be the same person, as long as he/she is duly qualified to fulfil the tasks outlined in this TOR for both experts.

- **Key expert 1**

Tasks of key expert 1

- Conduct review of already CRED collected meteorological information, perform gap analysis and new data collection and systematization with regards to 2019-2024, update meteorological statistics in Georgia.
- Gather and manage necessary data for accurate analysis.
- Assemble the findings into structured reports, drafting sections on methodology, results, and recommendations.

Qualifications of key expert 1

- Education/training: University degree (German ‘Diplom’/Master) in Geophysics, Meteorology, or Climatology, ideally with a focus on quantitative methods and statistical analysis related to climatology/environmental assessments.
- Language: C1 -level language proficiency in English, Georgia native.
- General professional experience: 6 years of professional experience in Meteorology, climatology or environmental analysis or climate science.

Note: Team Leader and Key Expert 1 can be the same person, as long as he/she is duly qualified to fulfil the tasks outlined in this TOR for both experts.

- **Key expert 2**

Tasks of key expert 2

- Conduct an analysis of already collected overview of climate change effect damages in the past (last 20-30 years) in Georgia (will be provided by CRED), perform gap analysis and new data collection and systematization with regards to updated corresponding meteorological statistics in Georgia (Objective 1 above).
- Gather and manage necessary data for accurate analysis.
- Assemble the findings into structured reports, drafting sections on methodology, results, and recommendations.

Qualifications of key expert 2

- Education/training: university degree (German 'Diplom'/Master) in Environmental Science, Environmental Economics, or economic policy (or any other course of study relevant to management and climate change and environmental assessment).
- Language: C1-level language proficiency in English, Georgian native.
- General professional experience (2.1.3): 6 years of professional experience in the in the Economics, environmental policy, Environmental Economics or climate action sector, focusing on projects related to sustainability, environmental impact assessment, or greenhouse gas emissions.

Note: Team Leader and Key Expert can be the same person, as long as he/she is duly qualified to fulfil the tasks outlined in this TOR for both experts.

7. Costing requirements

Assignment of personnel and travel expenses

Per-diem and overnight accommodation allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable at https://www.bundesfinanzministerium.de).

Accommodation costs which exceed this up to a reasonable amount and the cost of flights and other main forms of transport can be reimbursed against evidence

All business travel must be agreed in advance by the officer responsible for the project.

Sustainability aspects for travel

GIZ would like to reduce greenhouse gas emissions (CO_2 emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO_2 efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

If they cannot be avoided, CO_2 emissions caused by air travel should be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The Development and Climate Alliance (German only) has published a list of standards (German only). GIZ recommends using the standards specified there.

Specification of inputs

The following basic calculations for the contract for works are a reference value based on the acceptance criteria for each partial work/milestone specified in Chapter 3 (Tasks to be performed by the contractor).

Since the contract to be concluded is a contract for works, we would ask you to offer your services at a lump sum price. The final one-time payment will be accomplished against proposed lump sum price after successful completion of the assignment.

In addition, the assessment of the financial bid is also based on the underlying daily rate. Please also provide the underlying daily rate according to the attached price schedule form.

8. Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

- GIZ should provide clear and comprehensive documentation of the project requirements, including specific goals, timelines, deliverables, and any methodologies or standards that should be adhered to.
- GIZ should facilitate access to all necessary data related to already collected meteorological information and overview of climate change effect damages information, implementation reports, sectoral analyses, and any other relevant environmental assessments.
- Provide a list of key stakeholders involved in the Climate Action Plans and establish communication channels for the contractor to engage with these stakeholders when necessary.

9. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 10 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter **Error! Reference source not found.** of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in English (language).

As the contract to be concluded is a contract for works, please offer a fixed lump sum price that covers all relevant costs (fees, travel expenses etc.). The price bid will be evaluated on the basis of the specified lump sum price. In addition, please also provide the underlying daily rate. Quantitative requirements for the optional services. The specifications for pricing are defined in the price schedule (Annex 4).

10. Annexes

1.1 Template for Bottom-up Climate Change effects and Damage Data

1.2. Template Damage Data Categorization

1.3. Template for Top-down Damage Estimations

1.4. Damage data concept