CLIMATE SYSTEMS, TECHNIQUES AND RESOURCES FOR IMPROVED DECISION-MAKING, EDUCATION AND SUSTAINABILITY PROJECT

DRAFT TERMS OF REFERENCE

CONSULTANCY SERVICES FOR TECHNICAL ASSISTANT

1. BACKGROUND

1.01 The Caribbean comprises nations that are diverse in terms of geographical size, population, political stability as well as economic drivers. This diversity is, however, dwarfed by the common vulnerability to the impacts of climate variability and change (CVC) that each of the territories experience; and which places the Caribbean amongst the most vulnerable, across all socio-economic and livelihood sectors. Throughout the region, shifts in duration, frequency and intensity of extreme weather and climatic events have already caused serious economic losses in climate sensitive sectors (for example, in 2004, the impact of Hurricane Ivan on Grenada resulted in the nation's agriculture and spice industry gross domestic products earnings being set back by 7-10 years). Continued and projected climatic changes not only place the Caribbean amongst the most vulnerable to the impacts and CVC, but threatens the region's economy, growth and aspirations for sustainable development.

1.02 At the start of the 21st century, there were still challenges adequately characterising and understanding the past and impending threats of CVC to the region due to a paucity of information on account of (a) the general lack of climate change studies at scales matching the geographical size of territories within the region; (b) minimal or no peer-reviewed sector-specific or related studies on the influence of climate change; and (c) the absence of continuous in-situ meteorological data. This led Caribbean scientists and relevant stakeholders to embark on a drive to improve data availability from both in-situ meteorological stations and climate model projections as well as working towards the provision of climate change data and information at spatial and temporal scales more relevant to the region for use in decision-making, risk reduction and improving overall resilience. This drive resulted in the production of the set of first relevant and semi-scale specific regional climate model outputs using the Intergovernmental Panel on Climate Change's (IPCC's) Special Report on Emission Scenarios (SRES) as well as the subsequent Representative Concentration Pathways (RCPs) scenarios. The results of these endeavours were used by the Caribbean and other Small Island Developing States in:

(a) their campaign to have the end of century global warming target be limited to 1.5°C above pre-industrial levels;
(b) the production of several of the region's national communications to the United Nations Framework Convention on Climate Change;
(c) a wide array of publications on the impact of climate variability and climate change on varying sectors, such as agriculture;
(d) the development and implementation of numerous capacity building and training workshops geared at improving the climate knowledge and capacity in the region; and
(e) the preparation of the State of the Caribbean Climate (SOCC) Report, through support from the Caribbean Development Bank (CDB) [1] to The University of the West Indies (UWI), Mona. The report, which was published online in 2020, analysed the current and future state of the region's climate using the best available science and data at the time.

[1] This was made possible through financing from the European Union (EU) within the framework of the African, Caribbean, Pacific, EU, Natural Disaster Risk Management in CARIFORUM countries.

1.03 The SOCC Report has been viewed as a landmark activity for the region, as it provided the most in-depth view of Caribbean States in terms of the impacts of CVC and has been a go-to resource for anyone conducting climate-related endeavours within the Caribbean. Importantly, the report contributed to an increase in the basic knowledge and understanding of CVC of Borrowing Member Countries (BMCs) of the CDB by providing decision-makers with the best available climate science information at the time in an easily digestible document. Notwithstanding this, the Caribbean is once again lagging the globe in terms of the scenarios used to inform climate change, adaptation and mitigation efforts as the globe has now moved away from the use of both SRES and RCP scenarios to Shared Socioeconomic Pathways (SSPs). There is therefore urgent need for the region to close this gap, so that it strengthens its efforts to appropriately respond to the threat of climate change.

1.04 Recognising the importance of addressing the aforementioned gaps, the CDB, under the European Union-funded Caribbean Action for Resilience Enhancement Programme, has provided grant resources to the UWI, Mona to implement the "Climate Systems, Techniques, and Resources, for Improved Decision-making, Education and Sustainability (STRIDES)" project. The Climate STRIDES project seeks to engender enhanced climate resilience in the region through the provision of systems, tools and resources that improve decision making capacity, general awareness and influence behaviour change in the face of a changing climate. Under the Climate STRIDES project, an updated volume of the SOCC Report will be prepared and made available for stakeholder validation, training, awareness and sensitisation.

2. OBJECTIVE

2.01 The primary responsibility of the Technical Assistant (TA) will be to collect, analyse and report on climate data and information in support of the preparation and finalization of the "State of the Caribbean Climate Report: Information for Resilience Building (Volume II)".

3. SCOPE OF WORK

3.01 The TA will be assigned to the Climate Studies Group Mona at the University of the West Indies. Specific duties and responsibilities include:

(a) Conducting literature review of credible databases, reports and articles on Caribbean climate.
(b) Collecting, compiling/collating Caribbean climate data, ensuring quality control checks are performed.
(c) Conducting basic and advanced climate data analyses; (e.g., Empirical Orthogonal Functions, Singular Value Decomposition, Global Climate Model and Regional Climate Model analyses).
(d) Assisting with the preparation of draft and final sections of the updated SOCC Report.
(e) Supporting the organisation and delivery of Climate STRIDES events (e.g., workshops), as required.
(f) Conducting presentations linked to the Climate STRIDES project, as required.

3.02 The TA will also perform other project-related duties, as assigned by the CSGM Principal Investigator and/or the Climate STRIDES Project Coordinator.

3.03 Two individuals will be hired as TA consultants. Each consultant will be assigned specific tasks aligned with the scope of this TOR, their qualifications, and areas of expertise. Among other tasks, both consultants will contribute to drafting the SOCC Report, with clearly defined responsibilities. Each TA will

be individually accountable for completing their assigned deliverables. When working on collaborative outputs, individual contributions will be clearly tracked.

4. QUALIFICATIONS AND EXPERIENCE

4.01 The TA should be able to commence working in April 2025 and should have the following minimum qualifications, experience and skills:

(a) A Bachelor of Science in Climate Science, Meteorology, Climatology, Environmental Science, Physics, or related disciplines.
(b) At least 1 year working experience in climate data analysis and visualization.
(c) At least 1 year working experience in climate and/or environmental modelling.
(d) Strong programming/coding/scripting skills applied to climate science applications and tools.
(e) Proficiency conducting statistical analysis.
(f) Competent at performing geospatial analysis.
(g) Knowledge and command of the English language (as evidenced by publications, reports or other documents prepared in English).
(h) Good oral communication skills, as evidenced presentations or talks delivered at public fora.

5. REPORTING REQUIREMENTS AND DELIVERABLES

5.01 The TA will report to the CSGM Principal Investigator and the Climate Strides Project Coordinator, and will produce the following deliverables:

(a) Zero-Order Draft of sections of the updated SOCC Report, based on analysis conducted by Month 2.
(b) First Draft of sections of the updated SOCC Report, based on analysis conducted by Month 4.
(c) Second Draft of sections of the updated SOCC Report, based on analysis conducted by Month 6, inclusive of supporting information such as references, images and data in the formats specified by the CSGM Principal Investigator.
(d) Reviews of draft versions of the full SOCC Report by Month 8.
(e) Finalized sections of the updated SOCC Report, inclusive of all supporting data, spreadsheets, models, references etc. by Month 10.
(f) Reviews of the graphic designed versions of the full SOCC Report by Month 12.
(g) Presentations linked to the assignment, as required.
(h) Support for Climate STRIDES activities and events (e.g., workshops) as required.

6. DURATION

6.01 The assignment will require a level of effort of 12 months. The TA is expected to start working in April 2025.

7. PLACE OF WORK

7.01 The TA will be assigned to the Climate Studies Group Mona within the Department of Physics at the University of the West Indies, Mona. The Assistant will be required to be resident in Jamaica for the duration of the assignment and is expected to report for in-person work at least three workdays per week. Eligible applicants outside of Jamaica will be required to cover any relocation expenses.