Development of Climate Resilient Integrated Coastal Zone Management (ICZM) Plan for the North Coast of Egypt

Deliverable 3.1.1: Assessment of Capacity Needs and Training Programme for ICZM

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List of Abbreviations

CB	:	Capacity Building
CDM	:	Crisis and disaster management
CMIC	:	Coastal Monitoring Information Centre
CoRI	:	Coastal research Institute
DRI	:	Drainage Research Institute
DTM	:	Digital Terrain Model
ECRI	:	Environmental and Climate change Research Institute
EEAA	:	Egyptian Environmental Affairs Agency
EMA	:	Egyptian Meteorological Authority
FOU	:	Forecast operator training
GARPAD	:	General Authority for Reconstruction Projects and Agricultural Development
GOPP	:	General Organization for Physical Planning
GU	:	User training in GIS
HDU	:	User training in Flood modelling
HRI	:	Hydraulic Research Institute
IA	:	Implementing Agencies
ICZM	:	Integrated Coastal Zone Management
KPI	:	Key Performance Indicator
LU	:	User training in Lit-pack modelling
M&E	:	Monitoring and Evaluation
MALR	:	Ministry of Agriculture and Land Reclamation
MOEE	:	Ministry of Electrical and Energy
MPED	:	Ministry of Planning and Economic Development
MWRI	:	Ministry of Water Resource and Irrigation
NARSS	:	National Authority for Remote Sensing and Space Sciences
NDA	:	Nile Delta Aquifer
NIOF	:	National Institute for Oceanography & Fisheries
NUCA	:	New Urban Communities Authority
NWRC	:	National Water Research Centre
PMU	:	Project Management Unit
RIGW	:	Research Institute for Groundwater
RU	:	User training in Risk assessment/ cost benefit analysis
SPA	:	Egyptian General Authority for Shores Protection
SWI	:	Saltwater Intrusion
TNA	:	Training Needs Assessment
ToR	:	Terms of Reference
ToT	:	Training of Trainers
UNDP	:	United Nations Development Program
WU	:	User training in MIKE 21 SW Wave modelling

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1. Introduction

This report presents an all-inclusive framework programme for the ICZM capacity building and training being implemented by NIRAS. The scope of the framework programme has been designed in accordance with the Inception Report, with the overall aim to:

- Raise the awareness of Climate Resilient ICZM stakeholders among the Egyptian management of the 1,000 km long Mediterranean coastline from Sallum to Rafah.
- Support elaboration of future legal, institutional and organisational set-up of coastal stakeholders
- Support the introduction and formulation of the ICZM Plan.
- Develop ICZM tools supporting the elaboration of the ICZM plan
- Train the future organisation in using the ICZM tools.

Based on the outcomes of the two one- day G1 Yellow Workshop that were held on 19th and 21st of December 2022, in Port Said and Alexandria Governorates respectively, and the E1 Orange one-day workshop held on 25th of December 2022 in Cairo, the present version No 03 of the report has been modified (compared to version 01 and version 02). According to the PMU's comments, and results of positive meetings between the consultant team and the PMU team, the consultant team of experts coordinated with each other to provide responses and clarifications for all ICZM tools.

1.1. Objectives and Expected Outcomes of the Workshops

The workshops targeted the governmental staff of the coastal governorates and central agencies as relevant stakeholders of the ICZM Tool Box. The workshops were organized as part of Task 1: Development of a Climate Resilient Integrated Coastal Zone Management Plan (ICZM Plan) Sub-Task 3.1. Assessment of capacity needs for ICZM planning and the Sub-Task 3.3. Training workshop at coastal governorates

The overall objectives of the workshop are:

- To assess the gaps of skills at the organization, job, and individual employee level of the ICZM Tools in the stakeholder institutes and ministries.
- To discuss the selection criteria of the participating candidates in the training programs.
- To share، discuss and elaborate on institutional activation of the ICZM regional Committee in each governorate.
- To share, discuss and elaborate on institutional set-up of the ICZM National Committee.
- To Present ICZM Ambassadors Program:
- Selection Criteria
- Ambassadors' tasks and incentives
- Institutional Sustainability

The Expected Outcomes of this workshop were as follows:

- Defining the training gaps of the targeted stakeholders
- Setting up the selection criteria of the participating candidates in the training programs
- Receiving feedback on the national and regional ICZM Committee.
- Development of ICZM Ambassadors program

Based on this Gap Analysis report, the consultant will develop a full capacity-building programme.

Before initiating, the training related to the individual deliverables, a detailed training programme will be elaborated, defining detailed scope, contents, trainers, trainees and expected outcome as part of *Deliverable 3.2.1*.

The expected programme is a consistent framework for all training included in the deliverables listed below and described in the TOR.

Deliverable 1.7.1: Development and implementation of a class and on-the-job training program in English and Arabic for mastering the coastal observation and model systems.

Deliverable 2.1.3: Organize workshops with key stakeholders to discuss the different alternatives for improving the regulatory framework including representatives from the related local administrative unit.

Deliverable 2.2.5: Hold workshops to:

- Improve coordination at the planning level, horizontally, between central organizations, and vertically, between central organizations and organizations at the local level.
- Help in integrating laws, plans, regulations, and agreements to overcome difficulties and facilitate the implementation process of ICZM projects to make a real difference on the ground and be reflected on the day-to-day work of executive agencies and communities.
- Propose and develop national policies and frameworks for crises and disasters management and disaster risk reduction.

Deliverable 2.6.2: Assistance of the Consultant to the preparation of meetings where the ICZM plan is presented to authorities involved in the implementation.

Deliverable 3.2.1: Design and implementation of a modular training program for stakeholders to build skills for professional development of coastal management practitioners, in a diversity of capacities (e.g., policy positions, day-to-day management and dealing with the national and local media).

Deliverable 3.2.2: Design and assistance to initiate a corresponding ToT program.

Deliverable 3.2.3: Training courses for officials of government agencies and relevant stakeholders to enhance their capacity on integrating climate-related risks in their planning and considerations.

Deliverable 3.3.1: ICZM training workshops at the coastal governorates.

Deliverable 3.3.2: Training courses for officials at the coastal governorates to strengthen crises/disasters management and disaster risk reduction using recent advanced technologies.

Deliverable 3.3.3: Webinars for providing easily understandable information on disaster, risk and protection options to all citizens.

2. Need for Capacity Building

The need assessment addresses all the components of ICZM Project. The delivery of the designed Training Need Assessment (TNA) will involve stakeholders in a way that will maximise necessary knowledge transfer and on-the-job training to Implementing Agencies.

In the following sections milestones, objectives and role are further elaborated.

2.1. Capacity Building Milestones

The TNA survey has consisted of the following stages:

- Meetings with the stakeholders to assess the present capacity and need for training;
- Prepare a Training Plan;
- Develop ToT programme;
- Prepare training evaluation forms and training reports for each training event.

Figure 2.1 illustrates the capacity building tasks.

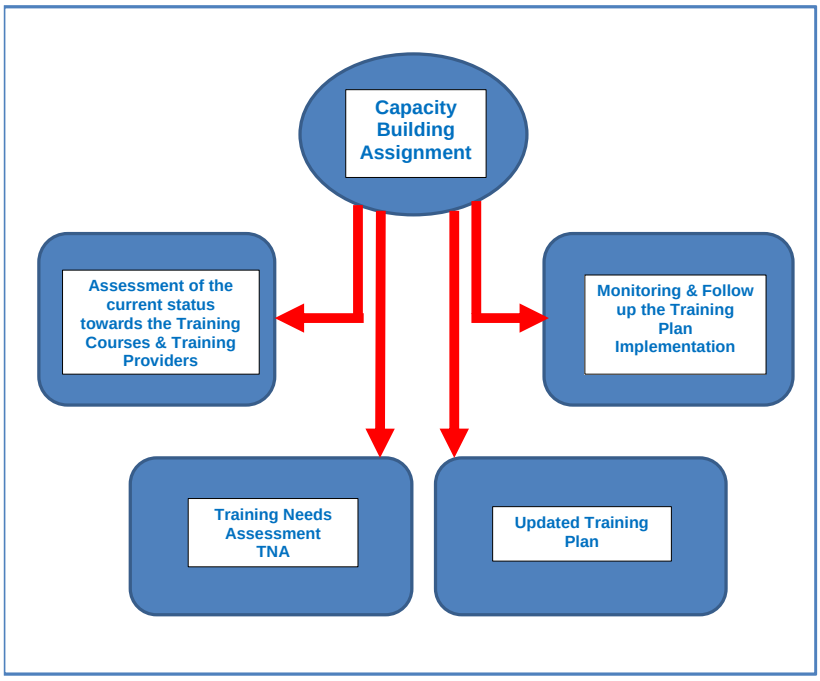

Figure 2.1: Capacity building tasks.

2.2. Capacity Building Objectives

The capacity building program will create the basis for a thorough understanding of various aspects of coastal management for ICZM and climate change adaptation, as well as promoting collaborative networks equipped with the necessary skills, knowledge and attitudes to undertake different tasks involved in the climate change adaptation

and planning of the coastal areas of Egypt. The framework for the program will aim to identify gaps and corresponding capacity needs relative to key implementation issues, and to build capacity of individuals and institutions to implement ICZM.

The four main results of the Capacity Building to be achieved, as defined in the Terms of Reference, are:

1. To develop the skills, expertise and knowledge of the project target group;
2. Provide a comprehensive assessment towards the implemented training courses, training providers, analysis of training needs and develop a training plan for the implementing agencies, in order to define the gap between existing and ideal skill sets required;
3. In particular, this should enable the implementing agencies to fully meet the ToR performance criteria and programme objectives;
4. The assignment is part of the Project, which involves addressing several human resources issues, including training and development of the project target groups.

2.3. The Role of Training

The Project's ICZM targets will be achieved by the transfer of knowledge and skills through technical assistance in the form of training, enabling the improvements in the performance to be measured.

An increase in skills, knowledge, efficiency and effectiveness of individual employees will result in an overall increase in performance of each utility. These improvements will be measured in terms of performance indicators and will provide a noticeable improvement in service to customers.

Therefore, a component of the Project is to provide training to as many key staff as possible and with that in mind a Training Needs Survey has taken place.

This report highlights the methodology and main findings of the TNA, which will lead to the development of the required Training courses; when implemented, it will assist each Implementing Agency in the Project to achieve its Project's targets.

The following chapters provides details of the methodology and main results of the TNA.

3. Gaps of Skills

3.1. Objectives

The overall objective of the Capacity Building Programme is to build up capacity of the Implementing Agency staff to carry out quality and professional Integrated Coastal Zone Management activities and services. This will ensure establishment of a sustainable governmental management platform at each of the targeted ICZM planning issues and production of professional and quality reports as and when required.

Accordingly, the overall objective is to provide a comprehensive analysis of training needs which, when implemented, will address the development goals of the Project and improve customer service levels by developing the skills, expertise and knowledge of the employees.

In particular, this should enable the Implementing Agencies to fully meet the project performance criteria and project objectives.

3.2. Scope of TNA

The assignment focused on conducting a detailed Training Needs Assessment (TNA) of Implementing Agencies and of the 8 Coastal Governorates of the Project.

As part of a Training Needs Survey, the following stakeholders participated in both G01 Yellow workshop and the E01 Orange workshop in addition to many meetings and visits during the Inception Phase:

1. Shore Protection Authority, SPA
2. Egyptian Environmental Affairs Agency, EEAA
3. New Urban Communities Authority, NUCA
4. General Organization for Physical Planning, GOPP
5. Institutes under the National Water Research Centre, NWRC: Hydraulic Research Institute (HRI), Drainage Research Institute (DRI), Coastal Research Institute (CoRI), Research Institute for Groundwater (RIGW), Environmental and Climate change Research Institute (ECRI)
6. Eight Coastal Governorates
7. Ministry of Water Resource and Irrigation, MWRI
8. Ministry of Electrical and Energy, MOEE
9. The National Centre for Planning State Land Use, Minister of Cabinet
10. Ministry of Planning and Economic Development, MPED
11. Ministry of Higher Education (NARSS & NIOF)
12. The National Authority for the development of the Sinai Peninsula
13. Ministry of Transportation (Maritime Section)
14. General Authority for Reconstruction Projects and Agricultural Development (GARPAD/MALR)
15. Egyptian Meteorological Authority (EMA)

A number of separate meetings with selected key stakeholders have followed these meetings during the inception phase.

Thus, valuable discussions have been carried out with each of the Stakeholders and important feedbacks received for planning and designing the training programmes.

It was clear from the above initial analysis carried out during the inception report that the most important decision makers in the coastal zone are MWRI, Ministry of Environment, Coastal Governorates, Ministry of Housing and the Ministry of Agriculture. Within these meetings, decision makers from the following important technical agencies/institutes were identified: SPA, EEAA, CoRI, RIGW, DRI, GOPP, NUCA, and the ARC-institutes.

The experts analysed the participation and outputs, which resulted from the organized workshops: Kick-off A and I, A0, A1, I1, G1, E1 and I2 workshops.

The Consultant prepared the present TNA report based on the results of all above documents. The findings of TNA are reflected in the updated Training Plan, recommended for each of the agreed ICZM tools, presented in Chapter 6.

3.3. Methodology

3.3.1. Overview (Outreach/Brain Storming Model and Analysis)

The Consultant used a group of structured techniques throughout the planning, data collection, classification and analysis, and gap identification phases:

1. Introductory meeting;
2. Orientation meeting;
3. Outreach brain storming workshop;

The Consultant Capacity Building Expert applied an Outreach Model of Analysis that aimed at relating the training needs resulting from the TNA survey to each of the Project objectives. This ensures that all the objectives of the Project are met and that; once implemented, the training will result in improved service levels and increased compliance with the regulator's performance indicators.

At all stages of the exercise, the Project objectives were used as the criteria for identifying training needs; and in respect of the project's job descriptions regarding the PMU and IA's teams' members; this avoided the common problem of employees "identifying" training needs which might not reflect their role or the aims of the organisation.

This approach is portrayed graphically in the Figure 3.1 below.

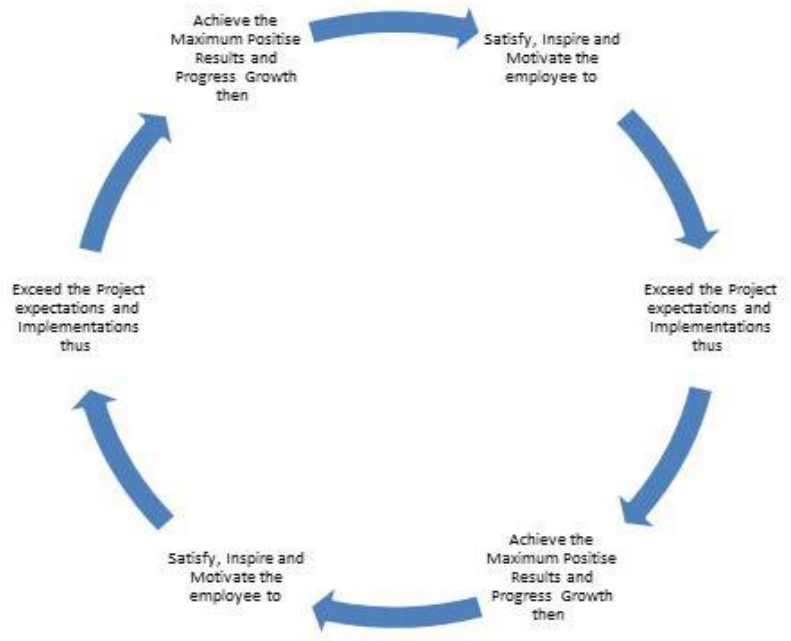

Figure 3.1: Capacity Building Approach

The three levels of analysis within the Capacity Building/TNA approach technique are described in the sub-sections below.

3.3.2. Organisational Level

This level represents the Implementing Agency level, which was approached by reviewing the Project objectives against the responses of all interviewed during the brain storming workshops. This review resulted in the identification of the organisational "skills gap" and hence where training could most effectively be used to achieve Project objectives throughout each Implementing Entity.

This review is often referred to as the identification of corporate training needs and in general can be achieved by relating actual performance of the company to its targets; in this case the performance indicators prescribed by the Project.

3.3.3. Job Level

This level covers the training needs of the interviewed job holders, which provided the training needs to that of each candidate within all Agencies.

This level thus reviews the skills required for each job and identifies the training needed to achieve the project objectives.

3.3.4. Individual Employees level

This level provides direct information on how well each candidate performs in his/her job in terms of supporting the organisation in achieving the Project objectives effectively. It provides the training needs required for the candidates as individuals within each Implementing Agency and is an effective method in updating a training programme. However, it is a very time-consuming method, and it therefore is more practical to interview the experts of the project.

3.4. Survey and Analysis

A Training Needs Survey is an exercise which gives the consultant data regarding the training needs of those candidates interviewed, plus their perception of the training needs of others. From the survey, the Consult also gains an understanding of the organisational or corporate training needs.

However, in order to update a coherent and accurate Training Plan, the data collected needs to be analysed, the result being the Training Needs Analysis.

Thus, the combination of the three levels of survey (organisational, job, and individual) was used to update an analysis and subsequently a programme. The training needs, resulting from the three levels of analysis, were then classified, and linked together towards achieving the Project objectives.

3.5. Approach Applied

The TNA task was approached taking into account the following considerations:

- Avoid identifying irrelevant and non-productive training by ensuring that all participants are fully aware of the need for each one of them to contribute to the overall performance of their utility. This is, in itself, a knowledge transfer exercise;
- Reinforce the importance of achieving satisfactory customer service levels by linking all questions, workshops and training needs to PROJECT performance criteria;
- Work closely with the key stakeholders as joint team members;
- Include other Project team members wherever appropriate.

The stages in conducting the TNA are described in the following subsections.

3.5.1. Coordination Meetings with Stakeholders

G1 Workshop Port Said 19th of December 2022 (Full report Deliverable 3.3.1)

G1 Workshop Alexandria 21st of December 2022 (Full report Deliverable 3.3.1)

E1 Workshop Cairo 25th of December 2022 (Full report Deliverable 3.2.3)

In addition to the meetings that were conducted since August 2021 and forward to the submission of the final Inception Report in February 2022, to discuss the capacity building methodology with the key experts to discuss the methodology and disseminate the outcomes of the implemented workshops to the Capacity Building Programmes.

3.5.2. A Kick-off Meeting with the Capacity Building Expert

This meeting was conducted between Consultant Team Leader, the Team Leader Assistant and Consultant Capacity Building Expert**,** to launch the assignment and set the stage for the data collection phase.

3.5.3. Orientation Meeting

The Consultant' Team Leader conducted an orientation meeting with all the project experts to achieve the following objectives:

- Introducing the Project and its objectives;
- Linking the Project objectives to the need for training;
- Explaining the need for a Training Needs Survey and subsequent analysis prior to the actual training;
- Presenting the TNA assignment scope of work and methodology;
- Obtaining "buy-in" to the TNA;
- Determining the most attendance of PMU and Implementing Agencies team members to ensure coverage of the target categories.

3.6. Training Needs Assessment Form

Training Needs Assessment (TNA) – Participatory Approach

The following list of training courses reflects the required courses of the actual needs. This list forms the basis of the training plan, which will address the training courses prioritization to achieve the main aims and objectives of the Project. During the G-01 and E-01 Workshops, stakeholders filled out these surveys in order for the Consultant to assess the training needs.

Table 3-1 Training Needs Assessment Form

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
الأداة 1: **نماذج هيدروليكية الأمواج (الخلفية) ومستوى المياه** ***Tool* 1:** **Hydraulic (hindcast) Wave and Water Level Models**	1) WU1: Model Set-up and Calibration 2) الاعداد والمعايرة			
	3) WU2: Scenario and statistical analysis 4) السيناريوهات والتحليل الإحصائي			
	5) WU3: Modelling 6) النمذجة			
	7) WU4: Modelling/Data analysis 8) تحليل البيانات			
أداة 2* : النماذج المورفولوجية(التشكلية) الساحلية** ***Tool 2: **Coastal Morphological Models**	1) LU1: Model Set-up and Calibration 9) الاعداد والمعايرة			
	2) LU2: Scenario and statistical analysis 10) السناريوهات والتحليل الاحصائي			
	3) LU3: Modelling and analysis 11) النمذجة والتحليل			
أداة* 12) *3* : نماذج الفيضانات** ***Tool 3: **Flooding Models** ***13)***	1) HDU1: Flood modelling establish and set-up 14) اعداد نمذجة الفيضانات			
	2) HDU2: Flood modelling exercises 15) تمارين نمذجة الفيضانات			

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
	3) HDU3: Flood modelling exercises and analysis 16) تمارين نمذجة الفيضانات وتحليلها			
أداة 4 **17) : نماذج تسرب المياه المالحة** ***Tool 4:*** **Salt Water Intrusion Models** ***18)***	1) WU1: Modelling Setup 19) اعداد النمذجة			
	2) WU2: Modelling Coupling اقتران النمذجة			
	3) WU3: Modelling Calibration and Validation 20) معايرة النمذجة والتحقق من صحتها			
	4) WU4: Results Analysis 21) تحليل النتائج			
أداة 5 ***منصة المعلومات الجيومكانية*** ***Tool 5:*** **GIS Platform** ***22)***	1) Basic concepts on data types and data model المفاهيم الأساسية لأنواع البيانات ونموذج البيانات			
	2) Creating of Geo-spatial database إنشاء قاعدة بيانات جغرافية مكانية			
	3) Store vector and raster data into a spatial database تخزين البيانات المتجهة والنقطية في قاعدة بيانات مكانية			

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
	4) Familiarity with raster data concepts الإلمام بمفاهيم البيانات النقطية			
	5) Spatial queries and spatial analysis processes الاستعلامات المكانية وعمليات التحليل المكاني			
أداة 6: نموذج تقييم المخاطر *Tool 6:* **Risk Assessment Model**	1) Classification of landcover spatial data using remotely sensed data تصنيف البيانات المكانية للغطاء الأرضي باستخدام بيانات الاستشعار عن بعد			
	2) Change detection applications using GIS/RS تغيير تطبيقات الكشف باستخدام GIS / RS			
	3) GIS spatial analysis for detecting, classifying and delimiting flood impacted areas التحليل المكاني لنظام المعلومات الجغرافية لاكتشاف وتصنيف وتحديد المناطق المتضررة من الفيضانات.			

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
	4) Methods for field data collection. طرق جمع البيانات الميدانية.			
	5) Zoning and spatial planning. تقسيم المناطق والتخطيط المكاني.			
أداة 7: نظام التنبؤ **Tool 7: Forecast System**	1) FOU1: Monitoring and data management إدارة البيانات والمتابعة			
	2) FOU2: Design of forecast system 24) تصميم نظام التنبؤ			
	3) FOU4: Operation of forecast system 25) تشغيل نظام التنبؤ			
إدارة الأزمات والكوارث ***Risk and Disaster***	1) CDM1: Strengthen crises/disasters management 26) تعزيز إدارة الأزمات والكوارث			
تدريب المدربين لبرنامج سفراء الإدارة المتكاملة للمناطق الساحلية ***مركز المتابعة والمعلومات الساحلية*** ***ICZM Ambassadors TOT; CMIC***	1) Preparation of Good Quality Technical Materials 27) اعداد المواد الفنية عالية الجودة			
	2) Presentation Skills 28) مهارات العرض والتقديم			

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
	3) Effective Communication Skills 29) مهارات العرض والتقديم			
	4) Media and Public Relations Skills 30) مهارات الاعلام والعلاقات العاقة			
برامج تنمية المهارات الشخصية ***Other Soft Skills Programs,***	1) Communication Skills مهارات الاتصال			
	2)Conflict Mitigation الحد من النزاعات			
	3)Problem Solving مهارات حل المشكلات			
	4)Technical Reports Writing مهارات كتابة التقارير الفنية			
	5)Futurology and change management إدارة التغيير وعلم المستقبليات			
	6) The necessary skills for the implementation phase of the ICZM plan at the local level المهارات اللازمة لمرحلة التنفيذ لخطة الإدارة المتكاملة للمناطق الساحلية على المستوى المحلى			
	7) Coastal management professional development skills مهارات التطوير المهنى للادارة الساحلية			

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
	8) Coastal communities' readiness skills to face harsh weather conditions مهارات استعداد المجتمعات الساحلية لمواجهة ظروف المناخ القاسى			
	9) The necessary skills to deal with the early warning system at the local level المهارات اللازمة للتعامل مع نظام الانذار المبكر على المستوى المحلى			

3.7. Transforming Gap

In any organisation/project there is a gap between the required skills and the available current competencies. This gap should be assessed to ensure the provision of satisfactory service levels is not compromised and that the actual skills are available within the workforce. The provision of training can minimize this gap.

By analysing the results from the stakeholders, the Consultant transformed the candidates' responses on the current and future problems they face into training needs, to be added to the list of training needs they themselves identified or requested. At all stages of the process, the Project performance targets and the candidates' contributions to achieving these targets were used as a basis.

The responses from the candidates provided good indications for the general and specific training needs at the organisation level.

The actual methodology used to transform the gap between the required skills for the job holder to achieve the Project objectives and his/her actual skills into training needs included the following steps:

- Presentation, in detail, of the Project objectives at the beginning of each workshop;
- Asking the stakeholder to list actual duties as determined in the project job descriptions;
- Discussions with the stakeholder to explain the contribution in achieving the Project objectives; and
- Determining the main obstacles and problems encountered in achieving the required objectives of the tasks.

The responses provided the necessary data to assist the Consultant in determining the skills gap and hence the training needs.

The results of the discussion prepared the stakeholder to be able to understand its training needs on individual level as well as on team level.

3.8. Consolidation of Results

The Consultant combined the results of the Outreach Model of Analysis in order to produce a prioritised training needs analysis based on real, performance-orientated criteria rather than theoretical or self-serving non-productive needs as is often the case with such surveys. The data consolidated therefore was:

- Current and future performance targets as defined by Project;
- Visionary views and perception of problems as seen by the Implementing Agencies;
- Written job descriptions and actual tasks and the links with performance criteria;
- Workshops to establish training needs at:
    - Organisation level (Project);
    - Job level;
    - Individual level.
- In addition, the results from meetings have been confirmed for the Consultant by impressions gained from conversations held during field visits and workshops.

3.9. Data Collection Tools

The Consultant used a structured session form, as showed above in 3.6

1. The current required job activities;
2. The attended training courses through the Project;
3. The evaluation towards each of the attended training course and the training provided respectively;
4. The required training course regarding his responsibilities and her/his required input towards the current project life.

The Forms were filled in by the ICZM experts based on all the meeting and workshops carried out during the Inception Phase.

The Outreaching Model of Analysis methodology was applied in order to achieve the following:

Highest Level of Reliability and Viability

The structured meeting form was designed with a logical sequence of items included.
This sequence helped to create a mind set for the candidate that gave him/her the opportunity to move from the Project objectives to the scope of their job and its related duties and responsibilities.

The next step was to identify the obstacles that he/she faces and his/her needs to overcome these obstacles.

This sequence was meant to avoid the usual "wish list" that often results from other training needs assessment procedures. The process adopted by the Consultant focuses the meetings on the training needs required to achieve the Project objectives.

Enhancement of the Accuracy of the TNA Results

The Consultant used the "dual analysis" approach when discussing with staff, i.e.:

- After establishing the staff's duties and Project-related tasks, ascertain the obstacles he/she faces and his/her task implementation;
- Also establish the staff's perception of his/her colleagues' needs;
- The aggregate TNA results from both face-to-face structured meetings provided a reasonable size of staff at each job level. These aggregated results enabled the Consultant to establish the training needs at the job level for the target categories.

3.10. Results

The survey indicated a bundle of training courses needed for Implementing Agencies; these training courses were among those listed by the project experts brainstorming session. The training courses arising from this needs assessment are mainly focusing on the following seven ICZM tools; which are being developed as part of the ICZM project:

1. Hydraulic (hind cast) Wave and Water Level Models
2. Coastal Morphological models
3. Flooding Models
4. Saltwater intrusion models
5. GIS platform
6. CMIC
7. Risk assessment model
8. Forecast system
9. Crisis and Disaster management
10. Ambassadors program
11. Soft Personal Skills (Communication Skills)
12. Institutional Soft Skills

استمارة تقييم الاحتياجات التدريبية

Training Needs Assessment Form

تقييم الاحتياجات التدريبية -النهج التشاركي

تعكس قائمة الدورات التدريبية التالية الدورات المطلوبة للاحتياجات الفعلية كما تشكل هذه القائمة أساس خطة التدريب ، والتي ستتناول أولويات الدورات التدريبية لتحقيق الأهداف والغايات الرئيسية للمشروع

Training Needs Assessment (TNA) – Participatory Approach

The following list of training courses reflects the required courses of the actual needs. This list forms the basis of the training plan, which will address the training courses prioritization to achieve the main aims and objectives of the Project.

مجال Field	مجال التدريب Training Topics Proposed	مطلوب Required	غير مطلوب Not Required	ملاحظات Notes
الأداة 1:	1) WU1: Model Set-up and Calibration الاعداد والمعايرة	**10**		

نماذج هيدروليكية الأمواج (الخلفية) ومستوى المياه ***Tool* 1:** **Hydraulic (hindcast) Wave and Water Level Models**	2) WU2: Scenario and statistical analysis السيناريوهات والتحليل الإحصائي			
	3) WU3: Model-lingالنمذجة			
	4) WU4: Model-ling/Data analy-sisتحليل البيانات			
أداة 2* : النماذج المورفولوجية(التشكلية) الساحلية** ***Tool 2: **Coastal Morpholog-ical Models**	1) LU1: Model Set-up and Calibration الاعداد والمعايرة	10		
	2) LU2: Scenario and statistical analysis السناريوهات والتحليل الاحصائي			
	3) LU3: Modelling and analysisالنمذجة والتحليل			
3:*نماذج الفيضانات** ***Tool 3: **Flooding Models**	1) HDU1: Flood mod-elling establish and set-up اعداد نمذجة الفيضانات	12		
	2) HDU2: Flood model-ling exercises تمارين نمذجة الفيضانات			
	3) HDU3: Flood model-ling exercises and analysis تمارين نمذجة الفيضانات وتحليلها			
أداة 4* 4) : نماذج تسرب المياه المالحة** ***Tool 4: **Salt Water Intrusion Models** ***5)***	1) WU1: Modelling Setupاعداد النمذجة	12		
	2) WU2: Modelling Coupling اقتران النمذجة			
	3) WU3: Modelling Cal-ibration and Valida-tion معايرة النمذجة والتحقق من صحتها			
	4) WU4: Results Analy-sisتحليل النتائج			
أداة 5 ***منصة المعلومات الجيومكانية***	1) Basic concepts on data types and data model	**42**		

Tool 5: **GIS Platform** ***5)***	المفاهيم الأساسية لأنواع البيانات ونموذج البيانات			
	2) Creating of Geospatial database إنشاء قاعدة بيانات جغرافية مكانية			
	3) Store vector and raster data into a spatial database تخزين البيانات المتجهة والنقطية في قاعدة بيانات مكانية			
	4) Familiarity with raster data concepts الإلمام بمفاهيم البيانات النقطية			
	5) Spatial queries and spatial analysis processes الاستعلامات المكانية وعمليات التحليل المكاني			
Coastal Monitoring and Information Centre CMIC	1) Monitoring and Information Management	25		
أداة 6: **نموذج تقييم المخاطر** ***Tool 6:*** **Risk Assessment Model**	1) Classification of landcover spatial data using remotely sensed data تصنيف البيانات المكانية للغطاء الأرضي باستخدام بيانات الاستشعار عن بعد	35		
	2) Change detection applications using GIS/RS تغيير تطبيقات الكشف باستخدام GIS / RS			
	3) GIS spatial analysis for detecting, classifying			

	and delimiting flood impacted areas التحليل المكاني لنظام المعلومات الجغرافية لاكتشاف وتصنيف وتحديد المناطق المتضررة من الفيضانات.			
	4) Methods for field data collection. طرق جمع البيانات الميدانية.			
	5) Zoning and spatial planning. تقسيم المناطق والتخطيط المكاني.			
6) أداة 7: نظام التنبؤ ***Tool 7:*** **Forecast System**	1) FOU1: Monitoring and data management إدارة البيانات والمتابعة	12		
	2) FOU2: Design of forecast system تصميم نظام التنبؤ			
	3) FOU4: Operation of forecast system تشغيل نظام التنبؤ			
إدارة الأزمات والكوارث ***Risk and Disaster***	1) CDM1: Strengthen crises/disasters management تعزيز إدارة الأزمات والكوارث	25		
تدريب المدربين لبرنامج سفراء الإدارة المتكاملة للمناطق الساحلية ***مركز المتابعة والمعلومات الساحلية*** ***ICZM Ambassadors TOT; CMIC***	1) Preparation of Good Quality Technical Materials اعداد المواد الفنية عالية الجودة	40		
	2) Presentation Skills مهارات العرض والتقديم			
	3) Effective Communication Skills مهارات الاتصال الفعال			

	4) Media and Public Relations Skills مهارات الاعلام والعلاقات العاقة			
برامج تنمية المهارات الشخصية **Other Soft Skills Programs,**	1) Communication Skills مهارات الاتصال	40		
	2) The necessary skills for the implementation phase of the ICZM plan at the local level المهارات اللازمة لمرحلة التنفيذ لخطة الإدارة المتكاملة للمناطق الساحلية على المستوى المحلى	75		
	3) Coastal management professional development skills مهارات التطوير المهنى للادارة الساحلية			
	4) Coastal communities' readiness skills to face harsh weather conditions مهارات استعداد المجتمعات الساحلية لمواجهة ظروف المناخ القاسى			
	5) The necessary skills to deal with the early warning system at the local level المهارات اللازمة للتعامل مع نظام الانذار المبكر على المستوى المحلى			

4. Overall Outcomes of the Workshops

The G01 and E01 Workshops fixated on planning of the Capacity Building Activities. The overall objective of the Capacity Building Programme is to build up the capacity of the Implementing Agency staff to carry out quality and professional Integrated Coastal Zone Management activities and services. This will ensure establishment of a sustainable governmental management platform at each of the targeted ICZM planning issues and production of professional and quality reports as and when required.

Accordingly, the overall objective is to provide a comprehensive analysis of training needs which, when implemented, will address the development goals of the Project and improve customer service levels by developing the skills, expertise and knowledge of the employees.

In particular, this should enable the Implementing Agencies to fully meet the project performance criteria and project objectives.

The participants were divided into five groups based on their jobs in the 15 governmental institutes, 1) GIS users and Risk Management Staff 2) Research Institutes 3) Planning Specialists 4) Agriculture and Fisheries Specialists 5) Environment and Other specialties

The speakers presented the ideal skills that should be acquired by the participants to assure the achievement of the project objectives which highlighted the following major findings:

1. Hydraulic (hind cast) Wave and Water Level Models

   The planning specialists, agriculture specialists and the participated general managers (10 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

2. Coastal Morphological models

   The planning specialists, agriculture specialists and the participated general managers (10 participants) from different stakeholder institutes raised the need of this training program. They expressed their real related direct need in the daily tasks in their institutes.

3. Flooding Models

   The environment specialists, the planning specialists and the participated general managers (12 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

4. Saltwater Intrusion models

   DRI representatives, the agriculture specialists, the environment specialists and the planning specialists (12 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

5. GIS Platform

   GIS specialists, NUCA, planning specialists and Ministry of Transportation (42 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

6. Coastal Monitoring and Information Centre CMIC
   GIS specialists, NUCA, planning specialists and Ministry of Transportation (25 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

7. Risk assessment model

   (35 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

8. Forecast System

   GIS specialists, NUCA, planning specialists and Ministry of Transportation (12 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

9. Crisis and Disaster Management

   (25 participants) from different stakeholder institutes raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

10. Ambassadors Program

    Participants agreed that ICZM awareness through the ambassadors is crucial to ensure implementation and sustainability of the ICZM plans in coastal governorates.

    All participants who meet the criteria of the selection of the ambassadors (40 participants) from different stakeholder institutes expressed a very high enthusiasm to be ICZM Ambassadors.

11. Soft Personal Skills (Communication Skills)

    (40 participants) from different stakeholder raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

12. Institutional Soft Skills

    (75 participants) from different stakeholder raised the need for this training program. They expressed their real related direct need in the daily tasks in their institutes.

ICZM National Committee

Despite, the efforts of the Environmental Affairs Agency in the field of integrated coastal management since 1994, in addition to release of a set of supported documents and guidelines for development in coastal areas, establishment of the National steering Committee for Integrated Coastal Management, and doing coastal monitoring programme , the Agency's effort have significantly regressed over the last decade. This is clear in the delay of issuing the national strategy of integrated coastal management, and the failure to hold the meetings of the national steering committee for integrated coastal management as planned.

So, it is now very crucial to consolidate and foster all the efforts to activate the national committee for ensuring the sustainable institutional role of the ICZM.

ICZM Committee in each governorate - Bottom Up Approach-

Participants demonstrated general agreement on the activation of the committee for integrated coastal zone management at the defined coastal governorates based on article 60 Bis in the executive regulations of the Environment Law No. 4 of 1994. While highlighting that the committee should provide information to beneficiaries rather than conflicting information. Activation of integrated coastal zone management committees will have a positive role in bringing the regional plans to the level of the national committee that is coordinated through the Environmental Affairs Agency. This bottom-up approach ensures the promotion of results in addition to ensuring institutional sustainability.

General Recommendations

- Providing some online courses available directly at the same time as the training halls, in order to benefit as many courses as possible from the course content.

- Create a social media profile that includes all project partners and serve as a platform for disseminating scientific material and steps to progress in the project.

- Recording training courses and broadcasting them through the project's social networking site.

Ultimately, following well-defined and relevant training topics based on the TNA, the improved contributions by individuals and teams will be reflected from the bottom (Individual Level) to the top (Organisational Level), maximising the achievement of the Project objectives and other performance targets.

5. On-Going Capacity Building from PMU

PMU is carrying out some general capacity building courses for the key stakeholders in coastal zone management. The programme consisted till now of five programmes:

1. Principals of Coastal Engineering.
2. Environmental Impact Assessment.
3. Geographic Information System and Remote Sensing (GIS & RS) Training Courses.
4. Principals of Integrated Coastal Zone Management (ICZM) Training Course.
5. Introduction to Coastal hazards.

The programme presented in this report is coordinated with the PMU capacity building programme. Meanwhile, the forthcoming capacity building activities will be coordinated between NIRAS and PMU.

6. Approach and Methodology for Capacity Building

This chapter presents a framework for the capacity and training programme for each of the training components.

A detailed training programme will be elaborated within the framework of this programme for the training components included in each of deliverables.

Framework Programme is based on the results of the need assessment and the gaps identified in Chapter 2 and 3.

It takes into account the general training performed under the PMU programme briefly presented in Chapter 5.

A mix of training methodologies have been offered, including on-the-job support, formal training, webinars, case studies and practical applications which mirror real work situations as much as possible. The target audience selected by stakeholders will include managerial and technical staff of primarily from the five key Ministries and the Governorates in accordance with the Inception Report [1].

In addition to the training programme it is proposed to include an "Ambassador Programme" as an integrated part of the ICZM capacity and training programme. This programme is described in a separate Chapter 7. It will have an important key role in securing sustainability in the adjustment of the legal and institutional framework not only within the present project period but also beyond this period.

The following sub sections present the capacity building and training framework programme for each of the deliverables in the ToR. The training is based on the overall assumption that the trainees are well experienced in the software tools. The detailed skill requirement to the trainees are presented in the following sub-sections.

6.1. Model tool and on-the-Job Training (Deliverable: 1.7.1)

6.1.1. Wave modelling tool: Mike 21 SW - User level 1 training

6.1.2. Coastal Morphological tool: Mike Litpack

6.1.3. Flooding Modelling

6.1.4. Saltwater Intrusion

6.1.5. GIS Platform

6.1.6. Coastal Monitoring and Information Centre CMIC

6.1.7. Risk assessment Tool

6.1.8. Forecast System

6.1.9. Crises and Disasters Management

6.1.10. ICZM Ambassadors TOT

6.1.11. Personal Soft Skills (Communication Skills)

6.1.12. Institutional Soft Skills

7. The ICZM Ambassadors

In addition to the programme described in above chapters, matching the ToR, NIRAS also propose to implement an Ambassador Programme as an integrated part of the ICZM capacity and training programme. It will have an important key role in securing sustainability in the adjustment of the legal and institutional framework not only within the present project period but also beyond this period.

- Administered by NIRAS, the ICZM Ambassador Program will provide a specialized TOT communication skills training program that focusses on ICZM and Sustainable Development. This training will then be applied to informing and educating others about ICZM and the impact on aquatic environments. Founded on the latest research on science communications, program trainings will be in-depth, interactive, and provide the tools for ICZM scientists to more effectively communicate with thought leaders, journalists, stakeholders, and lay audiences.

- This program is seeking passionate and dedicated candidates that want to reach a variety of audiences and expand their thinking on the impacts that humans have on our aquatic environments.

Objectives of the ICZM Ambassadors Program

1. Build a passionate team to partake in a communication training program specialized for ICZM.

2. Apply this training to inform target audiences on the critical issues of our ICZM and the impacts this has on coastal zones' inhabitants. This will include the development of outreach materials, presentations, and speaking engagements.

3. Share the methods and skills gained through this program to train successive classes of ambassadors to build a network of skilled science communicators.

Expectations and Commitment for Ambassadors

- The commitment to be a trained as an ICZM Ambassador is a two year commitment, with the hope that all ambassadors will continue to be involved with the program beyond year two.
- Expectations for all ambassadors include:
- Participate training workshops tailored for the ICZMAP
- Partake in classroom and online communication coursework
- Actively participate in monthly Ambassador team meetings
- Commit to engaging with and presenting to non-science audiences
- Develop materials and resources to be posted on the ICZM website for other practitioners to access
- Review, analyze, and evaluate best methods for engagement on ICZM

In year two, use the skills gained to develop training for another cohort of ICZM ambassadors.

Benefits of the ICZM Ambassador Program

- Receive specialized communication training at no cost
- The development of valuable career skills, including media and journalism experience
- Attending Project workshops and trainings with international trainers
- Obtaining certificates of attendance stamped UNDP and NIRAS
- Promoting Integrated Coastal Zone Management ICZM in local and international forums
- Collaborate with ICZM scientists
- Develop of leadership skills
- Build professional networks and collaborate with peers
- Gain experience with the policy process

Candidates Selection Criteria in line with the criteria announced on the Presidency of the Republic website

- A group of ambassadors to be selected from relevant ministries, governorates, and research centers participating in the project to promote the integrated coastal zone management elaborated by the project.
- Age ranges from 30 to 50 years old
- The candidate should have a significant role that supports the achievement of one or some of the ICZM sustainable development goals.
- The nomination letter should indicate the actual impact of the candidate in his work environment
- The candidate must be an active leader in his community and his workplace (this means that the nominee has the leadership skills such as being influential, inspiring, motivating, and a team player) certified by managers and colleagues.

The programme will include the following preliminary stages:

- Introduction of the programme in the A2 and A3 workshop in September and December 2022, respectively.
- Based on the outcome of workshop A2 and A3 a separate meeting will be arranged beginning of 2023 to establish the corps of ICZM Ambassadors and develop the ICZM Ambassador Programme 2023-2024.
- The programme will include internal events to promote the ICZM process in each organisation dynamically aligned and coordinated with the overall ICZM process being managed by PMU/NIRAS. Tentatively we assume one event each quarter related to the theme being dealt with on the ordinary A-, I-, G- and E- workshop. The Ambassador are carrying out the events in their respective organisation.
- The Ambassador will briefly share the progress of ICZM awareness on the ordinary held A-, I-, G- and E-workshop.
- Organising one annual event (part of the A workshop programme) for all ICZM Ambassadors sharing the experience with implementing the individual ICZM Ambassador Programme. This event is organised by the ICZM NIRAS Team as integrated part of the capacity building programme
- Organizing one annual event (part of the A workshop programme) for all ICZM Ambassadors sharing the experience with implementing the individual ICZM Ambassador Programme. This event is organised by the ICZM NIRAS Team as integrated part of the capacity building programme.
- The programme will have a separate TOT programme for maintaining the implementation of the Ambassador programme beyond the project period.

8. Raising the awareness of Climate Resilient ICZM stakeholders in fields of biodiversity conservation and Sustainable Development

The following points evidence this:

1- The diversity of the representation of the partner agencies in the capacity building program, such as the General Authority for the Protection of Lakes and Fish Resources, and representatives of natural

reserves in Matrouh, Sinai, and others, in addition to representatives of all ministries, research centers, and governorates.

2- To achieve the Sustainable Development, the capacity building program was designed to gather a broad range of stakeholders who participate effectively in Sustainable Development aspects (Three Legs of Sustainability) which are:
   - Social aspects, the active participation of coastal governorates members and NGOs members ensures the social awareness
   - Economic aspects, the representation of Ministry of planning and the planning sectors in the Ministry of Water Resources and Irrigation in addition the private sector in the governorates ensures the economic awareness
   - Environmental aspects, the representation of MOE and EEAA in addition to the coastal governorates members ensures the environmental awareness.

3- The Ambassadors Program represents a good model for achieving sustainable development for the project, in addition to the platforms and websites that the project will operate.

9. Monitoring of Implementation of Programme

Key Messages:

- The main functions of Capacity Building Monitoring & Evaluation (M&E) are to ensure improvement-oriented critical reflection and learning, to maximize the impact of interventions, and to provide accountability to national and local stakeholders and development partners;
- This Capacity Building M&E Plan is developed to help project managers, engineers, and M&E staff in the Project to implement M&E and highlights how M&E will be used to improve the impact of the Capacity Building Activities.

The below matrix shows the 4 main evaluation types which we apply in our project's Monitoring and Evaluation Plan.

Table 9-1: Monitoring and Evaluation Plan

Evaluation level and type	Evaluation description and characteristics (ICZM Tools Measurement Indicators)	Examples of evaluation tools and methods (ICZM Tools Impact Assurance)	Relevance and practicability (ICZM Tools Application)
1. Response	Response evaluation is how the delegates felt, and their personal responses to the training or learning experience, for example: Did the trainees like and enjoy the training? Did they consider the training relevant?	Typically 'happy sheets'. Feedback forms based on subjective personal reaction to the training experience. Verbal reaction which can be noted and analysed.	Can be done immediately the training ends. Very easy to obtain reaction feedback Feedback is not expensive to gather or to analyse for groups.

	Was it a good use of their time? Did they like the venue, the style, timing, domestics, etc? Level of participation. Ease and comfort of experience. Level of effort required to make the most of the learning. Perceived practicability and potential for applying the learning.	Post-training surveys or questionnaires. Online evaluation or grading by delegates. Subsequent verbal or written reports given by delegates to managers back at their jobs.	Important to know that people were not upset or disappointed. Important that people give a positive impression when relating their experience to others who might be deciding whether to experience same.
2. Learning	Learning evaluation is the measurement of the increase in knowledge or intellectual capability from before to after the learning experience: Did the trainees learn what intended to be taught? Did the trainee experience what was intended for them to experience? What is the extent of advancement or change in the trainees after the training, in the direction or area that was intended?	Typically, assessments or tests before and after the training. Interview or observation can be used before and after although this is time-consuming and can be inconsistent. Methods of assessment need to be closely related to the aims of the learning. Measurement and analysis are possible and easy on a group scale. Reliable, clear scoring and measurements need to be established, so as to limit the risk of inconsistent assessment. Hard-copy, electronic, online or interview style assessments are all possible.	Relatively simple to set up, but more investment and thought required than reaction evaluation. Highly relevant and clear-cut for certain training such as quantifiable or technical skills. Less easy for more complex learning such as attitudinal development, which is famously difficult to assess. Cost escalates if systems are poorly designed, which increases work required to measure and analyse.
3. Behaviour	Behaviour evaluation is the extent to which the trainees applied the learning and changed their behaviour, and this can be immediately and several months after the training, depending on the situation: Did the trainees put their learning into effect when back on the job?	Observation and interview over time are required to assess change, relevance of change, and sustainability of change. Arbitrary snapshot assessments are not reliable because people change in	Measurement of behaviour change is less easy to quantify and interpret than reaction and learning evaluation. Simple quick response systems unlikely to be adequate. Cooperation and skill of observers, typically line-managers, are

	Were the relevant skills and knowledge used Was there noticeable and measurable change in the activity and performance of the trainees when back in their roles? Was the change in behaviour and new level of knowledge sustained? Would the trainee be able to transfer their learning to another person? Is the trainee aware of their change in behaviour, knowledge, skill level?	different ways at different times. Assessments need to be subtle and ongoing, and then transferred to a suitable analysis tool. Assessments need to be designed to reduce subjective judgement of the observer or interviewer, which is a variable factor that can affect reliability and consistency of measurements. The opinion of the trainee, which is a relevant indicator, is also subjective and unreliable, and so needs to be measured in a consistent defined way. 360-degree feedback is useful method and need not be used before training, because respondents can make a judgement as to change after training, and this can be analysed for groups of respondents and trainees. Assessments can be designed around relevant performance scenarios, and specific key performance indicators or criteria. Online and electronic assessments are more difficult to incorporate - assessments tend to be more successful when integrated within existing management and coaching protocols.	important factors, and difficult to control. Management and analysis of ongoing subtle assessments are difficult, and virtually impossible without a well-designed system from the beginning. Evaluation of implementation and application is an extremely important assessment - there is little point in a good reaction and good increase in capability if nothing changes back in the job, therefore evaluation in this area is vital, albeit challenging. Behaviour change evaluation is possible given good support and involvement from line managers or trainees, so it is helpful to involve them from the start, and to identify benefits for them, which links to the level 4 evaluation below.

		Self-assessment can be useful, using carefully designed criteria and measurements.	

9.1. Quantitative indicators (Deliverable: 3.1.1)

The Training Programme KPIs are the following:

a. Training Objectives

Are the objectives realistic, simple and relevant? Have they been achieved? If yes, to what extent?

b. Contents and Training Methods

Is the content covered adequate and meaningful? Are the training methods appropriate? Are they facilitating or hampering learning?

c. Group Process

Are the groups functioning effectively? Is the group process contributing to learning, or is it hampering it?

d. Trainers

Are the trainers keeping pace with the learners? Are they too slow or too fast? Are they sensitive to the learners' needs? Are they competent?

e. Learning Materials

Are they well organised? Are the learners finding them relevant? Are materials appropriate to the contents?

f. Physical Equipment

Is the training facility comfortable? Are the living arrangements satisfactory? Are the food arrangements satisfactory? Does the physical environment facilitate learning or hamper it?

We are using the 4 descriptive and 13 quantitative KPIs for the evaluation of the workshops or the training programs as seen in the table below.

The Form below presents the Evaluation Forms distributed in every ICZM workshops to be filled by the participants to gain their feedback on the effectiveness of each workshop.

Table 9-2: Training Courses and Workshops Evaluation Form.

Workshop name	---------- ---------- ---------- ----------	Date of evaluation	----/----/----

Attendee /Trainee's name (optional):	----------
Organization	----------

Please answer the following questions related to the evaluation of the above-mentioned training course/ workshop, by giving a mark (1 - 10) to each of the questions asked, where the mark (one) means very low performance and the mark (10) is high performance. Note that this assessment aims to know the Positive points as well as weaknesses in order to improve performance in the future.

#	Aspect	Mark (1-10)
	a. Mention the most important information/skills that you acquired during the training course/ workshop.	---------- ---------- ---------- ---------- ---------- ----------
	b. Do you believe that this training course/ workshops give you clear vision about the project tools, methodologies and progressive steps? **If yes, please describe.** **If no, please advise.**	---------- ---------- ---------- ---------- ---------- ----------
	c Can you transfer the acquired skills/ information to your colleagues?	

	d. Scientific and practical material presented in the training course/ workshop:	
1.	The training material discussed in this course is considered practical and applicable in our fields of ICZM work.	[_____]
2.	In this session, the focus was on the use of the scientific method in subtraction, which is mixed with knowledge based on experience and practice	[_____]
3.	The parts of the presented tools' material were linked to each other in a sequential, interconnected and integrated manner	[_____]
4.	After completing this course, I think that I am now able to start applying what I have learned through this course in my field of work	[_____]
5.	The practical cases that were used to illustrate the concept of the tools' training course/ workshop were sufficient and logical.	[_____]
	e. Training venue equipment:	
6.	The equipment that was available in the place is good and sufficient to achieve the purpose	[_____]
7.	The institution was working to provide services and hospitality to the participants in an optimal manner	[_____]
	f. Trainer/ Instructor performance:	

8.	The Trainer/ Instructor's style and presentation of the material are clear and understandable	[_____]
9.	The Trainer/ Instructor has a capacity to understand the foundations of the topic of the course	[_____]
10.	The Trainer/ Instructor raises practical issues related to the project tools and links them to the methodological approach in application	[_____]
11.	The Trainer/ Instructor presents the scientific material in a coherent and sequential manner	[_____]
12.	Level of interaction with the Trainer/ Instructor during this course	[_____]
13.	The Trainer/ Instructor provides logical solutions to answer the participants' questions	[_____]

After each workshop or training program we will produce a professional report including statistical analysis of the results and comments.

9.2. Monitoring and Evaluation (Deliverable: 3.4.1)

9.2.1. Participatory Methodology

Monitoring and evaluation (M&E) of training programmes is a widely neglected area. But in our Project we pay high attention to the Monitoring and Evaluation Process.

Traditional evaluation practices seek the passive involvement of learners, who are usually the objects of evaluation. The evaluation is often one-sided, dominated by trainers, who may not even share the results of the evaluation with learners. Indeed, often it is only the learner's ability to 'cram' facts about content areas that is tested at the end of a programme, as a way to assess the effectiveness of the training.

Understanding the importance of M&E involves acknowledging that participatory training programmes are about process just as much as outcome. Our aim should be to assess what is happening during the training programme, as well as the impact at the end (PRIA, 2011). Why is evaluation so important in participatory training? To understand this, we need to go back to our basic understanding, our principles and convictions.

We conduct these participatory programmes with a clear goal in mind – to encourage involved stakeholders to undergo a process of self-development, to bring about change, and to free them from stereotyped modes of thinking and behaviour, instilling in them willingness for transformative action. Training has a specific role in our overall strategy.

Our commitment to change impels us to constantly check and assess how far we are proceeding and what scale of change we have been able to bring about. Evaluation therefore is crucial in participatory training.

Evaluation in this context means the systematic eliciting and analysis of feedback information about the relevance and impact of the training in order to assess whether the training has effectively brought about learning or change. It is not aimed at being judgemental; rather it highlights particular strengths and weaknesses of the programme. It helps to reflect on and consolidate the present learning for participants, helps trainers modify and revise the programme, and contributes towards strengthening future programmes.

In this regard, monitoring is an essential aspect of the evaluation process. Monitoring is essentially an on-going process to ensure that the training programme is on track, and that the pace and content of the learning remain relevant to any particular group of learners. Through continuous monitoring of the pace of learning, the flexibility of a training programme to adapt its pace and depth to the requirements of learners is enhanced. Continuous monitoring also allows a trainer to have better understanding of what needs to be changed if the outcome of the training evaluation is disappointing.

Characteristics of Participatory Monitoring and Evaluation:

Shared Control: Both the learners and the trainers maintain shared control over the process of M&E.

Developmental: The evaluation helps to strengthen the training programme by working out the difficulties faced by learners and trainers; it is intended as a developmental intervention.

Awareness Raising: It leads to a process of collective awareness.

All the learners and trainers are aware of what is happening to them at a given moment of time.

Empowering: As information is shared with the group, and the learners maintain control over the M&E process, it becomes an empowering experience.

Mobilisation: Learners are motivated to contribute to the effectiveness of the training programme by being actively involved in the evaluation process.

9.2.2. Follow-Up

Follow-up of the training programme is essentially aimed at continuing the process of learning initiated during the training programme. Each training programme creates a set of knowledge and ideas, which learners try to implement in their own context. These efforts may require further support as follow-up.

Follow-up of a training programme can be used for several purposes:

- Provision of support, encouragement, knowledge and resources needed to implement the learning, which the learner has acquired during the course of the training programme.
- Helps define additional learning needs during the period immediately after the training programme and helps to continue the learning process by bringing out new learning needs.
- Used to assess the training programme and its impact on the learners, their work and their organisations. This helps the trainers in designing future training programmes.

- Provision of an opportunity for the learners to consolidate their own experience acquired during the training programme.

9.2.3. Methods of Follow-Up

Follow-up can be conducted in different ways. It can be planned differently for each learner; it can be done for the entire group of learners; it can also be done for a selected sub-group as well. Methods of follow-up depend on its purpose and group of learners. Several possible methods are:

- Direct Methods These methods entail face-to-face interaction among learners themselves and between learners and trainers. Examples are field visits by other learners or trainers to the home of a particular learner, group meetings with or without the trainer, etc
- Indirect Methods Indirect methods do not entail face-to-face contact. These include correspondence on a regular or periodic basis, initiated by learners as well as trainers. It might constitute the form of a newsletter or periodical, including questions posed by learners based on their field problems and experiences, with a response from the trainer or other learners. This could also include an exchange of learning materials developed by different people, etc.

9.2.4. Analytical Report for each workshop or training program

Essentially this report highlights the why and how of training. It evaluates in nature and pools together analytic data to make links, focus on issues and trends and highlight what worked, what did not work and what could be the possible reasons for the same. The presentation of the report is in an action-reflection mode. It is useful for the trainers conducting the training to find out what they learnt, action-researchers in the field of training as well as for other trainers to learn about innovative thinking and experiments and use it in their own work. Often, reports end up being a combination of several types, depending on who they have been written for and towards what purposes they were written.

9.2.5. Logical Framework

Logical framework analysis Capacity Building Objectives and outputs are considered:

Table 9-3: Logical Framework.

Overall Project Objectives: • Raise the awareness of Climate Resilient ICZM stakeholders among the Egyptian management of the 1,000 km long Mediterranean coastline from Sallum to Rafah. • Support elaboration of future legal, institutional and organisational set-up of coastal stakeholders • Support the introduction and formulation of the ICZM Plan. • Develop ICZM tools supporting the elaboration of the ICZM plan • Train the future organisation in using the ICZM tools.			
Objective / Outputs	Verifiable Indicators	Means of Verification	Notes and Assumptions

Assignment objective: Train the future organisation in using the ICZM tools.	• The PMU MWRI is established and operational • The Consultant is in place and operational • Project progress is according to plan • Quality of works is adequate	• Quarterly progress reports • Project completion report	The PMU and the Consultant are cooperative and willing to coordinate with each other
Output 1: TNA is prepared	TNA report is sent to PMU PMU approved the TNA	• Inception Report • Monthly progress reports • Quarterly progress reports • Detailed project schedule • PMU training reports	Part of the Project TOR The criteria of the selection process are very clear
Output 2: Training Courses Plan is prepared	• Training Needs Assessment TNA is approved • Training Plan Report is prepared. • PMU approved the training plan	• TNA Report • Training plan Report • Monthly progress reports • Quarterly progress reports • Detailed project schedule • PMU training reports	Part of the Project TOR Brainstorming and open discussions are very interesting
Outputs	Verifiable Indicators	Means of Verification	Notes and Assumptions
Output 3: Tool 1 training is implemented	• Evaluation questionnaires reflected good results • On Job M & E measured tangible progress for the participants	• Evaluation questionnaires • Monthly progress reports • Quarterly progress reports	Part of the Project TOR Efficient and Clear Database is found
Output 4: Tool 2 training is implemented	• Evaluation questionnaires reflected good results On Job M & E measured tangible progress for the participants	• Monthly progress reports • Quarterly progress reports	Part of the Project TOR Attractive and innovative materials
Outputs	Verifiable Indicators	Means of Verification	Notes and Assumptions

Output 5: Tool 3 training is implemented.	• Evaluation questionnaires reflected good results • On Job M & E measured tangible progress for the participants	• Monthly progress reports • Quarterly progress reports • Cooperatives records	Part of the Project TOR Within the Egyptian Law
Output 6: Tool 4 training is implemented	• Evaluation questionnaires reflected good results • On Job M & E measured tangible progress for the participants	• Training Implementation Reports • Monthly progress reports • Quarterly progress reports	Part of the Project TOR Criteria of the selection of multipliers are efficient and clear
Output 7: Tool 5 training is implemented	• Evaluation questionnaires reflected good results • On Job M & E measured tangible progress for the participants	• Monthly progress reports • Quarterly progress reports • Cooperatives internal system	Part of the Project TOR Within the Egyptian Law
Output 8: Tool 6 training is implemented	• Evaluation questionnaires reflected good results • On Job M & E measured tangible progress for the participants	• Monthly progress reports • Quarterly progress reports • Booklets' drafts	Part of the Project TOR Useful and Attractive Booklets
Output 9: Tool 7 training is implemented	• Evaluation questionnaires reflected good results On Job M & E measured tangible progress for the participants	• Training Bags • Monthly progress reports • Quarterly progress reports	Part of the Project TOR Attractive and innovative materials
Output 10: ICZM Ambassadors are effective	• Selection Criteria are developed • PMU approved the selected candidates	• Monthly progress reports • Quarterly progress reports	Part of the Project TOR Attractive, useful and innovative initiative
Output 11: CMIC is developed	• CMIC is established • CMIC is effective	• Monthly progress reports • Quarterly progress reports	Part of the Project TOR National and international best practices are considered
Output 12: Training material revised and developed addressing at least the main topics	• 2 Training Bags were delivered • 2 TOT Manuals were delivered one for Trainee and one for Trainer	• Monthly progress reports • Quarterly progress reports	Part of the Project TOR

mentioned above, and the training material developed for the ToT sessions.	Technical Materials were delivered		Attractive and innovative materials
Output 13: A gender equality complaint and reporting system is in place and reported cases are adequately addressed by the Client	• Reporting system on identified gender equality issues and follow-up is in place	• Monthly progress reports • Quarterly progress reports	Part of UNDP Strategy Female participation is increased
Output 14: Training material revised and developed addressing at least the main topics mentioned above, and the training material developed Webinars and websites	• Professional website is established • Number of visitors is increased	• Monthly progress reports • Quarterly progress reports	Part of the Project TOR Attractive and innovative materials

10. References

[1] NIRAS, Inception Report, UNDP, 2022.

[2] NIRAS, "The ICZM Ambassador Programme," UNDP, 2022.