

GCCA+ Climate Resilient and Marine Zone Project for The Gambia

TORs, Deliverables and Project Activity Update for the Key Expert2 – Data Management and CC modelling, country Mission, July 12, 2021 to August 27, 2021

This Project "GCCA+ Climate Resilient Coastal and Marine Zone project for The Gambia" aims at consolidating results and positive experiences of the previous GCCA project "Support to The Gambia for integrated coastal zone management (ICZM) and the mainstreaming of climate change" 2013-2016.

The objectives of the project are: 1) to support implementation of recommendations set out in the ICZM Management and Strategic Plans (Jan 2016) and the National Climate Change Policy (NCCP) implementation plan for the Gambia (April 2016) and 2) to enhance institutional governance enabling planning and implementation of improved climate resilience, adaptation and mitigation measures in the Coastal and Marine Zones of the Gambia.

The project CC is envisaged through technical component 2: Knowledge management through data collection and analysis; through downscaled climate modelling; to inform climate resilient development.

Expected outcomes are:

a) Updated information available and guidelines for decision making

- Climate change analysis for planning,
- Climate Change Impacts and Spatial Planning,
- Climate Change accounting for financial management of impacts.

b) generate localized, downscaled CC modelling

The Project Activity Update and Mission Report of the Key Expert on Data Management and Climate Change to the Gambia during the July to August 2021 outlines the following activities as listed in the TOR;

According to the ToR the following activity deliverables were undertaken in support of this Component:

- The TORs for the National Climate Change Expert to support the work of TA while on missions to Gambia and beyond, in order to ensure adequate learning effect for the NRP for sustainability of the activities, was elaborated and forwarded to the TL for further submission to the Agrer – *see the attached draft* appendix 1
- A further TORs for NKE to support the TA in carrying out climate change modeling training to the selected Gambian institutions was also elaborated and forwarded to the TL – *see the attached draft* appendix 2

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Activity 2.1 Knowledge gaps identified, types of needed data and methods of data collection determined. The expected deliverables for this component are;

- Reference the gap knowledge-analysis undertaken in the previous GCCA project,
- further pursue this knowledge gap identification and updating,
- advice on the way forward.

Activity during the mission and update of the component deliverables:

- a) Reference the gap knowledge-analysis in the previous GCCA project was undertaken at the inception of the TA project activities In November 2020 and the ***findings captured and reported in the Project Inception Report.***
- b) Further pursue this knowledge gap identification and make recommendations for updating-
The project update and deliverables during the mission are elaborated below;

Needs assessment survey on CC data and institutional capacity is carried out and completed for Stakeholder institutions (DWR, NEA, MOECCNR, MOA, UTG etc.). The methodology took into account the availability of institutional data management, reliable historical meteorological/sectoral data, equipment and human resource. Part of the assignment was accomplished during the Expert's first mission in the Gambia in January 2021 that covered most of the institutions within the Greater Banjul Area – ***part of the outcome was covered and reported in the first mission report of February 2021***

- Capacity needs assessment was completed for the greater Banjul area by including five additional institutions (DWR-Hydrology, Geological Dept, Dept of Physical planning and housing, GEF landscape / seascape project and DWR-data and instrumentation) that were not covered in the during my first experts' first mission in January
- In addition, a 5-day field trip was carried out for the Gambian regions to cover institutions outside Greater Banjul. The aim of the field trip was to conduct institutional capacity baseline survey i) to assess the historical Data availability and how they collect and manage data in the field, ii) establish needs for data rescue initiatives where applicable iii) identify technical capacity needs, iv) visit data observatories to assess their status, and v) provide on-site training on best practices on institutional data management. The expert was accompanied in the trip by the officer availed from DWR (A. Ceesay). A total of five regions were covered namely North Bank Region (NBR), Central River Region (CRR), Upper River Region (URR), Lower River Region (LRR) and the West Bank Region (WBR). The institutions covered included the Technical Advisory Committee (TAC) members in the regions, Meteorological Observatories, Community Administrators and ongoing projects in the regions – ***attached table that summarizes the findings from the field work*** Appendix3

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Working closely with DWR, NEA, MOA, UTG and other CC data generating institutions to organize observed historical data time series from station networks in spreadsheets and recommended formats. Fill the missing data with recommended methodology, and recommend if additional data needs is required through data rescue – the work is ongoing.

- We have started to work with DWR which hosts and houses the observed climate historical datasets that will be crucial in the climate modeling and downscaling for the country. The Director of DWR seconded one of his staff (Aboudlie Ceesay) to start doubling with me in this endeavor (the same staff is also recommended for the position of the NRP).
- Working with the proposed PA, we are developing a climate databank with 11 regular meteorological stations to support climate change modelling. The variable of interest is rainfall and temperature for period 1981-2020; Additional 23 Mixed Farming Centre (MFC) rainfall stations (MFCs are overseen by the Ministry of Agriculture; rain gauges are installed by the DWR through an MOU between the two institutions to record rainfall and shared on monthly basis). The 23 MFCs are included to improve on spatial network coverage within the country; climate data cataloguing is being undertaken to identify and fill missing data gaps where possible – *see the attachment* Appendix4; developed also a meteorological station catalogue (*see the attachment* Appendix5)
- We have discussed and agreed with DWR and NEA for the need for data visualization software for the DWR that currently has none. We have identified the data visualization tool (GeoCLIM) developed by United States Geological Surveys (USGS) that is being used by other similar institutions in Africa and around the World, for installation at DWR. The software employs appropriate ground-truthed remotely sensed data and other proxy data sets in areas with sparse ground observations like the ocean, forests, etc. to complement on station observed datasets. **Ongoing** – downloaded remote sensed rainfall data in the format ready for input to the display tool. Plans are underway to install the software at DWR and provision of required training to staff during the upcoming mission to the Gambia by the Technical Expert
- The capacity needs assessment also included ongoing and recently completed projects such as the Early Warning System (EWS) implemented by DWR, the largescale Ecosystem Based Adaptation (LEbA) implemented by the Ministry of Environment Climate Change and Natural Resources (MOENCCNR), the Strategic Program for Climate Resilience (SPCR) etc. The purpose is to organise the review and data rescue of the impressive amount of information obtained from these previous and ongoing studies in order to systematically determine the needs for updating and for complementary required for implementation of the Integrated Coastal Zone Management (ICZM) strategy and the National Climate Change Policy (NCCP).

2.2 Database for ICZM set up & strengthened in collaboration with existing initiatives;

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Activity 2.2 Deliverable: Database for ICZM set up & strengthened in collaboration with existing initiatives;

Ongoing – to determine with NEA and DWR how the new data sets generated in 2.1 can be well managed, made accessible, disseminated and converted into knowledge, for example by upgrading NEA's Information Management System (IMS) and possibly by developing a digital knowledge platform. We have discussed and agreed with NEA and DWR for need to develop climate change data bank for meteorological data at DWR, and sectoral databank at NEA. Once the databanks are setup, further discussions will be put in place on management, accessibility, dissemination and conversion into knowledge of the stored data.

Ongoing – on *Training of a dedicated national technical and scientific staff in the updating, management and use of this database* for purposes related to sustainable coastal zone management and for climate change adaptation, applying best practice data management principles. Training is already commenced for the proposed NRP Personal Assistant from DWR (A. Ceesay) on updating and management of the climate meteorological database being developed at DWR