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HUMAN RESOURCES DEVELOPMENT AND INSTITUTIONAL ARRANGEMENTS FOR MANAGING COASTAL RESOURCES AND ENVIRONMENTS IN THE UAE, FROM CONCEPT TO PRACTICE

By

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ABSTRACT

The coastal area of UAE contains some of the world's richest ecosystems including extensive oil reservoirs, coral reefs and mangrove forests. UAE in fact faces an acute shortage of personnel having the necessary knowledge, technical skills and managerial capability to meet the new challenges which involve the application of integrated approaches to formulation and implementation of plans for the sustainable development of coastal and marine areas. This paper is focus on the following two objectives: Human resources development and capacity building for planning and managing of coastal areas and identify elements of environmental training strategies and environmental master plan. Increasing awareness for the needs for coastal zone management should starts with policy-maker, decision-makers and planners. It is recommended that before the initiated training programmes, careful analysis for the present and future needs along with analysis of the present training programme, either locally, regional or internationally should be done. On the other hand, evaluation of the current training programmes is inevitable as well as training should be target and at different levels.

INTRODUCTION :

Coastal regions are the home of the three-quarters of the world's population. At the United Nations Conference on Environment and Development. (UNCED) in Rio de Janerio Brazil in 1992, the protection of coastal environments to ensure sustainable use of natural resources was at the top of the agenda for action [1].

Under Agenda 21, Coastal states should «commit themselves to integrated management and sustainable development of the coastal areas and marine environment under their national jurisdiction». UNCED further pointed out the importance of coastal states developing national policies and management capabilities for integrating the development and management of multisectoral activities in coastal marine areas [2]. One of the major elements that permeates all programme areas contained in chapter 17 (on the ocean and coastal zone) of Agenda 21 of the UNCED is the need for human resources development, and in particular training. This has been identified as one of the most important elements of capacity building and especially a mean through which the adoption and implementation of new political, administrative and technical schemes for integrated management and sustainable development of coastal and marine areas, including exclusive economic zones could facilitated.

UAE in fact face an acute shortage of personnel having the necessary knowledge, technical skills and managerial capability to meet the new challenges which involve the application of integrated approaches to the formulation and implementation of plans for the sustainable development of coastal and marine areas. Therefore it is necessary for the UAE to concern about the study of coastal zone and as well as to implement the human resources, in order to be able to solve, manage and deal with this important sector.

This paper will focus on the following two objectives :

1. Human resources development and capacity building for planning and managing of coastal areas.
2. Identify elements of environmental training strategies and environmental master plan.

UNITED ARAB EMIRATES COASTAL REALM :

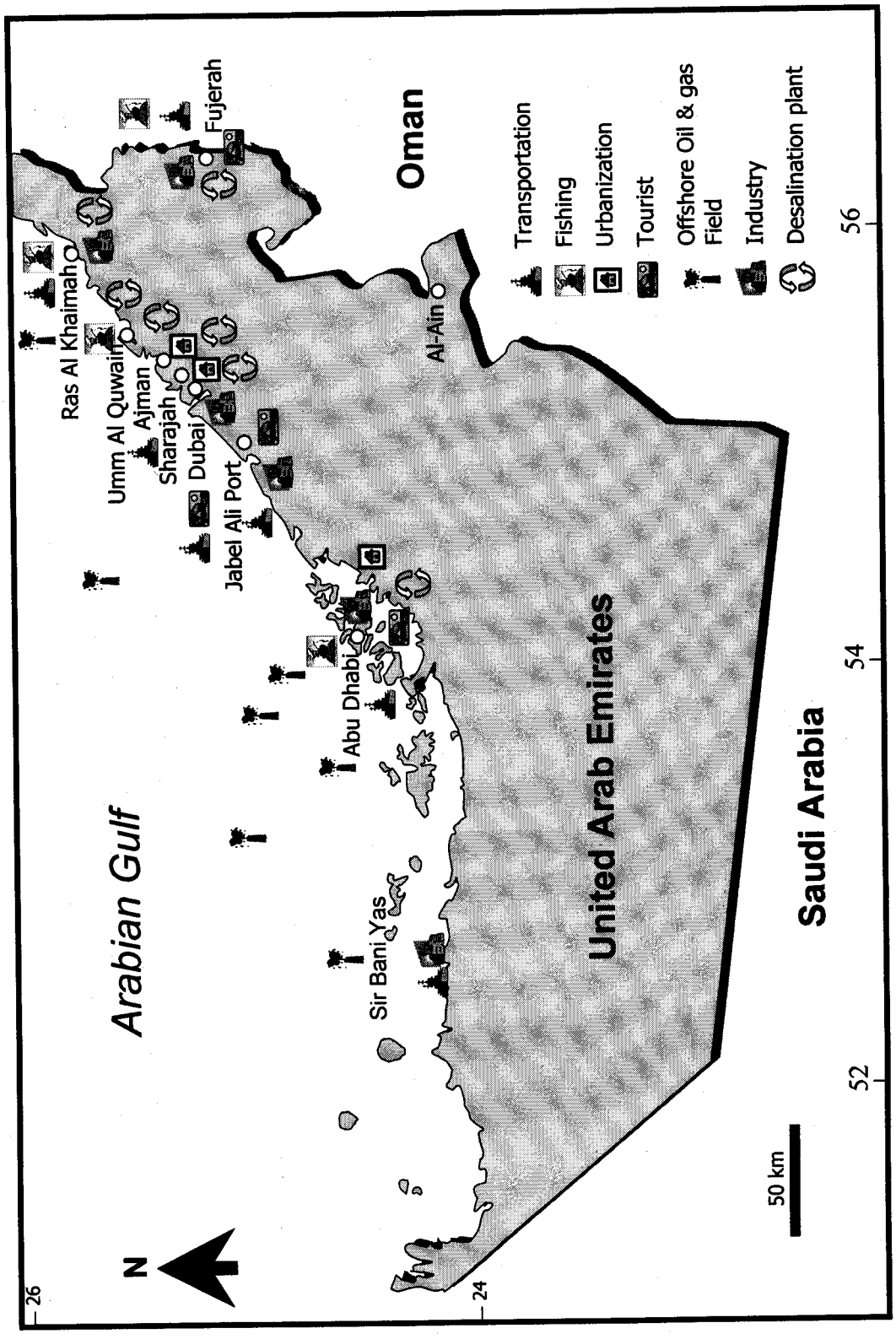
The coastal area of UAE contains some of the world's richest ecosystems including extensive oil reservoirs, coral reefs and mangroves forests. The United Arab Emirates is situated at the southern part of the Arabian Gulf. Its coastline extends for about 720 km part at the gulf of Oman and part at the Arabian Gulf (Figure 1). This coastal area plays an important role in the UAE economy. Many activities such as recreational, industrial, transportation, oil production, and exploration are concentrated at the coastal realm. These activities have resulted in negative impacts on the coastal area.

The coastal area of UAE can be divided into western part extends about 650 km from Qatari boarders to Ras Al-Khaimah,

and the eastern coast extends about 70 km from Ras Al-Khaimah to Kalba.
Most of the west coastlines consist of stretches of gently shelving sands, interrupted occasionally by khors, lagoons or mostly ancient coral rocky formations [3] East of Ras Al-Khaimah the beaches are mostly rocky and characterized by dark grayish fine sediment. The narrow beaches are bordered by high igneous rocky mountains. Except for Ras Al Khaimah, the sand beaches of the west coast were backed by wide areas of salt marches [3]. Towards the lower mark, softer deposits were found with considerable quantities of slit and mud. The shallow, nearshore, subtidal areas consist of sand or rock bottom and some areas of coral feefs and seagrasses beds. By comparison, the east coast of UAE on the Gulf of Oman consists of relatively narrow rocky and/or sand beaches bordered landwards by cliffs and mountains of igneous nature. The subtidal areas are comparatively deeper that those of the Arabian Gulf and consist of coral reefs and sand occasionally covered with seagrasses [3].

The United Arab Emirates has extensive offshore reefs, but like many of its gulf neighbours it has lost mangroves to unplanned coastal development and the resulting sedimentation has stressed corals. Spectacular oil spills are commonplace, usually coming from ships passing the Strait of Hormuz, the world's busiest waterway. In July 1997 a damaged tanker spilled thousand of tons of diesel fuel in a coral reef area. The year before that it was crude oil sludge dumped illegally from another tanker. The United Arab Emirates' largest oil spill occurred in 1994, when 16,000 tons of Iranian crude oil seriously damaged the country's eastern coastline and its fishing industry. In 1996, scientists found a new threat to UAE corals : Yellow Band Diesease, a previously unknown plague, is consuming corals in the southern Arabian Gulf off Abu Dhabi (c.f. INTERNET, the internet URL address is: http://www.motherjones.com/coral_reef/united_arab_emirates.html).

Unfortunately, the marine environment in the Gulf region has been subjected to considerable stresses through the deliberate as well as the accidental oil spills, ballast water discharge, dredging and burial for coastal development, and uncontrolled sewage and industrial wastewater discharge. Additionally, human activities exerted on the banks of the khors are very intensive [4]. These banks are exploited by small industries, used as ports and anchoring shelters by fisherman and developed for recreation, sport, and commercial boating. The given stresses and activities provide potential sources of pollution including trace elements and consequently are posing a serious threat to the marine environment [3]. Figure (1) displays the most recent and common uses of the United Arab Emirates coastal area.


Arabian Gulf
United Arab Emirates
Oman
Saudi Arabia
Ras Al Khaimah
Umm Al Quwain
Ajman
Sharajah
Dubai
Jabel Ali Port
Fujerah
Abu Dhabi
Sir Bani Yas
Al-Ain
Transportation
Fishing
Urbanization
Tourist
Offshore Oil & gas Field
Industry
Desalination plant
N
50 km
26
24
52
54
56

(Fig. 1)

1. HUMAN RESOURCES DEVELOPMENT AND CAPACITY BUILDING :

Main Objectives :

UNCED made an urgent call to states to promote and facilitate the implementation of education and training efforts in integrated coastal management for sustainable development. Due to the wide range of technical and managerial requirements, formalization of training programme for development the human resources should primary focus on :

* Improving, through training and education, the knowledge, skills and attitudes of specific target groups (policy-makers, managers, users / implementers, (NGOs).
* Increasing public awareness through lectures open for publics, conferences, and workshops. The role of NGOs is a must.
* Enhancing, Developing and/or strengthening harmonizes among UN agencies, international financing organizations, governments, and inter governmental and non-governmental organizations in order to address training and educational priority needs and promote coherence and consistency of actions.

Major Actions Areas :

AT WHAT LEVEL AND IN WHAT MAJOR SUBJECT AREA :

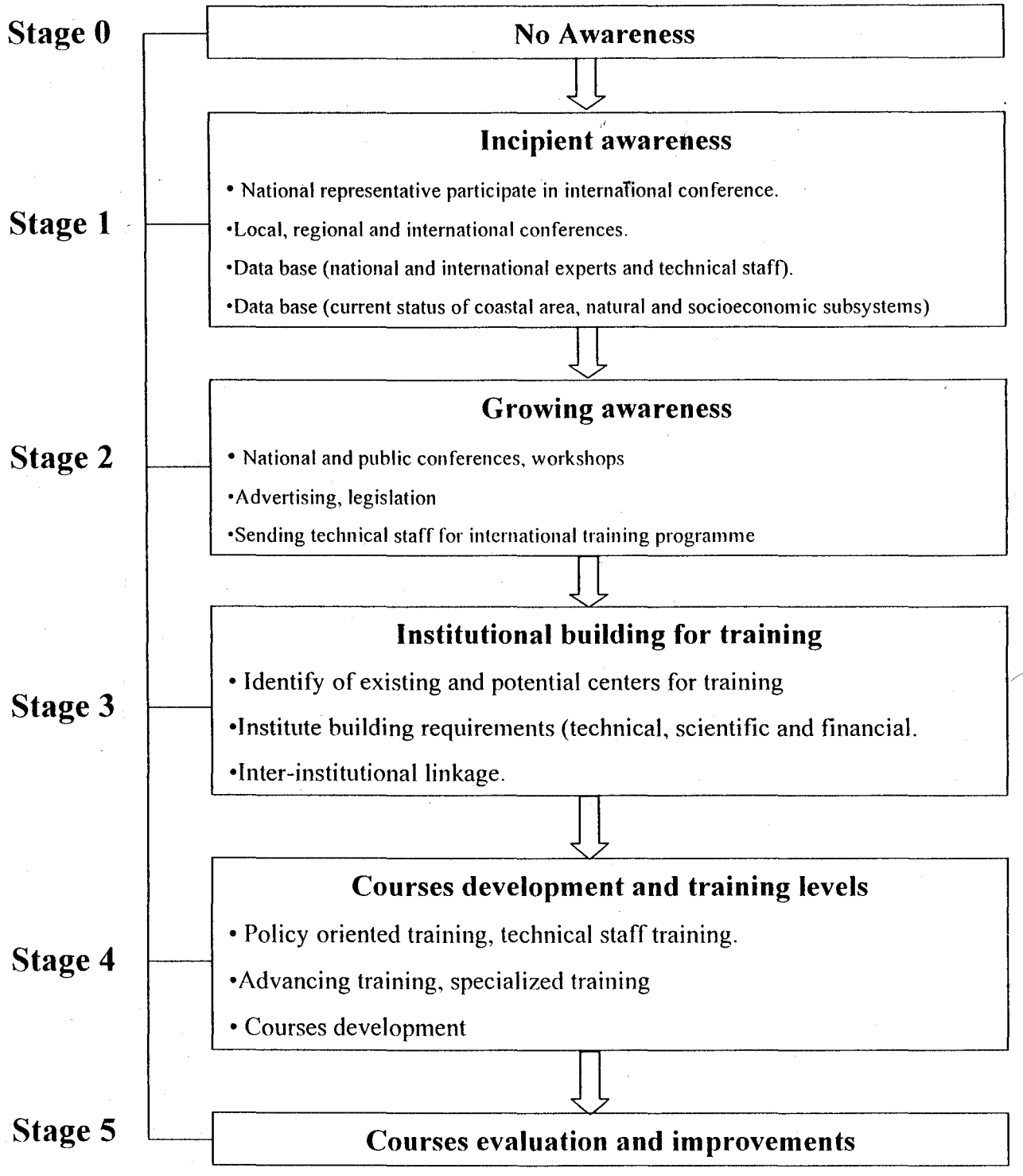
Development of human resources should implemented at different level (public, policy-making, decision-makers, technical peoples, ... etc.). The area of training should emphasize according to the four major variables in Integrated Coastal Zone Management Programme. These four variables are economic development, living variables, non-living variables, and social development.

The major action areas are partially developed in UAE. Examples of such activities are:

* Lectures open to the publics given on the national and international events. These lectures deal with many hot topics such as oil pollution, coastal management, marine pollution, etc.
* Many national and international conferences and workshops dealing with the protection of the environments in UAE the present status and future planing.
* Training workshops in cooperation with international agencies, These workshops mainly concern about the development of human resources and building capacity in the many fields including analysis of marine samples and environmental management.

The previous mentioned activities are directed to the publics, policy-makers planner, and decision-maker. Another successful programme that established several years ago at United Arab Emirates University is the master degree in environmental science. Many of the policy-maker, decision-maker, and planner at different sectors in UAE had been enrolled in the programme. This programme is mainly directed for building human resources in the field of environmental science. Figure 2. Summarized the point of view

concerning the steps, the major actors, and the major participators for initialization of national training programme for human resources development in U.A.E.



(Fig. 2)

II. IDENTIFY ELEMENTS OF TRAINING IN INTEGRATED MANAGEMENT OF COASTAL AND MARINE AREAS AND ENVIRONMENTAL MASTER PLAN:

I. Identify elements of environmental training strategies :

1. OBJECTIVES :
   a) To identify hot spots for environmental training
   b) To set up strategy for CZM training

2. REVIEW OF THE CURRENT TRAINING PROGRAMME AND THEIR ADMINISTERING INSTITUTES :

It is important before starting a new programme in the CZM training, to evaluate and review of the current and previous training programme in the area of interest, either at the national or international levels [5]. Review of the current programme also included the review of the institutes and training center currently involved in the interested fields. Expert working in marine sector as well as related areas such as social impact, environmental engineer should be identified [6].

3. IDENTIFT HOT SPOTS SUBJECTS FOR TRAINING :

Identifying the certain hot spots, such as :
Pollution (oil pollution, wastewater pollution, industrial and domestic sewage ... etc.).

Dealing and identifying the uncertainty such as :
Accidental hazards (ship accidents, oil spill, ... etc.).
Global climatic changes and impact of rising sea level.

B. Assessment of human resources requirements and scope and type of associated training programme :

Training for coastal management should be either :
a) Individual training
b) Group training
c) Local training
d) Topic targeted to regional/national issues.
e) Effective network
(National / Regional / Global)
(People / Institutes / Informative materials)

C. Governance arrangements for coastal one management :

Historically, sectoral plans at local or state level governed planning and management of coastal areas [7]. Insufficient effort was made to coordinate these sectoral plans or integrate local, regional and national plans. The scope and complexity of present environmental problems in the coastal zone makes such integration inevitable.

It is important of formulate legislative instruments to structure ICZM. Such legislation should ideally take into account the following aspects :
* Integration of terrestrial and marine ecosystems and their utilization (horizontal integration).
* Integration of all levels and actors concerned (vertical integration).
* Integration of planning, management and control (integration in time).

In the United Arab Emirates, a legislative instrument is already exits. The federations law no 7, 1993 was established to formulate the Federal Environmental Agency (FEA). FEA is an independent governmental organization concerning about conservation protection and development of the environment in UAE, establishing the strategies needed for persevere of the environments from damages caused by different activities as well as to established the laws, suggestion and researches. One of the FEA missions is to study the nature of the coastal and marine environment in UAE as well as proposed suggestions for protecting and developing the marine resources in UAE. It also is involved in reducing marine pollution hazards. it should be noted that ICZM is a governmental process and hence it needs a governmental organization for leading the efforts of integration either in horizontal, vertical direction or in time. It is worth to mention that many municipalities in UAE have a well-developed programme for management and protection of marine environments. Many of these programmes are sectoral management programmes however some of them are integrated programmes. Other municipalities have either a subdepartmental units or are starting new programmes.

CONCLUSIONS :

1. ICZM is a governmental process. A governmental office should leads the process. The suggested office in UAE is Federal Environmental Agency.
2. Increasing awareness for the needs for coastal zone management should starts with policy-maker, decision-makers and planners.
3. Evaluation of the current training programmes is inevitable.
4. The role of NGOs is very important.
5. Before the initiated training programmes, careful analysis for the present and future needs along with analysis of the present training programme, either locally, regional or internationally should be done.
6. Training should be tárget and at different levels.

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