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مشروع تعزيز التكيف مع تغير المناخ في منطقتي الساحل الشمالي ودلتا النيل في مصر
ENHANCING CLIMATE CHANGE ADAPTATION IN THE NORTH COAST AND NILE DELTA REGIONS IN EGYPT PROJECT (ECCADP)



Terms of Reference (TOR)

Individual Coastal Engineering Expert

1. Background

The Enhancing Climate Change Adaptation in the North Coast and Nile Delta Regions in Egypt Project (ECCADP) aims at supporting the adaptation efforts of Egypt in the North coast and in particular the Nile Delta which is identified by the IPCC in its Fourth Assessment Report as one of the world's three "extreme" vulnerable.

The objective of the project is to reduce coastal flooding risks in Egypt's North Coast due to the combination of projected sea level rise and more frequent and intense extreme storm events. Output 1 focuses on constructing 69 km of sand dune dikes at five vulnerable hotspots within the Nile Delta that were identified during an engineering scoping assessment and technical feasibility study. Output 2 focuses on the development of an Integrated Coastal Zone Management (ICZM) plan for the entire North Coast, to manage long-term climate change risks and provide Egypt with adaptability to impending flood risks.

The project will facilitate transformational change in the short-term by reducing coastal flooding threats along vulnerable hotspots in the Delta and in the long-term by integrating additional risks of climate change into coastal management and planning, budgeting and implementation of risk reduction measures. The Project is implemented by the Ministry of Water Resources and Irrigation in collaboration with UNDP and is funded by the Green Climate Fund (GCF). The project is managed by a Project Management Unit (PMU) which is led by the executive project manager and includes staff assisting the manager in carrying out the various management tasks.

An international consulting firm has supported the project in modeling sea level rise risks for North Coast of Egypt using Mike 21. The project has supported the Government of Egypt in establishing an institutional framework for ICZM planning and implementation. The project has recruited a multidisciplinary team of national consultants to develop ICZM for North Coast and to support implementation in two coastal governorates.

The project seeks to recruit an international individual Coastal Engineering Expert to assist in the verification process of selected coastal protection systems/measures within the climate resilient ICZM plan for the North Coast of Egypt - related tasks - as described below in the duties and responsibilities section.

2. Duties and responsibilities:

Under the full supervision of the Project Manager and oversight of the Water Resources and Irrigation and UNDP, the Coastal Engineering Expert will have the following responsibilities:

- Collaborate with the multidisciplinary team of international and national consultants recruited by project management unit, including the national coastal engineering consultant, to develop the climate resilient ICZM plan for the entire North coast in Egypt.
- Lead the development of, review and eventually approve the Shore Management Plan (SMP) for the entire North Egyptian coast. This includes, but not limited to, the following:
 - Specify measures required to mitigate coastal risks such as erosion and flooding at each coastal unit and calculate the effectiveness and costs of such measures.



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- Identification and delivery of the current and future negative impacts that overtopping may cause on port activity at each coastal unit.
- Calculation and delivery of the following indicators for the potential impacts of climate change on the north coast: Sediment Transport Indicator (STI), Long Term erosion Indicator (LTI), Beach Erosion Indicator (BEI), Coastal Erosion Indicator (CEI), Assignment to coastal points, the erosion index, Beach Flooding Indicator (BFI), Coastal Flooding Indicator (CFI), Assignment to coastal points, the flooding index, Agitation and overtopping exceedance Agitation-based and overtopping-based operability indicators, Port downtime index, and Siltation or other relevant indicators.
- Lead, review and approve the following reports in collaboration with the national coastal engineering expert:
 - a report on the effectiveness and costs of measures to mitigate coastal erosion for venerable sites along the North Egyptian coast.
 - a report on the effectiveness and costs of measures to reduce flood risks under different scenarios of SLR and extreme weather events.
 - a report on the current and future negative impacts that overtopping may cause on port activity in north coast at study level units.
 - a report on the indicators for the potential impacts of climate change on the north coast (See above for details).
- Participate in regular virtual and in person meetings with the project team, and field trips - if needed- with the ECCADP and relevant stakeholders.
- Deliver expert opinion and help in making appropriate decisions for the project management unit in the development of the SMP.
- Liaise with the project strategic planning officer of the project all activities that are related to the climate resilient ICZM plan.
- Participate in the implementation process of ICZM plan in a number of pilot governorates in the Egyptian northern coasts.
- Assist in updating and finalizing the SMP following the implementation each pilot governorates.
- Advise on required measures to improve the SMP in the future.

3. Duration

- ECCADP will contract the expert for Twelve months within which S/He will be asked to deliver a number of reports and attend a number of meetings as part of the process of developing and implementing the climate resilient ICZM plan for the North Coast of Egypt. This contract can be renewed based upon the project requirements and the evaluation of the performance of the work carried out in the preceding year.
- The estimated working days for this task are 40 days during the period of the initial contract (i.e. 12 months) and the expert will be contacted for each duty at least two weeks before their planned dates.

4. Deliverables

- A Framework for the SMP for North Coast of Egypt including Table of Contents.
- Monthly progress reports showing the progress of the SMP development, implementation and finalization activities.
- A report describing the selected coastal systems/measures within the climate resilient ICZM plan showing the various options that have been examined, basis for the selection of a particular system/measure and guidance for design and construction of such systems/measures.



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- A final report describing the process of development, implementation and finalization activities of the SMP along with lessons learned and recommendations for improvement.

5. Implementation Arrangements:

The consultant will be reporting to the PMU. The consultant will be home based with 2-3 trips to Egypt throughout the contract duration.

6. Qualifications and Experience

- University degree in coastal engineering, or other relevant disciplines. preferably at MSc. level.
- A minimum of (15) years of professional experience in coastal engineering projects. Previous work experience with similar projects to the ECCADP project is mandatory.
- Experience with shoreline management projects in Egypt and/or in countries with similar conditions and comparable complexities is preferred.
- Knowledge of relevant national and local institutions in Egypt would be an advantage.
- Fluency in written and spoken English is must.

7. Evaluation / Selection Process

All applicants will be screened against qualifications and the competencies set above.

Candidates fully meeting the requirements will be further evaluated based on the criteria below:

- **Technical Criteria CV review: max 70 points:**
 - Educational qualification as defined in the ToR (10 points)
 - Experience as defined in the ToR (10 points)
 - Relevant work experience in similar projects – 20
 - Experience of the Egyptian northern coasts– 30
- **Financial Criteria - max. 30 points:**
 - Financial scores will be calculated using the formula [lowest offer / financial offer of the candidate x 30].
- **Application:**

Please submit your application letter, recent CV, and a financial offer including daily rate and breakdown of costs for achieving the above tasks and deliverables to the below email specifying the title of the post:

Dr Mohamed Ahmed

mohamed.ahmed@eccadp.com

egyptgcfproject@gmail.com

Consultancy notice issued on: Oct. 27, 2024

Deadline for application: Oct. 31, 2024