



ADAPTATION TO CLIMATE CHANGE IN THE NILE DELTA THROUGH INTEGRATED
COASTAL ZONE MANAGEMENT PROJECT

**INTEGRATED COASTAL ZONE MANAGEMENT IN THE
NORTHERN COAST OF EGYPT
– A SCOPING STUDY –**

**DELIVERABLE 1:
INCEPTION REPORT**

SEPTEMBER 2016



FOREWORD

This is the first of the seven deliverables of the study entitled *Integrated Coastal Zone Management in Egypt- a Scoping Study*, according to the contract signed by the Environmental Hydraulic Institute Foundation “IH Cantabria” and the Adaptation to Climate Change in the Nile Delta through Integrated Coastal Zone Management Project (ACCNDP), on 14th July 2016.

The preliminary version of this Inception Report is dated 26th August 2016. ACCNDP kindly submitted comments on the Inception report on 9th October 2016. This document includes these comments and presents the final Inception Report.

This report includes a detailed work-plan including the following chapters: Introduction, Scope of Work, including the work plan and the list of deliverables. Furthermore, this report summarizes the activities and conclusions extracted from the first workshop scheduled within the study (Inception Workshop).

The Consultant (IH Cantabria and Environics) was fortunate in receiving full cooperation from ACCNDP.

Santander, 13th October 2016.

Raúl Medina Santamaría.

Project Manager



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1. INTRODUCTION

This introductory chapter provides a brief description of the administrative framework and the objectives of the study.

Under contract, the title of the study is *Integrated Coastal Zone Management in Egypt – a Scoping Study*. It has been renamed under ACCNDP suggestion as *Integrated Coastal Zone Mangement in the Northern Coast of Egypt - a Scoping Study*. To facilitate reading, the study is hereinafter named *ICZM Scoping Study*.

1.1. Administrative framework

The summary of the contract terms is presented in the following table:

ICZM in the Northern Coast of Egypt – a Scoping Study	
Contract terms	
Contracting authority	The Adaptation to Climate Change in the Nile Delta through Integrated Coastal Zone Management Project” (ACCNDP)
Starting date	15 th July 2016
Time period	5 months
Budget	298,120 USD

Table 1. Summary of contract terms.

The *ICZM Scoping Study* is financed by *The Adaptation to Climate Change in the Nile Delta through Integrated Coastal Zone Management Project (ACCNDP)*.

ACCNDP is an initiative of the Coastal Research Institute (CoRI) and funded by the Egyptian Ministry of Water Resources and Irrigation (MWRI) through the Shore Protection Authority (SPA), the Global Environmental Facility (GEF) and United Nations Development Programme (UNDP). The ACCNDP aims to integrate the management of Sea Level Rise related risks into the development of Egypt’s Low Elevation Coastal Zone (LECZ) in the Nile Delta by strengthening the regulatory framework and institutional capacity to improve resilience of coastal settlements and development infrastructure, implement innovative and environmentally friendly measures that facilitate/promote adaptation in the Nile Delta, and establish a monitoring and assessment framework and knowledge management systems on adaptation.

1.2. Objectives

The main objective of this study is to define the scope of establishing an ICZM Plan along the North Coast of Egypt.

The study has two specific objectives, corresponding with two tasks (Task 1 and Task 2):

- Objective of Task 1: to identify existing conditions for the development of coastal management plans in the Mediterranean coast of Egypt, in terms of available resources. Therefore, this study will define the present and future coastal issues and challenges that will determine the management priorities of the Mediterranean coast of Egypt.

- Objective of Task 2: to raise the awareness of relevant stakeholders on the importance and benefits of having an ICZM Plan. That is, to involve and empower concerned authorities and non-governmental stakeholders in the coastal planning process.

2. SCOPE OF WORK

This Chapter describes the scope and the methodology proposed for the development of Tasks 1 and 2. Each Task is made up by a set of Activities, presented in the following table:

TASK	ACTIVITY
1. ICZM stock-taking, preliminary assessment and scoping study	1.1 Data collection and assessment.
	1.2 Definition of Coastal Units.
	1.3 Assessment of each Coastal Unit.
	1.4 Assessment of long-term scenarios.
	1.5 Development of the GIS System.
	1.6 Transfer of knowledge.
2. Consultation, awareness raising and participation	2.1 Stakeholders identification
	2.2 Development of communication tools
	2.3 Visioning coastal challenges

Table 2. Task and activities of the study.

2.1. Task 1. ICZM stock-taking, preliminary assessment and scoping study

The main objective of Task 1 is to identify and preliminary assess technical, environmental and socio-economic issues related to shoreline management along the Mediterranean coast of Egypt. This Task includes all the activities required to provide a holistic understanding of the coast, identifying present and future challenges and problems. These challenges will guide the objectives of future coastal management plans.

This Task starts with the **collection of all existing information** needed for carrying out the study: data, models, projects and plans in the Egyptian Mediterranean coast, policies and institutional arrangements related to the coastal management. Moreover, an initial stocktaking of the sectoral plans of interest for the coastal zone is to be carried out.

All this information will be collated and analysed to **assess the coast from its different dimensions**: i.e. physical, ecological, social and cultural, economic, institutional and policy. This information will be **summarized into factsheets**, providing synthetic information on the major results and facilitating their use by non-specialist stakeholders and decision-makers.

2.1.1. Activity 1.1 Data collection and assessment

This Activity has a twofold objective:

- first, to analyse the existing data relevant for the coastal management, and their availability;
- second, to collect available information (data, models, reports, plans, policies and institutional arrangements...) to support coastal assessment.

The first step of this Activity is the **identification of data needs**. The data needs list, presented in the following table, was submitted to the Client on the 2nd August 2016.

TYPE	SUBSYSTEM	DATA	FORMAT
Documents	Coastal plans	Master Plans	pdf/doc and GIS
		Shoreline Management Plans	pdf/doc and GIS
		Coastal Schemes made by the SPA	pdf/doc and GIS
	ICZM Plans	Marsa Matruh	pdf/doc and GIS
		Alexandria	pdf/doc and GIS
		Fuka	pdf/doc and GIS
	Future plans	Urban development plans	pdf/doc and GIS
		Tourism development plans	pdf/doc and GIS
		Industry development plans	pdf/doc and GIS
Sat.	Ortophotos	Available ortos of the coastal area	raster
Numerical and qualitative data	Admisnitrative boundaries (and toponomy)	Egypt	.shp (poly or line)
		Governorates	.shp (poly or line)
		Regions	.shp (poly or line)
		Markaz	.shp (poly or line)
		Qism	.shp (poly or line)
		Cities /towns/ villages	.shp (polygon or point)
		Bedouin settlements	.shp (polygon or point)
		Coastal element names (beaches, geological elements)	.shp (point, annotation)
	Morphology (physical features)	Grain size (D50) for each beach	.shp (polygon)/pdf/doc
		Beach length and width	
		Beach slope	
		Shoreline positions (for available years)	.shp (line)
		Bathymetry (if not digitized, nautical charts)	raster
		Topography (DEM)	raster
		Sediment mass balance (if available)	.shp
		Water balance (if available)	.shp
	Hydrology	Wadis / rivers location	.shp (line or polygon)
		Sabkhas / Wetland location	.shp (polygon)
		Groundwater basin location	.shp (polygon)
		Water intakes	
		Water quality	
		Wells	
		Water bodies	.shp (polygon)
	Geology	Coastal dune location	.shp (polygon)
		Shoreline types (sand, rock, artificial)	.shp (line)
		Seabed typology	.shp (polygon)
		Soil typology	.shp (polygon)
	Environmental features (ecology)	Protected areas	.shp (polygon)
		Internationally designated areas (Ramsar sites, IBAs, IPAs)	
		Water quality	.shp (polygon or point)
		Ecosystems / habitats valuable habitats	.shp (polygon)
		Turtle nesting beaches	.shp (point or polygon)
		Environmental status	
		Natural resources	
		Main species (flora and fauna)	
		Species of concern (threatened, endemic, of social importance, etc)	
	Threats to biodiversity		
	Land use and infrastructures	Land use (for available years)	.shp (polygon)
		Urban, industry and tourism sprawl (from future plans)	.shp (polygon)
		Built up area	.shp (polygon)
		Roads	.shp (line)
		Bridges	.shp (polygon)
		Airports	.shp (point)
		Ports/Harbours	.shp (polygon)

		Railway	.shp (line)
		Fishing ports	.shp (polygon)
		Sanitation and water supply infrastructures	.shp (polygon)
		Energy supply infrastructures	.shp (polygon)
		Industry	.shp (poly or point)
		War places (demining)	.shp (polygon or point)
		Shoreline structures (groins, breakwaters, dikes, resorts, harbors)	.shp (polygon)
		Touristic areas/resorts	.shp (polygon)
		Public beaches	.shp (polygon)
		Border check point	
		Land Cover	.shp
		Coastal discharges	
		Social and cultural	Economic activities
	Employment		pdf/doc (.shp if available)
	Population		pdf/doc (.shp if available)
	historical developments		pdf/doc (.shp if available)
	Security		
	Infrastructure		
	Health		
	Education		pdf/doc
	Tribes		pdf/doc
	Housing		pdf/doc
	Traditions		pdf/doc
	Heritage		pdf/doc
	Incomes		pdf/doc
	Archeological sites		.shp
	Literacy and school rates		.shp (polygon)
	Climate	Incomes	.shp (polygon)
		Human development index	.shp (polygon)/pdf/doc
		Buoys data	
	Others	Tide gauges data	
		Weather station data (winds)	
		Solid Waste (disposals, landfill fill, etc.)	.shp / doc
Noise Level stations		.shp / doc	
Air Quality stations		.shp / doc	
Weather stations		.shp / doc	
Renewable energy (Wind and Solar Atlas)		.shp / doc	
Agricultural Lands (Size, Quality, Crops, etc.)		.shp	
Oil and gas extraction sites and infrastructures		.shp	
Maritime transport routes		.shp	
Submarine cable and pipeline routes		.shp	
National Maritime Boundaries		.shp	
Fishing areas (Aquaculture, Fish Farming, etc.)	.shp		

Table 3. List of data needs

This list includes the necessary data to conduct the assessment of the Mediterranean coast of Egypt, including physical, environmental, socioeconomic and land use information. The met-ocean information will be provided by IH Cantabria, who has developed a large numerical database of wave climate in the Mediterranean coast. Besides, this list includes existing and future plans related to urban, industry and tourism development, and existing coastal management plans.

The second step of this Activity is to **collect available information from Egyptian institutions and stakeholders**. To promote stakeholders collaboration, the Consultant organized an Inception Workshop on 17th August 2016 in

Cairo, to present the study to key stakeholders and agree on cooperation for data provision (see page 26). Afterwards, data will be collected directly through individual interviews with key stakeholders:

- Shore Protection Authority (SPA)
- Coastal Research Institute (CoRI)
- Egyptian Environmental Affairs Agency (EEAA)
- General Organization of Physical Planning (GOPP, under Ministry of Housing)
- National Center for Planning State Land-Use.
- Tourism Development Authority (TDA)
- Coastal Governorates

Other stakeholders will be contacted by telephone and/or email in order to obtain specific data from them.

The interviews with stakeholders for data collection need to be supported officially by means of ACCNDP letters.

The final date for data collection from stakeholders has been established on the 30th September 2016.

In addition to the data expected to be provided by key stakeholders, the Client has provided the following information to the Consultant regarding the Nile Delta:

TITLE	FORMAT	DATE
Coastal Protection Works on Nile Delta	.doc	December 2010
Basic physical data for Nile Delta Governorates	.doc	September 2012
Physical Parameters related to climate change along the Mediterranean coastal zone of Egypt	.pdf	June 2012
Head Master Initiative for the Nile Delta Coastal Hydrodynamics, Sediment Transport, Erosion, and Defense Schemes in View of Climate Change and ICZM.	.pdf	2012
The Burullus and Baltim sand dune system and surrounding areas Kafr El Sheikh Governorate, Nile Delta, Arabic Republic of Egypt	.pdf	2013
Study of the sedimentary environment of deposition along the Mediterranean coastal area of Egypt	.pdf	2011
Nile Delta, including spatial information of: Delta Governorates Roads Waterways Lakes Fish farms Urban area Centres Agriculture	.mpk (this is geographical information but it does not include any description field, nor names)	unknown

Table 4. Data provided by the Client related to the Nile Delta

2.1.2. Activity 1.2 Definition of Coastal Units

In order to deal with the great variety of conditions of the Mediterranean coast of Egypt, the coastal strip is divided into **homogeneous coastal units that require a specific management strategy**. Therefore, this division is to facilitate not only the coastal diagnosis but also its future planning and management.

First, a preliminary division of the coast was done according to **physical, environmental and administrative criteria** (hierarchically):

1. Physical criteria: changes in sediment transport due to the existence of headlands or changes in the direction of the coast. For instance, lateral boundaries of the coastal units might be natural, formed by capes, or artificial, created by elongated coastal structures.
2. Environmental criteria: presence of protected areas and water bodies (lakes and lagoons) that should be completely included within a Coastal Unit.
3. Administrative criteria: Governorates and *marakiz* (regions) limits.

The preliminary division of the coastal strip has resulted in fourteen Coastal Units (CU): six CU in the North Coast, six CU in the Delta Coast and two CU in the coast of North Sinai. This preliminary division of the coastal strip was **presented and discussed with the key stakeholders** during the following meetings:

- Kick off meeting: held at the facilities of the National Water Research Centre (NWRC) in Cairo, on 15th August 2016. The Client validated these preliminary Coastal Units.
- Meeting with SPA: the preliminary Coastal Units were presented and discussed with SPA on 16th August 2016, at the SPA headquarter facilities in Cairo. One of the main objectives of the meeting with SPA was the revision of existing coastal units or schemes defined under previous Master or Shoreline Management Plans. However, these plans do not include a division of the complete Mediterranean coast of Egypt, and the preliminary Coastal Units were validated.
- Inception Workshop: the preliminary Coastal Units were shown to the attendees of the Inception Workshop. The representative of the ICZM Department of EEAA stated that EEAA has a division of the coastal strip into management units. Therefore, the Consultant arranged a meeting with EEAA ICZM Department to discuss about the coastal zonation.
- Meeting with EEAA ICZM Department: the criteria for the establishment of Coastal Units was discussed in the first week of September. EEAA ICZM Department agreed with criteria.

Once these key stakeholders validated the preliminary Coastal Units, the final zonation of the coastal stretch is drawn and presented in the next figure.

The inland and seaward limits of the final Coastal Units consider Article 39 of the Environmental Law 4/1994 amended by Law 9/2009: *“Coastal Zone: the area extending from the coasts of Arab Republic of Egypt encompasses the territorial sea, exclusive economic zone and continental shelf, and extending landward to areas of active interactions with the marine environment for that not exceeding 30 km in the desert areas, unless major topographical features interrupt this stretch, while in Nile Delta would extend up and contour (+3m). Each of the coastal governorates shall define their coastal zone according to its physical conditions and environmental resources, not in any case less than “10 km” landward from coast line.”*

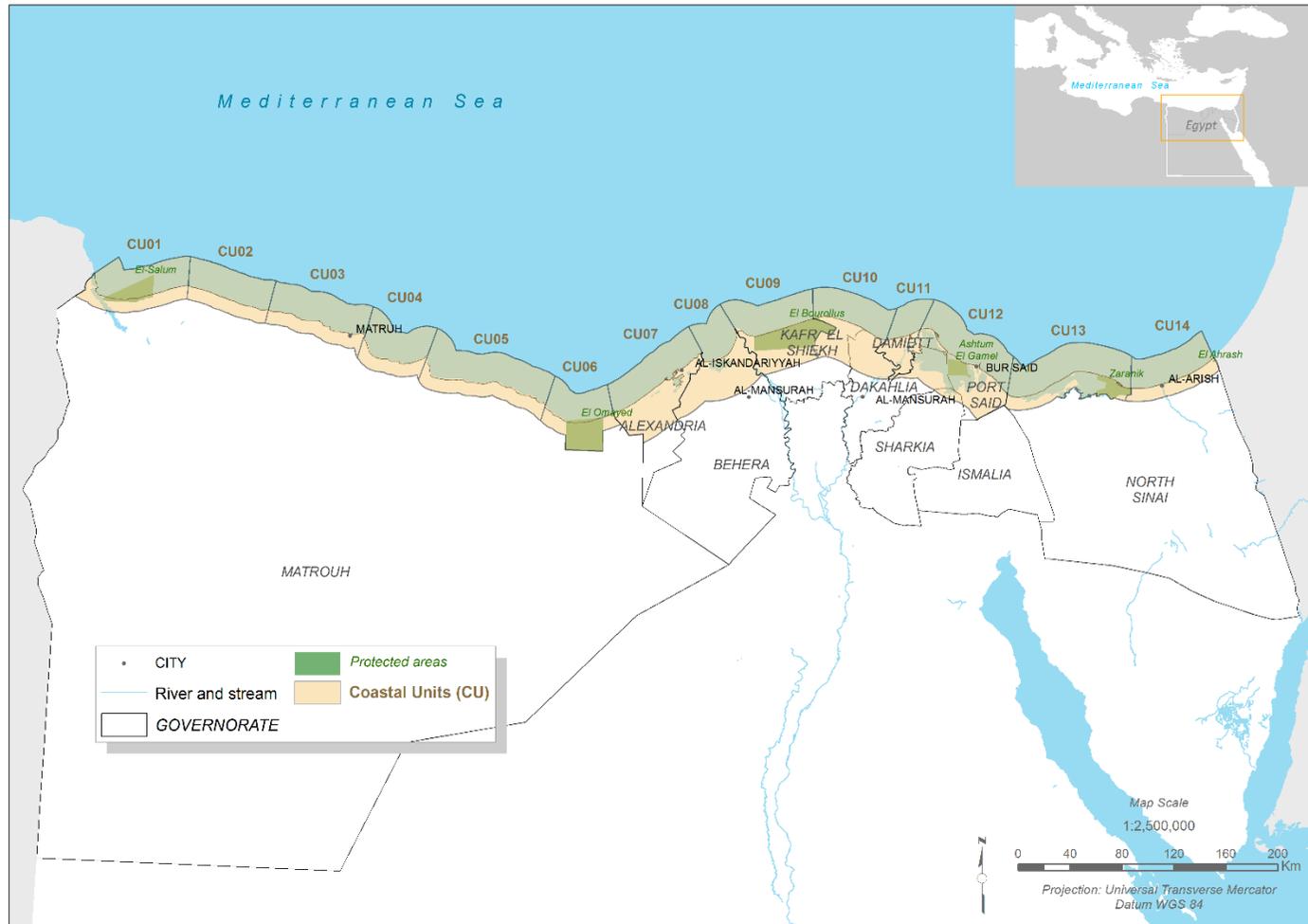


Figure 2. Coastal Units.

2.1.3. Activity 1.3 Assessment of each Coastal Unit

This Activity is to provide a description of the current characteristics, problems and challenges of each Coastal Unit, based on environmental and socio-economic analyses. The final output is a set of current key issues for the coastal management.

The **environmental analysis** includes the study of the physical and ecological subsystems, at two levels: i) basic physical and ecological data and ii) physical and ecological diagnosis, using indicators.

COASTAL SUBSYSTEM		BASIC INFORMATION	DIAGNOSIS
Environmental assessment	Physical assessment	<ul style="list-style-type: none"> - Coastal morphology - Coastal typology - Singular elements - Climate related variables (air temperature, precipitation, wind, sea level, waves and sea surface temperature) 	<ul style="list-style-type: none"> - Erosion and sedimentation areas - Flooding areas - Hotspots
	Ecological assessment	<ul style="list-style-type: none"> - Distribution of coastal habitats - Water bodies - Endemic species - Endangered species 	<ul style="list-style-type: none"> - Protected areas and IBAS - Impacts and pressures - Water quality

Table 5. Example of information analysed under the environmental assessment.

The **socioeconomic analysis** will include the study of the social features, the economic activities, the analysis of the land use, and the presence of critical infrastructures in each Coastal Unit. Following the scheme of the environmental assessment, the socioeconomic assessment will provide i) basic information related to population, main economic activities, traditions and heritage, and ii) a socioeconomic diagnosis based on social and economic indicators.

COASTAL SUBSYSTEM		BASIC INFORMATION	DIAGNOSIS
Socioeconomic assessment	Socio-economic assessment	<ul style="list-style-type: none"> - Population - Traditions and heritage - Social conditions 	<ul style="list-style-type: none"> - Population growth - Population displacement - Employment rate
	Land use and critical infrastructures	<ul style="list-style-type: none"> - Land use - Built up area - Critical infrastructures 	<ul style="list-style-type: none"> - To be defined

Table 6. Example of information analysed under the socioeconomic assessment.

Above tables are indicative. The final scope of the environmental and socioeconomic analyses, as well as the definition of indicators for the diagnoses, will be defined according to available data.

The integration of the environmental and socioeconomic assessments will allow the identification of the **current key issues of each Coastal Unit**.

In addition to the analysis of Coastal Units, this Activity also addresses the **assessment of the regulations and institutions** playing a relevant role in the management of the Mediterranean coast of Egypt. The spatial scale of this analysis is the entire Mediterranean coast, since most of regulations are applicable at national scale.

2.1.4. Activity 1.4 Assessment of long term scenarios

This Activity will address long-term changes along the coast of Egypt by integrating the most relevant climatic and climate-related drivers triggering impacts on key environmental and socioeconomic coastal sectors.

In order to inform the decision making process in coastal planning, impacts will be assessed at three different timeframes, namely present (Activity 1.3), near-term (2030-2040) and a long-term (2050-2070).

Drivers

In our analysis several climate-related drivers of impacts will be considered including: air temperature, precipitation, wind, sea level, waves and sea surface temperature. Both mean trends and extremes will be considered in order to provide the necessary inputs for impact calculation.

Information for the near-term will be mostly based on the calculation of trends and extrapolation of historical information of observed or reanalysis time series. For the long-term, projections based on General Circulation Models (GCMs) and Regional Climate Models (RCMs) will be used under different Representative Concentration Pathways (RCPs).

Drivers will be obtained for the near-term at a 10 km spatial resolution and for the long-term downscaled to spatial resolutions depending on the GCMs or RCMs used.

Due to its relevance in the area, land subsidence will be considered as one of the most relevant drivers.

Impacts

Impacts along the coastal area will be calculated for the different timeframes using different indices with a spatial resolution consistent with the drivers. Impacts included will be:

- Flooding
- Erosion and sediment transport
- Heat waves
- Drought stress
- Ocean acidification
- Saltwater intrusion

Impacts will be calculated using indices based on semi-empirical formulations relating drivers and representative characteristics of natural or socioeconomic coastal systems affected.

Key sectors in coastal areas

Among the natural and socioeconomic systems considered for impact calculation, our assessment will include the following ones (tentative list):

- Population
- Tourism

- Urban developments
- Critical infrastructures
- Water resources
- Agriculture
- Coastal fisheries
- Relevant ecosystems (corals, seagrass, lagoons, wetlands, etc.)
- Protected areas

Results

The impacts on key sectors will lead the identification of near-term and long-term key issues for the coastal management.

2.1.5. Activity 1.5 Development of the GIS System

All the information obtained during Task 1 will be integrated in a GIS system. The available spatial data (vector and raster) will be stored as shapefiles and rasters in a centralized ICZM catalogue.

The **ICZM catalogue** will have four main folders:

- **BASIC CARTOGRAPHY:** Base cartography layers will be managed in this folder, such as administrative boundaries (governorates, municipalities, etc.), roads, coastline, hydrology, elevation (digital elevation models), toponymy, utilities, etc.
- **ENVIRONMENT:** Layers related with the main results of the environmental analysis:
 - Coastal Units
 - Physical: layers related with physical processes will be managed in this folder, such as coastal typology or coastal sediment transport.
 - Ecological: layers related with ecology and biodiversity will be managed in this folder, such as protected areas, environmental corridors, turtles nesting beaches, etc.
 - Drivers: air temperature, precipitation, wind, sea level, waves and sea surface temperature.
 - Impacts: flooding, erosion, heat waves, drought stress, ocean acidification and saltwater intrusion.
- **SOCIOECONOMIC:** layers related to demography, social groups and tribes, economic activities, land use and infrastructures:
 - Social: demography and social characteristics.
 - Infrastructures: critical infrastructures and coastal infrastructures.

- Land use and planning: land use maps and future development plans.
- INTEGRATED DIAGNOSIS: layer produced during the integration of sectoral diagnoses:
 - Current key issues
 - Long term key issues

The final structure of the ICZM catalogue will be defined once the data collection is completed.

The coordinate system of the spatial data will be WGS84 UTM N 36. Furthermore, every layer will be described with metadata, following the standard 19115.

Additionally to the above ICZM catalogue, a QGIS project will be provided, in which all the spatial information will be displayed with their corresponding styles for visualization.

The spatial data of the ICZM catalogue will be displayed in a GeoViewer. GeoViewer is a graphic viewer that will be designed specifically for helping stakeholders to explore the ICZM geospatial data, vector overlays and raster data files. The tool will let stakeholders explore the map directly through Firefox and Chrome Web browsers, visualize layers and identify information. In addition, stakeholders will be able to check out a fixed overview of the map, restore the original view, move the view in any direction within the layer, and zoom in or out of the image.

The development framework will be .NET with open source technologies for web mapping display (open layers or leaflet).

The information contained in the ICZM Catalogue and in the Geoviewer can be updated in the future. The Consultant will provide a manual explaining the steps required for updating information into the GIS system (ICZM Catalogue and Geoviewer).

Two level of access will guarantee public and private access. The definition of public and private information will be discussed and agreed with the Client.

The GeoViewer will be accessible from the web site of the study (see Activity 2.2), since it is one of the major outcomes of the study. Before its publication in the web site, the GeoViewer access will be distributed among key stakeholders in order to test it during one week and validate its structure and functionality.

The most significant GIS developments of IH Cantabria can be visualized through the following video channel: <https://vimeo.com/groups/ihit>. The following figures show the designs of the Multi Hazard Risk Assessment System for the Omani Coastal Zone and the web application developed for the ICZM Plan for the coastal area between El Sallum and Marsa Matruh.

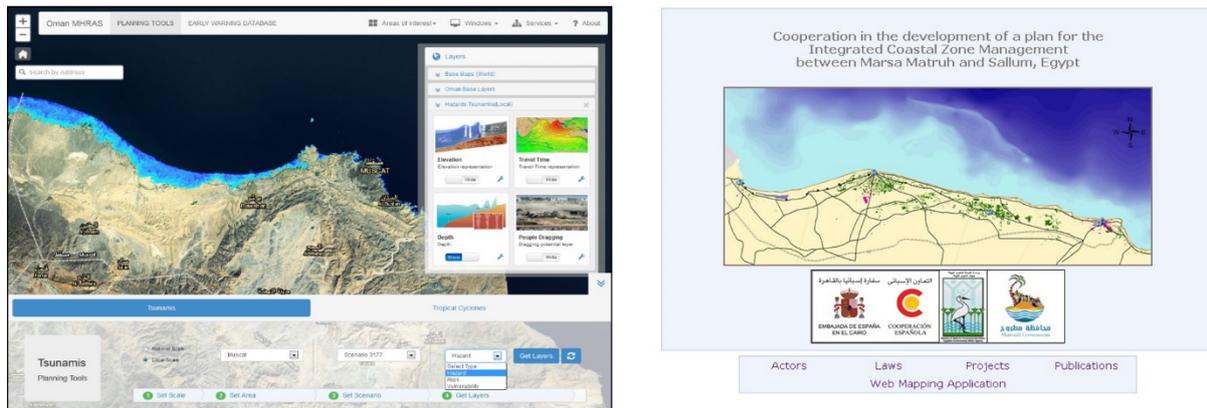


Figure 3. Examples of GeoViewers developed by IH Cantabria.

2.1.6. Activity 1.6 Transfer of knowledge

The *ICZM Scoping Study* will set the basis for establishing an ICZM Plan for the Mediterranean Coast of Egypt. In this context, it is important to ensure the correct empowerment of local coastal managers for using the study results as the baseline of upcoming coastal management plans.

Accordingly, this activity will provide **capacity to ACCNDP partners**, including CoRI, NWRC, MWRI and SPA. This activity will allow end users to deeply understand the scope and the applicability of results of the *ICZM Scoping Study*. The attendees will include researchers and scientists, comprising coastal, port and environmental engineers and managers. The preliminary list of attendees will be proposed by the Client (maximum 30 attendees) and it will be discussed and agreed with the Consultant according to the training contents and scope.

This activity involves the training of ACCNDP partners in the most relevant techniques developed during the study. These include Coastal Units Assessment and Geographic Information System. Therefore, this activity encompasses the organization of **two training sessions**.

The first training session will focus on the assignments developed during the first stages of the study, with special emphasis to the Coastal Units Assessment. This training session is to provide the technicians the scientific background of the methodology applied during the study relative to coastal zoning and identification of short and long-term issues. Results are to be discussed with the attendees to enable them understanding not only the way they were obtained but also their implications for coastal management. This training session will include lectures and practical exercises.

The second training session will be organized at the end of the study and it will focus on the use of the GIS system. This training session is to provide an i) introduction to the GIS system capacities and contents, ii) displaying data and iii) data analysis. This training session will include practical exercises with the GIS system.

The final scope and contents of the training sessions will be defined according to the attendees capacity needs and they will be debated and agreed with the Client.

Both training sessions will be held at the ACCNDP facilities.

2.2. Task 2. Consultation, awareness raising and participation

The general objective of Task 2 is to raise the awareness of coastal stakeholders and obtain a shared ownership of the coastal issues that will lead future management plans.

Stakeholder's participation is crucial to forge partnerships between government administrations and other coastal sectors. At this point, the coordination of government policy and action (vertically and horizontally) and the collaboration of government and non-governmental stakeholders (private sector, academia and local communities) are to sustain the efficiency of coastal management plans.

With this aim, the Consultant will develop a comprehensive communication plan to involve key stakeholders in the definition of the near and long-term issues for the coastal management. This Task starts with the **analysis of coastal stakeholders** and the identification of key publics. Then, this Task addresses the development of the main **communication tools**: the **web site** and the **brochures** explaining results of Task 1. The final part of this Task is the **organization of consultation activities**: the consultant will organize, in collaboration with Egyptian authorities, an agenda of meetings in coastal Governorates. These meetings aim at presenting the major findings of Task 1 to stakeholders and defining the vision of the coastal challenges through the collection of their suggestions and comments.

According to this, Task 2 is divided into three activities:

- Activity 2.1 Stakeholders identification
- Activity 2.2 Development of communication tools
- Activity 2.3 Visioning coastal challenges

2.2.1. Activity 2.1 Stakeholders identification

This Activity focuses on the identification and analysis of coastal stakeholders at national and local level. National stakeholders refer to those stakeholders with interests or competences on the whole Mediterranean coast, and therefore, involved in the management of all Coastal Units. Local stakeholders refer to those stakeholders relevant for the management of specific Coastal Units.

The identification of stakeholders at **national level** is already finalized. A preliminary list of national stakeholders, based on existing information (policies, regulations, reports and projects, etc.), was consulted with key stakeholders during the Inception Workshop. Their inputs were included into the final list of national stakeholders, shown in the following table:

NATIONAL STAKEHOLDERS
AUTHORITIES
Coast Guard Intelligence Service
Egyptian Armed Forces - Navy
Egyptian Cabinet's Information and Decision Support Centre
Egyptian Meteorological Authority
General Authority for Roads & Bridges and Land Transport
Informal settlements Development fund
Information Centre of the climate change and renewable energy
Ministry of Agriculture
Ministry of Agriculture - General Authority for Fish Resources Development - Head quarter (GAFRD)
Ministry of Defence - Coastal Guard Department (CGD)
Ministry of Housing
Ministry of Housing - General Organization for Physical Planning (GOPP)
Ministry of Industry and Foreign Trade - General Organization for Industrial Development (GIO)
Ministry of Local Development
Ministry of Planning
Ministry of Social Affairs
Ministry of State for Antiquities - Supreme Council of Antiquities
Ministry of State For Environmental Affairs - Egyptian Environmental Affairs Agency - Department of Integrated Coastal Zone Management
Ministry of State For Environmental Affairs - Egyptian Environmental Affairs Agency - Head quarter (EEAA)
Ministry of State For Environmental Affairs - Egyptian Environmental Affairs Agency - Nature Conservation Sector (EEAA- NCS)
Ministry of Tourism- Tourist Development Authority (TDA)
Ministry of Transportation - Marine and Harbour Authority (The Central Administration for Ports and Lighthouses)
Ministry of Transportation - Marine Transport Sector (MTS)
Ministry of Water Resources and Irrigation - Drainage Projects Authority
Ministry of Water Resources and Irrigation - General Egyptian Authority for the High Dam and Aswan reservoir
Ministry of Water Resources and Irrigation – Headquarter (MWRI)
Ministry of Water Resources and Irrigation - Headquarter - Ground Water Sector (GWS)
Ministry of Water Resources and Irrigation - General Egyptian Authority for the High Dam and Aswan reservoir
Ministry of Water Resources and Irrigation - Survey Authority
National Center for Planning State Land-Use
National Services Projects Agency
Northren Protected areas office
Nuclear Materials Authority
Surface Water Police
Ministry of Housing - General Organization for Physical Planning - Regional Urban Planning
CIVIL SOCIETY ORGANIZATIONS
Friends of the Environment
The General Federation of NGOs
NATIONAL COMMITTEES
High Level Committee for Integrated Coastal Zone Management (Private Sector, NGO and an Expert)
National Committee for Risk Reduction and Disaster
National Committee for Climate Change
RESEARCH COMMUNITY
Arab Academy for science, technology and maritime transport - Alexandria (AASTMT)
Centre for Housing Research
Desert Research Center
Helwan University / Cairo
Institute of Graduate Studies and Research - Alexandria University
Ministry of Agriculture - Agriculture Research Center - Central Laboratory for Agricultural Climate Institute
Ministry of Water Resources and Irrigation - National Water Research Center (NWRC)
Ministry of Water Resources and Irrigation - National Water Research Center - Coastal Research Institute (CoRI)
Ministry of Water Resources and Irrigation - National Water Research Center - Survey Research Institute

Ministry of Water Resources and Irrigation - National Water Research Center - Water Resources Research Institute (WRRRI)
Ministry of Water Resources and Irrigation - Shore Protection Authority (SPA)
National Authority for Remote Sensing and Space Science (NARSS)
National Institute of Oceanography & Fisheries (NIOF)
National Research Institute for Astronomy and Geophysics (NRIAG)
University of Alexandria - Faculty of Science - Environmental studies <i>Sciences</i>
University of Alexandria - Faculty of Science - Oceanography Department

Table 7. National stakeholders

ii) Identification of stakeholders at **local level**. The Consultant will prepare a list of stakeholders with roles and competencies on specific coastal areas. This list will be elaborated with the information provided by key stakeholders during individual interviews.

Once the national and local stakeholders are known, the Consultant will define a stakeholder’s consultation strategy: key publics, messages, dissemination mechanisms and consultation tools.

The key output of this Activity is the inventory and description of coastal stakeholders, including understanding the relationships between them. The stakeholder’s identification and analysis will provide an overview of the existing human resources and capabilities for the management of the Mediterranean coast of Egypt.

2.2.2. Activity 2.2 Development of communication tools

This Activity encompasses the development of the communication materials of the study: i) web site of the study, ii) brochures explaining results of Task 1. The communication tools will be edited in English and Arabic.

2.2.2.1. Web site – Content Management System (CMS)

The web site has three main objectives:

- Description of the study and provision of results.
- Raising awareness about the benefits of ICZM.
- Two-way communication with coastal stakeholders.

According to these objectives, the information will be structured into three sections:

THE STUDY Description of the study Study activities and results	RAISING AWARENESS Related links Latest news	PUBLIC PARTICIPATION Forum Contact us
--	--	--

The first section, “**The Study**” is to provide information about the development of the study and its results, including the major outcomes of the consultation activities. This section will include the following blocks:

- Description of the study: Background, Objectives, Framework (tasks, activities and outputs), and Partners and Stakeholders.

- Study activities and results: this block will centralize all the relevant information collected, validated, produced and documented for the coastal zone management in Egypt, as: Summary of meetings and workshops, Training materials, Legal documents (if available), Study reports and access to the GeoViewer.

The second section, “**Raising Awareness**”, will include the following blocks:

- Related links, to other ICZM initiatives around the world, as well as other initiatives related to coastal management in Egypt.
- Latest news, related with the study activities.

The third section, entitled “**Public participation**” will ensure the fluent communication between stakeholders and partners. This section will contain two blocks:

- Public forum with moderator, where stakeholders can enter their comments and suggestions about the problems and challenges of the coastal area.
- Contact us, to do specific enquires. The moderator of the public forum and the contact person will be defined by the Client.

In summary, the proposed web structure is:

- Home page (including access to the Geoviewer)
- Description of the study
 - Background
 - Objectives
 - Framework (tasks, activities and outputs)
 - Partners and stakeholders
- Study activities and results
 - Meetings and workshops
 - Training
 - Legal documents (TBC)
 - Study reports
- Geo-viewer
- Related links
- Latest news
- Forum
- Contact us

The Content Management System technologies are:

- IIS

- MySQL 5.7
- Php 5.6.32 (php 7 preferred)
- Wordpress 4.7.

Regarding the CMS visuals, it will be accommodated as much as possible to the existing project web site image (<http://www.nile-delta-adapt.org/>)

2.2.2.2. Brochures

For dissemination and participatory activities, the Consultant will prepare the following brochures:

- Brochures for the Inception Report. The brochures distributed during the Inception Workshop are shown in the following figures.
- Brochures for each coastal Governorate explaining the present and future key issues for coastal management.

Brochures will be broadly distributed among stakeholders and published into the web site of the study.

AUGUST 2016

ICZM IN EGYPT

A SCOPING STUDY

The “Integrated Coastal Zone Management (ICZM) in Egypt – a Scoping Study” is financed by “The Adaptation to Climate Change in the Nile Delta through Integrated Coastal Zone Management Project” (ACCNDP).

ACCNDP is an initiative of the Coastal Research Institute (CoRI) and funded by the Egyptian Ministry of Water Resources and Irrigation (MWRI) through the Shore Protection Authority (SPA), the Global Environmental Facility (GEF) and United Nations Development Programme (UNDP).



The main objective of “ICZM in Egypt – a Scoping Study” is to define the scope of establishing an ICZM Plan along the North Coast of Egypt. Therefore, this project will define the coastal issues and challenges that will determine the management priorities of the Mediterranean Coast of Egypt and will raise the awareness of relevant stakeholders on the importance and benefits of having an ICZM Plan.

THE PRESENT SITUATION: the North Coast of Egypt faces major challenges which impedes achieving a sustainable development, including conflict of responsibilities and interests between different users, severe environmental degradation, water pollution and deteriorating social conditions and climate change impacts. Natural and human induced pressures require long-term planning of coastal areas and the improvement of existing institutional capacities.

THE CHALLENGE: continuing with existing ICZM initiatives in Egypt, this study is to contribute to an holistic understanding of the coastal area and its singularities, involving coastal institutions and communities in the definition of coastal concerns.

THE OUTPUTS: the expected results of the project are:

- The zonation of the Mediterranean coast of Egypt into homogeneous coastal management units.
- The assessment of the coastal management units: current and future coastal issues.
- A GIS database and a web-based geoviewer.
- Involvement and participation of key stakeholders through workshops and communication tools (brochures and web-site).



TASKS AND OUTPUTS

TASK 1: ICZM STOCK-TAKING, PRELIMINARY ASSESSMENT AND SCOPING STUDY

Objective: To identify and preliminary assess technical, environmental, social and economic issues related to shoreline management for the established coastal management units.

Activities	Specific outputs
1.1 Data collection and assessment.	Data assessment for the ICZM development.
1.2 Definition of Coastal Units.	Coastal zonation.
1.3 Assessment of each Coastal Unit.	Assessment of actual issues for each coastal unit.
1.4 Assessment of long-term scenarios.	Description of future issues for different scenarios.
1.5 Development of the GIS System.	GIS database with data collected.
1.6 Transfer of knowledge.	On job training sessions for coastal practitioners.

TASK 2: CONSULTATION, RAISING AWARENESS AND PARTICIPATION

Objective: To involve and empower concerned authorities and non-governmental stakeholders in the coastal planning process.

Activities	Specific outputs
2.1 Stakeholders identification	Inventory of Coastal Zone Stakeholders.
2.2 Development of communication tools	English and Arabic web site and brochures for each coastal Governorate.
2.3 Visioning coastal challenges	Shared recognition and understanding of coastal issues.

THE TEAM

The project team is made up of scientist and experts from IH Cantabria, a Spanish research centre with international experience in coastal management and engineering, and Environics, an Egyptian firm with a long experience in environmental policies and systems, as well as institutional development and capacity building.

<http://www.ihcantabria.com/en/>
<https://environics.org/>



PROJECT MANAGEMENT BOARD

 Rafael Medina - Project Manager medinar@unican.es	 Mahmoud Fouad - Local Coordinator mahmoud.fouad@environics.org	 Maria Merino – ICZM Expert maria.merino@unican.es
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KEY EXPERTS

- José A. Juanes: Senior environmental planner
- Sahar Hafez: Senior institutional and legal expert
- Mauricio González: Coastal Engineer
- Felipe Fernández: GIS specialist

SCIENTIFIC ADVISORY PANEL

- Iñigo Losada: Climate change expert
- Yasser Sherif: Expert in environmental management

SUPPORT STAFF

- Hanna El Gohary and Abdelkhalak A. Ibrahim: Social and urban experts
- Alexandra Toimil and Paula Camus: Climate change experts
- Ignacio Aguirre- Ayerbe: Coastal Risks expert
- Roland Garnier and Omar Frilhy: Coastal engineers
- Anwar Sarwat and Tarek Galal: Environmental experts

Figure 4. Inception Workshop brochure. English version.

أغسطس 2016

الإدارة المتكاملة للمناطق الساحلية في مصر دراسة إستكشافية

إن الدراسة الخاصة بالإدارة المتكاملة للمناطق الساحلية في مصر مموله من قبل المشروع الخاص بالتكيف مع التغيرات المناخية في دلتا النيل (ACCNDP) ، ويمثل المشروع مبادرة من معهد بحوث الشواطئ (CoRI) وممولاً من قبل وزارة الري والموارد المائية بمصر (MWR) وذلك من خلال هيئة حماية الشواطئ (SPA)، المرفق البيئي العالمي (GEF) ، والبرنامج الإنمائي للأمم المتحدة (UNDP).



الهدف الرئيسي من الدراسة : هو تحديد و تأسيس خطة لإدارة المتكاملة للمناطق الساحلية الشمالية بمصر على طول سواحل البحر المتوسط ، لذلك سوف المشروع بتحديد القضايا والتحديات بالمنطقة الساحلية والتي ستحدد الأولويات في إدارة السواحل الشمالية بمصر والتي من شأنها رفع درجة الإدراك والتوعية للمسؤولين ومخذي القرار المفوض بهم هذا الأمر عن أهمية وفائدة إيجاد مثل هذه الخطة .

الموضع الحالي : يواجه الساحل الشمالي لمصر تحديات كبيرة من شأنها إعاقة تحقيق التنمية المستدامة ، بما في ذلك تضارب المسئوليات والإهتمامات بين الكثير من المستخدمين، تدهور بيئي حاد، تلوث للمياه وتدهور الأراضي الزراعية وتأثير التغيرات المناخية، ويحتاج الضغط البشري والطبيعي على الساحل للتخطيط على المدى البعيد للمناطق الساحلية وتحسين القدرات المؤسسية الموجودة حالياً.

التحديات : الإستمرار والتمشي مع المبادرات الموجودة حالياً بمصر والخاصة بالإدارة المتكاملة للمناطق الساحلية ، وستتم هذه الدراسة في الفهم الشامل للمنطقة الساحلية وإشراك المؤسسات والهيئات في تعريف المخاوف الساحلية.

النتائج المتوقعة من المشروع :

- تقسيم السواحل المصرية على البحر المتوسط لروحدات متجانسة للإدارة الساحلية لها
- تقييم القضايا الراهنة و المستقبلية لوحدات الإدارة الساحلية .
- عمل قاعدة بيانات بنظم المعلومات الجغرافية والمشاهدة الجغرافية عبر شبكة الإنترنت
- مساهمة وإشراك أصحاب المصلحة الرئيسيين ومخذي القرار وذلك من خلال ورش العمل ووسائل الاتصال (الكتيبات والموقع على شبكة الإنترنت).

المهام والنتائج

المهمة الأولى : التقييم الأولي والدراسة الاستطلاعية لخطة الإدارة المتكاملة للمناطق الساحلية
الهدف : تحديد وتقييم أولي للتضاربات القبية والبيئية والاجتماعية والاقتصادية المتعلقة بإدارة خط الشاطئ لوحدات الإدارة الساحلية المحددة

الأنشطة	النتائج المحددة
1.1 جمع وتقييم البيانات	تقييم البيانات لخطة الإدارة المتكاملة للمناطق الساحلية
2.1 تعريف وتحديد الوحدات الساحلية	تقسيم الساحل
3.1 تقييم كل وحدة إدارة ساحلية	تقييم القضايا الراهنة لكل وحدة ساحلية
4.1 تقييم الميناريوهات على المدى البعيد	توصيف القضايا والمسائل المستقبلية للميناريوهات المختلفة
5.1 إنشاء نظام المعلومات الجغرافية	إنشاء قاعدة بيانات بنظم المعلومات الجغرافية والبيانات المجمع
6.1 نقل وتبادل المعرفة	دورات التدريب المهني للمشاركين

المهمة الثانية: الإستشارة ورفع الوعي والمشاركة

الهدف : إشراك وتمكين الجهات المعنية وأصحاب المصلحة غير الحكوميين في عملية التخطيط الساحلية.

الأنشطة	النتائج المحددة
1.2 تحديد أصحاب المصلحة	حصر أصحاب المصلحة الرئيسيين في المنطقة الساحلية
2.2 تطوير وسائل الإتصال	عمل موقع على الإنترنت باللغتين العربية والإنجليزية وكتيبات لكل محافظة ساحلية
3.2 وضع تصور بالتحديات الساحلية	الفهم والإدراك المشترك للقضايا والمسائل الساحلية

فريق العمل

يتكون فريق المشروع من مجموعة من الخبراء والعلميين من (IH Cantabria) وهو مركز أبحاث إسباني لديه خبرات طويلة وعالمية في مجال إدارة المناطق الساحلية والهندسة الساحلية (Environics)، وهي شركة مصرية مع خبرة طويلة في مجال السياسات والتخطيط البيئية، وكذا التصوير المؤسسي وبناء القدرات .

<http://www.ihcantabria.com/en/>
<https://environics.org/>

PROJECT MANAGEMENT BOARD

	Raúl Medina - Project Manager medinar@unican.es		Mahmoud Fouad - Local Coordinator mahmoud.fouad@environics.org		Maria Merino – ICZM Expert maria.merino@unican.es
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KEY EXPERTS

- José A. Juanes: Senior environmental planner
- Saïar Hafez: Senior institutional and legal expert
- Mauricio González: Coastal Engineer
- Felipe Fernández: GIS specialist

SCIENTIFIC ADVISORY PANEL

- Iñigo Losada: Climate change expert
- Yasser Sherif: Expert in environmental management

SUPPORT STAFF

- Hanna El Gohary and Abdelhalek A. Ibrahim: Social and urban experts
- Alexandra Toimil and Paula Camus: Climate change experts
- Ignacio Aguirre- Ayerbe: Coastal Risks expert
- Roland Garnier and Omar Frilhy: Coastal engineers
- Anwar Sarwat and Tarek Galal: Environmental experts



Figure 5. Inception Workshop brochure. Arabic version.

2.2.3. Activity 2.3 Visioning coastal challenges

The aim of this Activity is to achieve a broadly shared recognition and understanding of the present and future coastal issues of the Mediterranean coast of Egypt and collect suggestions of coastal stakeholders. The main tool to present and discuss coastal issues with stakeholders is the **organization of public consultation meetings**.

Public meetings will be held in coastal Governorates (i.e.: in Marsa Matruh and Port Said) to facilitate local stakeholder's assistance. The participation of key stakeholders and the local academia (universities and research centers) will be highly promoted.

The meetings will be structured into two parts: the first part to present the major outcomes of the Task 1 with posters sessions and audiovisual presentations; the second part will be dedicated to discuss the key issues for the coastal management. The discussions will be channelled through the development of working groups formed by representatives of authorities, private sector, civil society and academia. This activity will allow building consensus about the priorities for the coastal management.

Public meetings will be supported by questionnaires. Questionnaires will be developed in public meetings and workshops as well as through the web site or other web tools such as <http://www.questionpro.com/> when possible.



Figure 6. Participatory activities during the Inception Workshop.

Suggestions, recommendation and highlights obtained through the consultation process will be analysed and summarized in a summary report that will be published in the study web site. This document will constitute the Vision of the coastal challenges.

2.3. Work plan

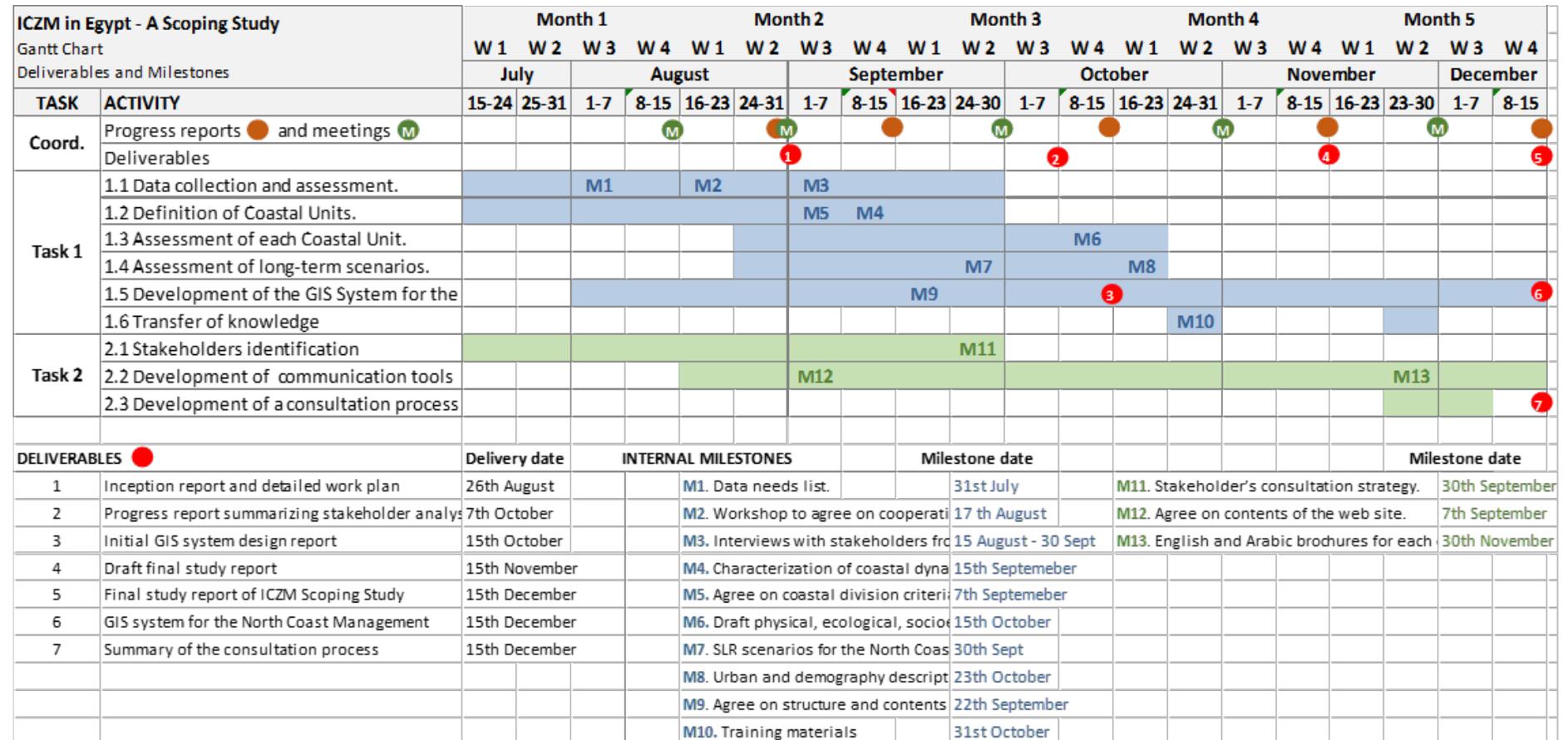


Figure 7. Work plan

2.4. Deliverables

According to the Contract and the proposed Work Plan, the Consultant shall submit the key deliverables specified hereunder according to the following schedule:

DELIVERABLE	DELIVERY DATE
Inception Report and detailed work plan	26 th August 2016
Progress report summarizing stakeholder analysis, field work, consultation process and stocktaking activities	7 th October 2016
Initial GIS System design report	15 th October 2016
Draft final study report	15 th November 2016
Final study report of <i>ICZM Scoping Study</i>	15 th December 2016
GIS System for the North Coast Management	15 th December 2016
Summary of the consultation process	15 th December 2016

Table 8. Deliverable List

3. INCEPTION WORKSHOP

The Inception Workshop was organized under Activity 1.1: Data collection. The Inception Workshop included two parts: the first one devoted to present the *ICZM Scoping Study* to key stakeholders, and the second part, focused on the development of participatory activities.

The Inception Workshop was held at the Pyramisa Hotel in Cairo, on the 17th of August 2016.

3.1. Participants

The workshop counted on the participation of 59 attendees, including representatives from diverse institutions such as the MWRI, EEAA, Ministry of Housing, research centres, and coastal governorates (among others), as shown in the next figure.

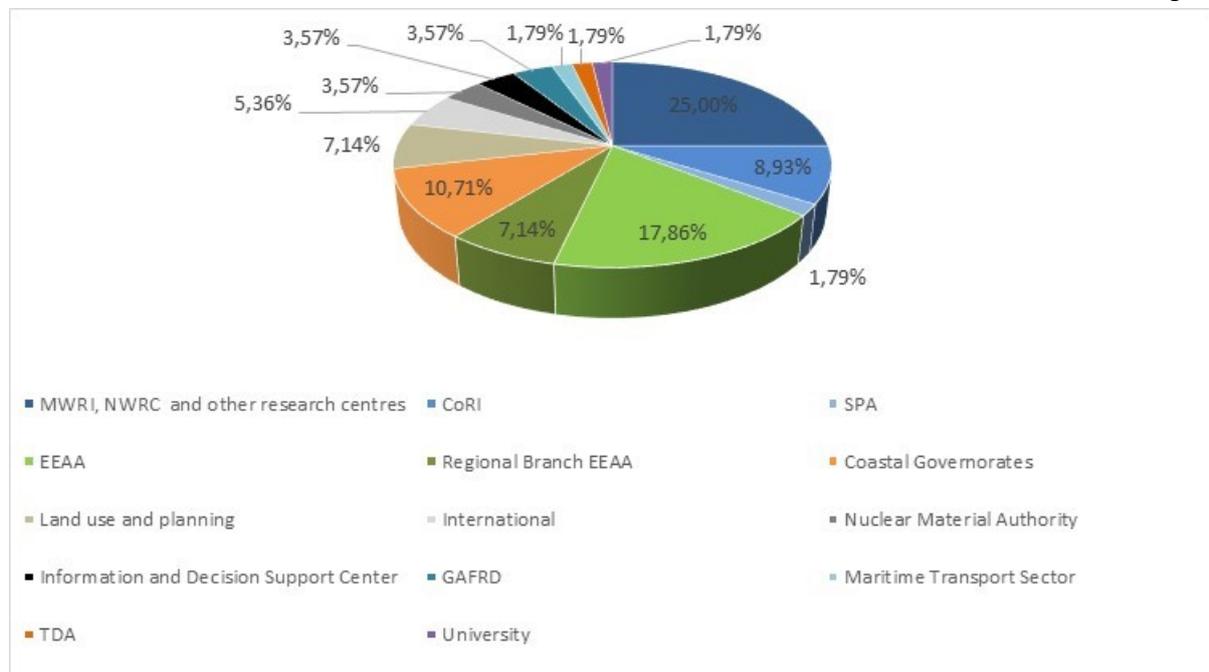


Figure 8. Inception Workshop participants by institution

The following table shows the list of participants.

	NAME	INSTITUTION	DEPARTMENT
1	Mohamed Ahmed	ACCNDP	
2	Mohamed Seliem	ACCNDP	
3	Marwa Ramadan Hafez	Alexandria Governorate	
4	Prof. Hanan Mitwally M. Mitwally	Alexandria University	Oceanography Department
5	Magdy Zakria	Beheira Governorate	Environment office
6	Magdy D. Abaas	Beheira Governorate	
7	Basem Ahmed Rabia	Egyptian Environmental Affairs Agency	Nature Conservation Sector - Zaranik Protected Area
8	Khaled Kheireldin	Egyptian Environmental Affairs Agency	Climate Change Department
9	Omniah Hegazy	Egyptian Environmental Affairs Agency	Climate Change Department
10	Noha Samy	Egyptian Environmental Affairs Agency	ICZM Department
11	Mohamed Besar	Egyptian Environmental Affairs Agency	Nature Conservation Sector
12	Tamer Kamal	Egyptian Environmental Affairs Agency	Nature Conservation Sector
13	Dr. Ahmed Aboulwafa	Egyptian Environmental Affairs Agency	Sharkia Regional Branch Office
14	Wafaa Abdel Sahfy Attia	Egyptian Environmental Affairs Agency	Sharkia Regional Branch Office
15	Halla Ali Elsayed Hamdalla	Egyptian Environmental Affairs Agency	Suez Regional Branch Office
16	Mahmoud Refaat	Egyptian Environmental Affairs Agency	Suez Regional Branch Office
17	Mohamed Gamal Eldin	Egyptian Environmental Affairs Agency	Tanta Regional Branch Office
18	Dr. Abdalla Eliwa	Egyptian Environmental Affairs Agency	
19	Eman Mohamed Zahir	Egyptian Environmental Affairs Agency	
20	Eng. Ahmed Nasser El-Said	Egyptian Environmental Affairs Agency	
21	Miral Selim	Embassy of Netherland	
22	Dr. Nagwan Sheha	Information and Decision Support Center	
23	Dr. Samy Saad	Information and Decision Support Center	
24	Omiyma Hafny Mohamed	Isamaillia Governorarte	
25	Dr. Ashraf Elabd	Japan International Cooperation Agency	
26	Fayed Ibrahim Elshamly	Kafr Elshikh Government	Environment office (Burullus lake)
27	Maha Shalaby	Maritime Transport Sector	
28	Nancy Raouf	Minister of Housing	Technical Office
29	Raghdah Eissa	Minister of Housing	Technical Office
30	Maher Sourial	Ministry of Agriculture	General Authority for Fish Resources Development
31	Mona Habib	Ministry of Agriculture	General Authority for Fish Resources Development
32	Dr. Mohamed Ismail	Ministry of Environment	
33	Asmaa El-Sayed Ghanem	Ministry of Water Resources and Irrigation	Coastal Research Institute (CoRI)

34	Medhat Abd El Mohsen	Ministry of Water Resources and Irrigation	Coastal Research Institute (CoRI)
35	Mohamed Soliman	Ministry of Water Resources and Irrigation	Coastal Research Institute (CoRI)
36	Moheb Mina Iskander	Ministry of Water Resources and Irrigation	Coastal Research Institute (CoRI)
37	Omnia Mahmoud Abd Elrahman	Ministry of Water Resources and Irrigation	Coastal Research Institute (CoRI)
38	Alaa Hassan	Ministry of Water Resources and Irrigation	Groundwater Sector
39	Dr. Abdel Hamed Abdel Hak Khater	Ministry of Water Resources and Irrigation	Hydraulics Research Institute
40	Dr. Ghada Haggag	Ministry of Water Resources and Irrigation	National Water Research Institute
41	Dr. Mohamed A. Motaleb	Ministry of Water Resources and Irrigation	National Water Research Institute
42	Maryan M. Mostafa	Ministry of Water Resources and Irrigation	National Water Research Institute - Central laboratory for environmental quality monitoring
43	Hossam M. Ibrahim	Ministry of Water Resources and Irrigation	National Water Research Institute - Channel maintenance research
44	Mohamed Anwar	Ministry of Water Resources and Irrigation	National Water Research Institute - CRI
45	Samir Abdel-Rahman	Ministry of Water Resources and Irrigation	National Water Research Institute - Mechanical and Electrical Research Institute
46	Marwa Khattab	Ministry of Water Resources and Irrigation	Nile Water Sector
47	Ahmed Fathy	Ministry of Water Resources and Irrigation	Shore Protection Authority
48	Hoda Faisal Mohamed	Ministry of Water Resources and Irrigation	Survey Research Institute
49	Doaa Mohamed Amin	Ministry of Water Resources and Irrigation	Water Resources Research Centre
50	Eman Ahmed	Ministry of Water Resources and Irrigation	Water Resources Research Centre
51	Hesham Mostafa	Ministry of Water Resources and Irrigation	Water Resources Research Centre
52	Karima Attia	Ministry of Water Resources and Irrigation	Water Resources Research Centre
53	Dr Amany Abdel Mageed	National Centre for Planning State Lands Usage	
54	Ashraf Elazab	Nuclear Material Authority	
55	Hesham El Nahas	Nuclear Material Authority	
56	Eng. Walaa Eldin Salah	Planning sector	
57	Ayman Mattar	Port Said Governorate	General Directorate of Environmental Affairs
58	Dr. Amr Abd Elgawad	Tourism Development Authority	
59	Marwa Gragery		

Table 9. List of participants

3.2. Activities

The Inception Workshop included the presentation of the study and participatory activities. The temporal development of these activities is shown in the agenda of the workshop:



Figure 9. Inception Workshop agenda

3.2.1. Presentation of the study

The Inception Workshop started with the welcome speeches of Prof. Mohamed A. Motleb, National Project Director, Dr. Moheb Motleb, UNDP project officer and Engineer Ahmed Fathy, Head of SPA. After that, Dr. Mohamed A. Ahmed and Prof. Raúl Medina explained the scope and the main activities of the ACCNDP and the *ICZM Scoping Study*, respectively.



Figure 10. Pictures of the Inception Workshop. Presentation of the study.

3.2.2. Participatory activities

Four participatory activities were designed to involve stakeholders into the first activities of the study:

1. Validation of the preliminary list of national stakeholders. The objective of this activity was the validation of the preliminary list of stakeholders at national level. This activity was developed in working groups that fulfilled the following questionnaire:

ICZM IN EGYPT – A SCOPING STUDY

IH cantabria | Environics

INCEPTION WORKSHOP

INCEPTION WORKSHOP

IDENTIFICATION OF COASTAL STAKEHOLDERS AT NATIONAL LEVEL

This exercise aims at validating the relevant stakeholders for the coastal management at national scale. Please review the following lists to identify new key stakeholders and correct wrong names.

NATIONAL AUTHORITIES:

- Ministry of Agriculture
- Ministry of Agriculture - General Authority for Fish Resources Development - Head quarter (GAFRD)
- Ministry of Defence - Coastal Guard Department (CGD)
- Ministry of Housing - General Organization for Physical Planning (GOPP)
- Ministry of Housing - Regional Urban Planning
- Ministry of Industry and Foreign Trade - General Organization for Industrial Development (GIO)
- Ministry of Planning
- Ministry of Social Affairs
- Ministry of State for Antiquities - Supreme Council of Antiquities
- Ministry of State For Environmental Affairs - Department of Coastal Zone Management
- Ministry of State For Environmental Affairs - Egyptian Environmental Affairs Agency (Head quarter) (EEAA)
- Ministry of State For Environmental Affairs - Nature Conservation Sector
- Ministry of Tourism- Tourist Development Authority (TDA)
- Ministry of Transportation - Marine and Harbour Authority (The Central Administration for Ports and Lighthouses)
- Ministry of Transportation - Marine Transport Sector (MTS)
- Ministry of Water Resources and Irrigation (MWRI)
- Ministry of Water Resources and Irrigation - Planning office
- Ministry of Water Resources and Irrigation - Reservoirs office
- Ministry of Water Resources and Irrigation - Survey office
- National Centre for Planning State Land-Use
- Egyptian Cabinet's Information and Decision Support Centre (IDSC)
- Egyptian Meteorological Authority (EMA)
- Northern Protected areas office
- Ashtom Al Gamil Protectorate
- Brullus Protectorate
- Sallum Protectorate
- Sinal Protectorates office
- Zaranik Protectorate
- Egyptian Electricity Holding Company - Brullus Power plant.
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ICZM IN EGYPT – A SCOPING STUDY

IH cantabria | Environics

INCEPTION WORKSHOP

NATIONAL COMMITTEES:

• High Level Committee for Integrated Coastal Zone Management
• National Committee for Risk Reduction and Disaster
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RESEARCH CENTRES:

• Arab Academy for science, technology and maritime transport - Alexandria
• Desert Research Centre
• Helwan University / Cairo
• Ministry of Agriculture - Agriculture Research Centre - Central Laboratory for Agricultural Climate Institute
• Ministry of Water Resources and Irrigation - National Water Research Centre (NWRC)
• Ministry of Water Resources and Irrigation - National Water Research Centre - Coastal Research Institute (CoRI)
• Ministry of Water Resources and Irrigation - Shore Protection Authority (SPA)
• National Authority for Remote Sensing and Space Science (NARSS)
• National Institute of Oceanography & Fisheries (NIOF)
• University of Alexandria - Faculty of Science - Environmental studies Sciences
• University of Alexandria - Faculty of Science - Oceanography Department
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CIVIL SOCIETY ORGANIZATIONS:

• Friends of the Environment
• The General Federation of NGOs
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Figure 11. Questionnaire for validation of national stakeholder's.

2. Identification of main coastal problems in the North, Delta and North Sinai coasts. The objective was to understand the perception of stakeholders regarding the main coastal problems. The Consultant designed a set of three blank maps one for each coastal region, on which the working groups identified and located the main coastal problems. These problems were classified in three groups: physical, environmental and socioeconomic.

3.3. Results

The results of the Inception Workshop are presented according to the structure of participatory activities:

1. Validation of the preliminary list of national stakeholders. Stakeholders identified new authorities and research centres, as well as clarified the institutional structure and hierarchy of national authorities. They also corrected the names and provided contact details of some stakeholders. With their inputs, the final list of stakeholders extended to 85 stakeholders: 4 international, 56 national and 25 local.
2. Identification of main coastal problems in the North, Delta and North Sinai coasts. Stakeholders identified main coastal features and problems of the coastal area, summarized in table 11.
3. Identification of urban development and coastal plans. Stakeholders identified future urban, tourism and industrial development plans, presented in table 12. Some answers were illegible or are still under translation, so these results will be included in further reports.
4. Presentation of the web site: stakeholders did not make comments on it.

	NORTH COAST	DELTA COAST	NORTH SINAI COAST
Physical problems	Erosion/sedimentation problems in El Sallum, Marsa Matruh, Fuka and El Alamin Dangerous rip currents in the area of El Alamin Flash floods along the coast (presence of wadis) No setbacks along the road	Existence of many coastal protection works along the coast Coastal erosion in Alexandria, Rosetta, east of Damietta Erosion and sedimentation along the delta Flooding of low lying areas Sedimentation in the Burullus inlet	Flash floods in El Arish Erosion in El Arish (groins) Sand dunes in El Arish Erosion problems in Manzala (SE) and east of Bardawil
Environmental problems	Areas of environmental interest in El Sallum bay (El Sallum protected area) and the Alamin wetland (El Obayet protected area). Water pollution in Marsa Matruh Pollution from resorts Disposal of sewage into wells in El Sallum Water harvesting for communities and resorts without environmental studies	Pollution of coastal waters: Abu Qir and Damietta Water pollution in lakes: Mariut (industrial outfalls), Idku (fishing farms), Burullus (agriculture and sewage) and Manzala Loss of lake area (Mariut, Idku, Burullus and Manzala) Salt water intrusion Siltation Increase of soil salinity Desertification Potential lack of fresh water Protected area in Burullus Overfishing in Burullus Loss of biodiversity in Manzala lake	Sewage and water pollution in Raffa Zaranik Protected area Good water quality in Bardawil lake Turtle nesting and bird migration Bird hunting Siltation in Bardawil and El Arish
Socioeconomic problems	Socioeconomic problems related to local communities (Bedouins) and with resources exploitation (fisheries and bird hunting) Unplanned development between El Alamein and Marsa Matruh Mine fields	High population density Development on low lying area Development on agricultural land Low health insurances Low fish quality Lack of fishing markets Insufficient income from agriculture and fishing activities in Damietta Investment and development in the area of Manzala	Fishing activities in Bardawil lake Low security Bedouin communities Fishing activities not supported by fishing ports Lack of economic activities Building on flooding paths Power station in El Arish

Table 10. Summary of main features and problems identified by stakeholders.

	NORTH COAST	DELTA COAST	NORTH SINAI COAST
Under study	<ul style="list-style-type: none"> Fishing harbour promoted by GARFD in Marsa Matruh Industrial development and nuclear power plant in El Dabaa Tourism development between Marsa Matruh and Neguila Proposed protected area in Ras El Hekma Tourism development in Fuka Tourism development between El Dabba and El Alamein Tourism development in El Hammam area New city in El Alamein 	<ul style="list-style-type: none"> New city in Mansura / Gamasa (under EIA) New city in the coastal stretch of Burullus Power plants in Burullus, Gamasa and in Manzala (SE) Coastal protection works along the delta Suez channel development center New touristic area in Port Said 	<ul style="list-style-type: none"> Fishing port in North Sinai
Approved	<ul style="list-style-type: none"> Project for mines removal Coastal development in Marsa Matruh 	<ul style="list-style-type: none"> Urban development in Alexandria Development around Idku lake Fishing farms in Rosetta New inlet in Rosetta Development around Burullus inlet Development around Ras El Bar inlet Development in the Manzala narrow strip and in Port Said Navigation project on Damietta branch (River Transportation Authority) Romond port for industrial uses Dredging in Burrulus inlet and lake Coastal protection works along the delta 	<ul style="list-style-type: none"> Environmental plans in Bardawil Development in Bir El Abd: agriculture, housing and industry

Table 11. Summary of future plans identified by stakeholder