

Call for individual Coastal / Hydro–dynamic Modelling Expert to assist in the verification process of developing and implementing the climate resilient ICZM plan for the North Coast of Egypt

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 Intergovernmental Panel on Climate Change (IPCC) in its Fourth Assessment Report as one of the world's three "extremely" vulnerable deltas in the world. The objective of the ECCADP 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 a climate resilient Integrated Coastal Zone Management (ICZM) plan for the entire North Coast of Egypt, to manage long-term risks including climate change.

The ECCADP 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 ECCADP is implemented by the Ministry of Water Resources and Irrigation (MWRI) and is jointly funded by the Government of Egypt (GoE), the Green Climate Fund (GCF) and the United Nations Development Programme (UNDP).

The ECCADP recruited an international consultancy firm to develop and assist in the implementation of a climate resilient ICZM plan for the North Coast of Egypt. The consultancy firm will build on the various outputs of the ICZM scoping study (<http://iczmegyptmaps.ihcantabria.com/Visor>) that was undertaken within the GEF/UNDP funded project, Adaptation to Climate Change in the Nile Delta through ICZM (ACCADP) which was completed in June 2018.

The project seeks to recruit an individual Coastal / Hydro–dynamic Modelling Expert to assist in the verification process of developing and implementing 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:

- 2.1 Review and approve the following items (consultancy firm' deliverables):
 - 2.1.1 Numerical process-based model for translating oceanic boundary conditions into hydrodynamic conditions at the North Egyptian coast with detailed user guides and manuals.
 - 2.1.2 Database of hydrodynamic conditions in the coastal zone which are pertinent for studies of risk assessment and for studies of coastal erosion for different climate change scenarios.
 - 2.1.3 Numerical process-based coastal zone flooding model with detailed user guides and manuals.
 - 2.1.4 Numerical process-based model of groundwater flow and salt intrusion for the most impacted zones with detailed user guides and manuals.
 - 2.1.5 Numerical model for simulating sediment transport and coastal erosion / sedimentation with detailed user guides and manuals.
- 2.2 Advise on corrective measures for the any defects in the ICZM activities regarding the related tasks.
- 2.3 Participate in meetings and field trips - if needed- with the ICZM consultancy firm and relevant stakeholders.
- 2.4 Provide expert opinion on matters related to Coastal / Hydro-dynamic Modelling with the context of the climate resilient ICZM plan.
- 2.5 Provide expert opinion and help in making appropriate decisions in case there is a disagreement between the consultancy firm and the project management unit, or the stakeholders involved in the development of the ICZM plan.

3. Duration

- 3.1 ECCADP will contract the expert for twenty-seven 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 period.
- 3.2 The estimated working days for this task is 90 days during the period of October 2021 – January 2024, and the expert will be contacted for each duty at least one week before their planned dates.

4. Deliverables

- 4.1 Reports that include the review and evaluation of the following items:
 - 4.1.1 Numerical process-based model for translating oceanic boundary conditions into hydrodynamic conditions at the North Egyptian coast with detailed user guides and manuals.
 - 4.1.2 Database of hydrodynamic conditions in the coastal zone which are pertinent for studies of risk assessment and for studies of coastal erosion for different climate change scenarios.
 - 4.1.3 Numerical process-based coastal zone flooding model with detailed user guides and manuals.
 - 4.1.4 Numerical process-based model of groundwater flow and salt intrusion for the most impacted zones with detailed user guides and manuals.
 - 4.1.5 Numerical model for simulating sediment transport and coastal erosion / sedimentation with detailed user guides and manuals.
- 4.2 Propose corrective measures to fix any deviations from the ICZM consultancy firm.

- 4.3 Provide expert opinion – in writing– on matters related to Coastal / Hydro–dynamic Modelling with the context of the climate resilient ICZM plan and in case there is a disagreement between the consultancy firm and the project management unit, or the stakeholders involved in the development of the ICZM plan.
- 4.4 Final report that includes verification process and approval of the above–mentioned deliverables (4.1.1~ 4.1.3).
- 4.5 lessons learned and recommendations for improvement.

5. Qualifications and Experience

- 5.1 University degree in Civil Engineering or related relevant discipline, preferably at MSc. level.
- 5.2 A minimum of ten (15) years of professional experience in the area Coastal / Hydro–dynamic modelling and / or other relevant projects.
- 5.3 Previous work experience with similar projects is strongly recommended.
- 5.4 Experience with Integrated Coastal zone and shoreline management projects in Egypt or in countries with similar conditions and comparable complexities would be an advantage.
- 5.5 Knowledge of relevant national and local institutions at would be an advantage.
- 5.6 Fluency in written and spoken English is must and in Arabic is advantage.

6. Application:

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

Dr Mohamed Ahmed

egyptgcfproject@gmail.com

Consultancy notice issued on September 1st, 2021.

Deadline for application is July 1st, 2021.

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:

7.1 Technical Criteria CV review: 70 points (minimum pass score = 50 points):

- 7.1.1 Educational qualification as defined in the ToR (10 points).
- 7.1.2 Experience as defined in the ToR (20 points).
- 7.1.3 Relevant work experience in verification process of ICZM plan (20 points).
- 7.1.4 Experience of the Egyptian northern coasts (20 points).

7.2 Financial Criteria: 30 points.

- 7.2.1 Financial scores will be calculated using the formula [lowest offer / financial offer of the candidate x 30].