

Terms of Reference

Coastal Protection Project at El Banayen Area in Burullus Kafr Elshiekh in Egypt

Background

The Egyptian Shore Protection Authority (SPA) is part of the Ministry of the Water Resources and Irrigation in Egypt and is responsible for the protection of the Egyptian Mediterranean and Red Sea coasts. SPA plans, designs and maintains the coastal structures along the abovementioned coasts such as jetties, sea walls, groins etc. to face the challenges of Climate Change, sea level rise, and shoreline erosion. SPA is also the implementing authority for the first component of the Enhancing Climate Change Adaptation in the North Coast and Nile Delta Regions in Egypt Project (ECCADP) that focuses on protecting 69 km at five vulnerable hotspots within the Nile Delta to sea level rise and extreme weather events.

SPA, with financial assistance from ECCADP, seeks to hire a specialist in the field of coastal engineering to provide technical support to SPA staff. The specialist will supplement SPA capabilities in delivering project designs and build staff capacities in using modern tools in their daily tasks.

Study area

El Banayen Area located in Burullus in Kafr Elshiekh, North of Egypt (See Figure 1). The area is currently subject to erosion and sedimentation and mining of the sand dunes to extract the valuable black sands. SPA aims to safeguard vulnerable shoreline in the study area from erosion, sedimentation and other potential hazards.

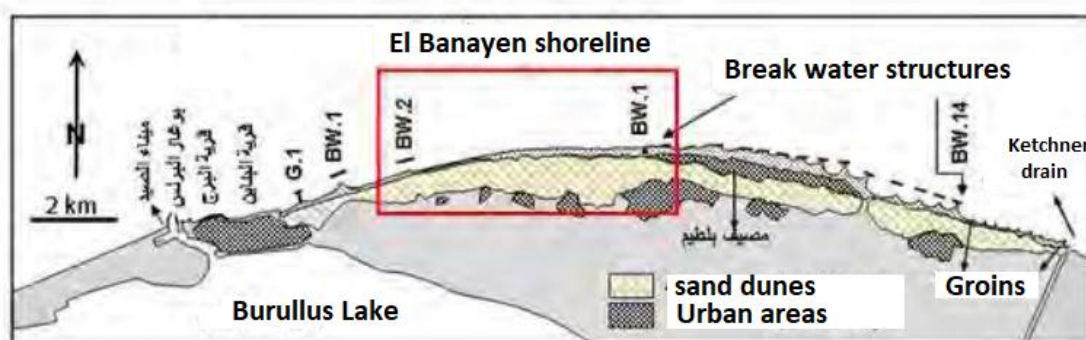


Figure 1: Study area

Objectives

The objectives of this technical assistance are:

- Enhance SPA staff capacities through on-the-job training capacity-building activities.
- Conduct a comprehensive assessment of coastal vulnerabilities and risks at El Banayen Area in Burullus Kafr Elshiekh in Egypt.
- Develop and design effective coastal protection measures to enhance resilience and reduce the impact vulnerabilities and risks identified above.
- Provide a monitor plan to evaluate the effectiveness of implemented measures.

Scope of Work

The scope of work for this technical assistance includes, but is not limited to:

- Supervise and review the following tasks that will be undertaken by SPA staff:
 - Development of a numerical model for the study area using a well-known modelling system such as Mike21 or Delft3D.
 - Conduct a detailed coastal vulnerability assessment, including the identification of high-risk areas and potential hazards at El Banayen Area in Burullus Kafr Elshiekh in Egypt.
 - Identify and design coastal protection measure (s) to mitigate the vulnerabilities and risks identified above. Designs need to be based on scientific assessments and best practices.
- Develop a monitor plan to enable SPA staff to evaluate the performance of above designed coastal protection measure(s) over time, using indicators such as shoreline erosion/sedimentation rates.

As part of this scope of work, SPA will be able to provide the following:

- Data such as
 - Land and marine survey of the study area
 - Sand dunes and breach sediment samples
 - Existing coastal structures
 - Shoreline changes in the study area



- Wind, waves and currents in the study area
- Previous studies that are relevant to the study area.

Deliverables

The deliverables will be to be jointly developed by SPA staff and the specialist and include:

- A numerical model of the study area.
- A coastal vulnerability assessment report, including maps, data analysis, and risk assessments.
- A detailed design report and implementation plans for coastal protection measure(s) in study area including all necessary tender documents.
- A monitoring and evaluation plans report on the effectiveness of implemented measure(s.)

Minimum Qualifications of the specialist

- An engineering degree in coastal engineering (preferably Ph.D. and/or M.Sc.)
- A minimum of 10 years of proven experience in the design of coastal protection measures.
- A minimum of 10 years hands-on experience on the use of computer simulation models in coastal engineering projects and coastal protection.
- Familiarity with coastal processes and protection measures in Egypt.
- Good personality and capable on mentoring and guiding young professionals during his course of this technical assistance at SPA

Timeline

The project is expected to be completed within one month, with regular progress reports and milestone reviews to ensure timely delivery of the scope of work and deliverables.

Offer Contents

The consultant is requested to provide the below two offers for evaluation in separate envelopes:



GREEN
CLIMATE
FUND



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)



- The technical offer including:
 - A recent CV
 - Previous relevant experience
 - Study methodology including the mathematical model(s) to be used.
- The Financial offer including:
 - The total value of the offer including taxes and other anticipated expenses with a breakdown of the cost.
 - The currency of the offer.

Evaluation criteria

The received offers will be evaluated as shown below:

- Technical offer 70%
 - Specialist qualifications 10%
 - Methodology to undertake the scope of work 30%
 - Previous studies work in Egypt and in the study area 10%
 - Previous works for similar projects 20%
- Financial offer 30%

Contact Information:

For inquiries or further information, please contact Prof. Dr. Essam khalifa, SPA Chair at Essam@mwri.gov.eg and Dr Mohamed Ahmed the ECCADP executive manager at mohamed.ahmed@eccadp.com.

Offers need to be submitted to the following emails:

Essam@mwri.gov.eg

mohamed.ahmed@eccadp.com

Deadline for submission: 15 April 2024