



PRIORITY
ACTIONS
PROGRAMME



**Regional Workshop on
Beach Management for the Mediterranean
(Valletta, Malta, July 2-3, 2007)**

REPORT

Priority Actions Programme
Regional Activity Centre
Split, September 2007

Regional Workshop on Beach Management for the Mediterranean
Valletta, Malta, July 2-3, 2007

Background

1. For quite some time PAP/RAC has been involved in activities dealing with beach management. The need was felt for appropriate guidelines to assist the relevant national authorities in implementing this sensitive task. Therefore, PAP/RAC organised the preparation of a brief manual on Beach Management Guidelines. In order to discuss the text before its finalisation, a workshop was organised to be attended by the national experts in the beach management field from all Mediterranean coastal states and the EU. The present workshop was linked to the Regional Workshop on Beach Management in the Mediterranean, where special reference was given to the application of the Bathing Area Registration & Evaluation (BARE) System in the Mediterranean coastal states, held in June 2005.

Participation

2. The workshop was attended by representatives of 8 Mediterranean countries, Beachmed project, ICoD and PAP/RAC, as well as a number of observers from Italy and Malta. A complete list of participants is attached as Annex I.

Agenda Item 1: Opening of the Workshop:

3. Mr. A Micallef, Director of ICoD, welcomed the participants and provided a brief introduction to ICoD and its work in the field of ICZM.

4. Ms. P. Dingli, Malta Tourism Authority, welcomed the participants on behalf of the Minister for Tourism and Culture, the Hon. Francis Zammit Dimech. Her speech is reported in Annex II.

5. Mr. J. N. Grech, CEO of the Foundation for International Studies welcomed the participants to the Foundation and raised hopes they would be satisfied with the working environment it offered. At the Foundation, they are fully aware of the impact human activities have on nature. Mr. Grech stressed that good environmental management was particularly important in the case of coastal tourism development. He considered that, for all its economic benefits, tourism could also be very harmful for beaches. He mentioned the example of litter. Therefore, the importance of meetings like the present one is great. Considering the socio-economic benefit of beach resources, Mr. Grech pointed out that the participants in the workshop should in their considerations, not only be scientific but also humane. He wished them good work and pleasant stay in Malta.

6. Mr. I. Trumbic, Director of PAP/RAC, greeted the participants on behalf of Mr. P. Mifsud, Co-ordinator of MAP. He briefly introduced the beach management related project. The present was the second workshop on the subject. Between the first and the second workshops, a lot has been done and the most obvious results are the present Guidelines. Throughout its activities, PAP/RAC has produced a number of guidelines on various subjects as they see them as a useful tool that can be easily distributed throughout the region. For some time the main activity of PAP/RAC has been ICZM, and a Protocol on ICZM is currently in preparation. It is in the final phase when all the consultation work has been done and it is expected to be adopted by the Contracting Parties by the end of the year. An important point for the present workshop is that beaches are included in the Protocol. Namely, so far, a legal basis for beach management has been missing. And the beaches are of great importance, not only for the tourists but just as much for the local population, and not just because of the income they generate. They are of great importance for coastal zone management. Some parts of coastal zones enjoy some sort of protection (urban areas, specially protected areas, ...) but large portions are not covered by

any legal instruments of protection or management. Beaches often fall in that category. There are some beach assessment/management tools, such as the Blue Flag and the like, but a large number of beaches are out of any system used so far. These Guidelines should fill that gap.

7. Mr. Micallef briefly presented the organisation of work for the coming two days, as reflected in the Agenda, attached as Annex III.

Agenda item 2: Beach Management - a sub-set of ICAM

8. Mr. A. Williams presented beach management as a sub-set of ICAM. Beach management master plan development involves a number of logical and sequential steps that include development of:

- i. Firstly a national policy for Coastal Management with a clear set of objectives that can provide an overall umbrella for local / state / county beach management plans.
- ii. A local strategy with which to achieve such objectives.

Beach management is a relatively young discipline which is essentially practical in nature but a vacuum exists with respect to theory in which a foundation has yet to be fully established. In the past it has been driven by practical issue resolution, essentially carried out on an *ad hoc* basis. Effective beach management has usually been considered as a response to a specific interaction of cultural influences with the physical environment and a prime objective of developing a sustainable landscape resource. In order to achieve strategic effectiveness the following key steps are necessary, but in reality, these components are generally absent from management practice or at best fragmented:

Analysis - addresses the existing situation, identifies problems and determines the desired results.

Planning - considers where and how change could be implemented and with what techniques, as well as what planning strategy to use.

Management - decisions taken during the above phase would be implemented. Action would also be taken to ensure completion of the adopted action plan.

Monitoring - considers how best to monitor the environment, results and progress, achieved by setting milestones and comparisons with base-line data.

Any beach management problem has to have clearly defined dimensions and limits, and there are primarily five dimensional elements to any problem. These are substantive, spatial, temporal, quantitative and qualitative. They assess factors such as whether something being done should be stopped or modified; something should be introduced; assess boundary problems; consider whether the problem is long/short term; has single or multiple causes and should investigate philosophy, worth and values.

9. After the presentation by Mr. Williams, BEACHMED was introduced. It is the largest EU-financed project on the subject. Its representatives attended the Workshop.

Agenda item 3: Conceptualisation of beach management

10. Mr. Micallef, in his presentation, considered a rationalisation of beach management within the context of national ICZM policy, bathing area resources, adoption of beach management guidelines and the subsequent development of beach management plans.

Beach management policy objectives were reviewed together with the form and contents of beach management plans. An innovative Bathing Area Management Model was presented as a holistic method of addressing beach management and forging policy with management plans. The model described involved seven phases, namely: Data Gathering, Policy Definition, Planning, Implementation, Analysis, Evaluation/Review and Monitoring/Control. Beach

management strategy and its relevance to adoption of beach quality evaluation schemes was also discussed.

11. In the discussion that followed, a number of issues were raised. One question regarded the types of beaches that the guidelines would cover. The authors explained that those were intended as general guidelines whose suggestions and recommendation would be adaptable to a wide variety of beach types. Another important issue raised regarded biodiversity. As important as it is for environmental quality of a beach, it can not be used as a parameter for defining beach quality. A general remark was made regarding the structure of the document that should follow the usual structure of PAP guidelines. Accordingly, a new chapter will have to be added. Question was raised as to at which level the guidelines would be applied. The conclusion was that the guidelines would be addressed to all those involved with ICZM.

12. Mr. M. Elbouch (Morocco) informed the meeting on the activities performed in his country with regard to beach management. Beach management has been performed for years by the relevant authorities. He briefly introduced the most important programmes implemented. Monitoring of bathing water quality has been performed since 1993, including 93 beaches and 300 stations, and the results are published annually and presented at a press conference. The "Clean Beaches" programme was launched by the Foundation Mohamed VI in order to protect the environment and to improve the beaches with regard to infrastructure, equipment, hygiene and safety. Currently, 55 beaches have been classified as "clean beaches", and the best ones are awarded a trophy. The "Blue Flag" programme has also been launched by the Foundation Mohamed VI. In 2005 two beaches met the requirements, and four in 2006. Also, Morocco has enforced a law on wastes which directly affects the problem of litter on the beaches.

Agenda item 4: Beach types

13. Mr. Micallef made a presentation concerning beach typology. He stressed the importance of recognising that different beach types require different levels and type of management. He described how the current BARE technique presented at this workshop recognised the widest spectrum of beach types compared to any other known beach rating/award schemes. Mr. Micallef then described the five beach types recognised by the BARE beach-quality evaluation system, namely Resort, Urban, Village, Rural and Remote beaches. He described how the classification of beach typology may be based on the physical dimension, where beaches could be classed as covering a spectrum from dissipative to reflective (essentially based on wave climatology and beach material) to a classification based on shape, e.g. linear, pocket, log spiral etc. or simply material e.g. sand, cobble, boulder, mixed sand and gravel. Mr Micallef explained how the BARE system based beach type classification on a cultural environment dimension that essentially refers to a beach continuum ranging from recreation to remote. Virtually all types can fit into a logical sequence from urban, village, rural and remote beaches. Resorts can fit into any of the four classifications. Policy definition and management decisions should therefore take cognisance of differing needs of varying beach types. For each beach type, Mr. Micallef described the type and level of management recommended.

14. In the ensuing discussion the issue was raised of criteria for defining the beach types. Again, it was replied that the guidelines were of a general nature providing a framework for categorisation which to date had been found to be very widely applicable. Beach managers can then make their own categorisation and adapt the guideline definitions accordingly. The participants agreed that a more precise definition of sensitive beaches was necessary.

Agenda item 5: Beach management issues

15. Mr. Micallef presented a review of important beach management issues, covering among others, aspects of bathing area carrying capacity, safety issues such as a safe bathing environment, water quality, signage, zonation of bather/boating activities and lifeguard services, beach access, provision of services including potable water, shower and toilet facilities,

changing rooms etc., provision of appropriate litter bins and beach cleaning regimes and consideration of applicable bye-laws.

16. The participants exchanged experience in beach management in their countries. The need was pointed out for the guidelines to respect the current legislation.

Agenda item 6: Beach awards and certification

17. Mr. Williams informed the participants of the beach awards and certification system. Beach awards are used as promotional tools for coastal tourism, but information regarding public knowledge of them is sparse. Three thousand six hundred beach users around the European coastline completed questionnaires with respect to beach selection parameters. The modal group of respondents was female aged 30-39. Beach choice was primarily determined by clean litter-free sand and seawater, followed by safety. Refreshment facilities and beach awards were deemed minor considerations by the public when choosing a beach to visit. Approximately 58% of respondents stated that they were aware of beach award and rating schemes, but only 1 person had selected a beach because of that. However, most failed to recognise any flag, e.g. a Blue Flag was equated to the European Union flag! Seventeen percent thought that a flag flying at a beach denoted danger. Findings suggested poor levels of knowledge of award status at particular beaches and the criteria included in awards. There is a need for beach awards to take proper account of the desires of beach users, and awards should also be appropriate to undeveloped as well as commercialised beaches, thereby reducing the temptation to add possibly undesired facilities to pristine beaches for the purpose of award qualification. Research showed that aspects included in the Blue Flag, European; Seaside Awards UK; National Healthy Beaches Campaign, USA accounted for just over one third of the user's total beach rating. Sixty seven percent of coastal visitors interviewed rated a beach as 'important' or 'very important' to their holidays with just 2% replying that they were unimportant.

18. *A number of points/queries were raised by workshop participants during discussion sessions that should be addressed within the final text of the Guidelines. Annex IV reflects the main issues raised and replies to such concerns.*

Agenda item 7: Bathing Area Registration and Evaluation

19. Mr. Micallef presented the Bathing Area Registration and Evaluation (BARE) system, highlighting particular innovative aspects that improve on current beach management techniques. In this respect the BARE system was described as:

- Evaluating not only the beach itself but the bathing area as a whole (i.e. the beach together with that area within walking distance and generally visible from the beach).
- Considering a wider variety of beach types other than resort and urban.
- Providing a bathing area Quality Classification according to a rating system that focuses on five main beach-related issues that have been shown to rate highly in beach user preferences and priorities.
- Providing a final bathing area classification not only as a guide to beach choice or an incentive for enhanced advertising potential but *primarily as a tool to identify priority needs in management*.

20. *A number of points/queries were raised by workshop participants during discussion sessions that should be addressed within the final text of the Guidelines. Annex IV reflects the main issues raised and replies to such concerns.*

Agenda item 8: Bathing water quality

21. Mr. C. Bonnici of the Department of Public Health of Malta made presentation on the issue of bathing water quality. He first referred to the legal basis on which bathing water quality is

monitored. First, there are the EU Directives (for EU Member States): 76/160/EEC - Bathing Water Quality; and 2006/7/EC - Management of Bathing Water Quality. Then, there is the 1985 Barcelona Convention Interim Criteria and Standards for Recreational Waters for the Mediterranean Sea. He briefly presented the major provisions of the above, and the relevant results for Malta. Finally, Mr. Bonnici introduced the latest developments regarding the relevant legislation, resulting from the changes in science and technology as well as in managerial experience. The need was also felt to simplify the monitoring procedure in order to enable getting the results more promptly.

22. The participants had numerous questions for Mr. Bonnici. Most of them regarded the various criteria used in Malta to decide on which points to monitor the water quality. Others enquired about the availability of data, and even on the desire of beach users to know whether it is safe for bathing or not. Also, it was asked whether a country should monitor all of its beaches or just the most popular bathing areas. Approach here has to be flexible and adapted to the situation in the particular country, and thus the decision should be with the competent authority.

Agenda item 9: A review of the current status of the ICZM Protocol

23. Mr. Trumbic informed the participants of the ICZM Protocol. Drafting of the new Protocol on ICZM was currently one of the main projects of the Mediterranean Action Plan and PAP/RAC. This was also an important objective of the Mediterranean Strategy for Sustainable Development. Mr. Trumbic particularly stressed the importance of the adoption of a legal instrument on the integrated management of coastal zones in view of the fact that more than 40% of the Mediterranean coastline had already been built up. A Working Group of experts designated by the governments was established to draft the text. The Working Group had several meetings discussing and refining the text, and it was ready for presentation at the National Focal Points Meeting in October.

24. In the lively discussion that followed, participants showed a great interest in the subject and raised a number of questions. Thus, one participant enquired whether the issue of erosion had been duly taken into account, and got the reply that the article 23 was dedicated to that matter. Of particular interest was the issue of set-back zone, how it can be defined, how large it should be, etc. In his reply, Mr. Trumbic reiterated that this issue would have to be approached individually by each country, taking into account various parameters, such as social, cultural and environmental.

Closure of the workshop

25. Mr. Trumbic thanked the participants for the excellent comments and suggestions that would be of great benefit for the authors in preparing the final text of the Guidelines. He declared the workshop closed on July 3 at 13:15 hrs.

ANNEX I

List of Participants

BOSNIA AND HERZEGOVINA

Mr. Simone Milanolo
Junior Researcher
Hydro-Engineering Institute
Stjepana Tomica 1a
71 000 Sarajevo

Tel/fax: + 387-33-207949
e-mail: simone.milanolo@heis.com.ba

CROATIA

Ms. Barbara Skevin Ivosevic
Department for the Protection of the Sea and the Soil
Directorate for Environmental Management
Ministry of Environmental Protection,
Physical Planning and Construction
Užarska 2/I
51 000 Rijeka

Tel: + 385-51-213499
Fax: + 385-51-214324
e-mail: barbara.skevin@mzopu.hr

CYPRUS

Mr. Glafkos Cariolou
Larnaca Marina Director
CTO representative in the Central Coastal Committee
Larnaca Marina
Larnaca

Tel: + 357-24-653110 / 653113
Fax: + 357-24-624110
Mob: + 357-99473926
e-mail: larnaca.marina@cytanet.com.cy
g.kariolou@cytanet.com.cy

FRANCE

Mr. Hugues Heurtefeux
Direction de l'Environnement
Service Connaissance
et Observation du littoral
Chef de service
EID Méditerranée
165 avenue Paul-Rimbaud
34184 Montpellier Cedex 4

Tel: + 33-4-67637299
Fax: + 33-4-67635405
e-mail: hheurtefeux@eid-med.org

MALTA

Mr. Victor Axiak
Professor
Department of Biology
University of Malta
Tal-Qroqq
Msida

Tel: + 356-21-342488 / 23-402850
Fax: + 356-21-342488
e-mail: victor.axiak@um.edu.mt

MONTENEGRO

Ms. Aleksandra Ivanovic
Head
Sustainable Development Department
Public Enterprise for Coastal Zone Management
Ul. Popa Jola Zeca bb
85310 Budva

Tel: + 382-86-452709
Fax: + 382-86-452685
e-mail: aleksandra.ivanovic@morskodobro.com

MOROCCO

Mr. Mohammed Elbouch
Chef de Service du Laboratoire National de
l'Environnement
Ministère de l'Environnement
Av. Allal El Fassi Madinat Al Irfane
Rabat

Tel: + 212-37-770492
Fax: + 212-37-681641
e-mail: elbouch21@yahoo.fr

SLOVENIA

Ms. Mihaela Svab
Senior Consultant at the Water Management Office
Environmental Agency of the Republic of Slovenia
Ministry for Environment and Spatial Planning
Vojkova cesta 1 b
1000 Ljubljana

Tel: + 386-1-4784569
Fax: + 386-1-4784049
E-mail: mihaela.svab@gov.si

BEACHMED PROJECT

Mr. Mauro Fabiano
Professor
Dipartimento per lo studio del territorio
e delle sue risorse
Università di Genova
Corso Europa, 26
15132 Genova

Tel/Fax: + 39-10-3538066
e-mail: fabianom@unige.it

Mr. Paolo Lupino
Regione Lazio
Gestione Aree Naturali Marine Protette
Via del Tintoretto, 432
00142 Roma

Tel: + 39-06-5168 9055/9056
Fax: + 39-06-1782273511
e-mail: pao.lo.lupino@tiscali.it

ICoD

Mr. Anton Micallef
Director,
Euro-Mediterranean Centre on Insular Coastal Dynamics
EUR-OPA Major Hazards Agreement
Council of Europe - Malta
Gozo University Centre
Mgarr Road
Xewkija
Gozo
Malta

Tel: + 356-21-240746
Tel/ fax: + 356-21-550637
e-mail: anton.micallef@fis.org.mt

PAP/RAC

Mr. Ivica Trumbic
Director
Priority Actions Programme
Regional Activity Centre
Kraj sv.Ivana 11
HR-21000 Split

Tel: + 385-21-340470 / 340471 (dir.)
Fax: + 385-21-340490
e-mail: ivica.trumbic@ppa.htnet.hr

Ms. Ljiljana Prebanda
Administrative and Information Officer
Priority Actions Programme
Regional Activity Centre
Kraj sv.Ivana 11
HR-21000 Split

Tel: + 385-21-340470 / 340474 (dir.)
Fax: + 385-21-340490
e-mail: ljiljana.prebanda@ppa.htnet.hr

Mr. Neven Stipica
Projects Officer
Priority Actions Programme
Regional Activity Centre
Kraj sv.Ivana 11
HR-21000 Split

Tel: + 385-21-340470 / 340479 (dir.)
Fax: + 385-21-340490
e-mail: neven.stipica@ppa.htnet.hr

Mr. Allan Williams
Professor
Faculty of Applied Design and Engineering
Swansea Institute
University of Wales
Mount Pleasant, Swansea SA1 6ED
United Kingdom

Tel: + 44-1792-481149
Fax: + 44-1792-651760
e-mail: allan.williams@virgin.net

OBSERVERS

Mr. Charles Bonnici
Principal Environmental Health Officer
Environmental Health Unit
Department of Public Health
Civic Centre
Convent Street
Zabbar
Malta

Tel: + 356-21-803220/222
Fax: + 356- 21-803212
e-mail: charles.bonnici@gov.mt

Ms. Pauline Dingli
Malta Tourism Authority
229, Auberge d'Italie
Merchants Street
Valletta
Malta

Tel: + 356-22-915174
E-mail: pauline.dingli@visitmalta.com

Mr. Nicholas Flores Martin
University of Malta
33, C.Bonaci str.
Birkirkara
BKR 4042
Malta

Tel: + 356-21-487820
e-mail: nicky.fm@gmail.com

Ms. Carmen Mifsud
Senior Environment Protection Officer
Nature Protection Unit
Environment Protection Directorate
Malta Environment and Planning Authority
St. Francis Ravelin
Floriana, CMR02
Malta

Tel: + 356-22-906008
Fax: + 356-22-901585
e-mail: carmen.mifsud@mepa.org.mt

Ms. Simonetta Piccinini
Italian Ministry of Environment - CoNISMa
Via Pittaco, 33
00124 Rome
Italy

Tel: + 39-06-85355476
e-mail: simonetta.piccinini@libero.it

Ms. Yvette Rizzo
Planning Officer
Malta Environment and Planning Authority
St. Francis Ravelin
Floriana
Malta

Tel: + 356-22-901564
e-mail: yvette.rizzo@mepa.org.mt

ANNEX II

Welcome address by Ms. Pauline Dingli

Malta, being an archipelago of small islands, has a number of pocket beaches that form its coast. Most of them are safe for bathing and intensely used. Yet, the state of beach management in Malta is still in its infancy. The development of Beach Management Guidelines for the Mediterranean will ensure good practices, better services for the user, and sustainability for the future of the beaches themselves.

Beaches are a pull factor for tourism, but on the other hand, tourism creates environmental pressures and land-use conflict. Furthermore, on a small island like Malta where population figures have touched the 400,000 thousand mark, overflow to the coast and encroachment is inevitable.

Through the Ministry of Tourism and Culture, the Malta Tourism Authority has invested in two urban beaches in tourism areas. One is the replenishment of St. George's Bay, while the other is the transformation of a rocky bay into a perched, sandy beach at Bugibba. The benefit from these two beaches resulted in hundreds of tourists frequenting them during all daylight hours. The Malta Tourism Authority has taken the role of integrated coastal zone management including beach management on the mentioned beaches, while monitoring others.

The Authority is also working on achieving a Blue Flag status for St-George's Bay. This is the first bay to earn this award on the Maltese islands, and it is the intention of the Malta Tourism Authority to achieve this status for other beaches gradually. However, we also acknowledge that a number of beaches must remain undeveloped. Minimal interventions will only take place to protect coastal and marine biodiversity, and to leave the ecological balance undisturbed. Difficult terrain was fundamental for these beaches to remain in their pristine condition which would otherwise have been lost. One of these beaches on Gozo was classified by the BBC of London as one of the 10 most romantic beaches in the world.

With ever-increasing threats of global warming and sea level rise, it is our interest that these huge challenges are discussed to share knowledge and experience to minimise or prolong negative effects. Pooling resources for this workshop will fine-tune the new Beach Management Guidelines for good management practices, that will assist better Malta and other Euro-Mediterranean countries to fulfil their obligations towards sustainable tourism and the coastal environment.

ANNEX III

Agenda

Monday, July 2:

- 09.20 - 09.30 - Registration
09.30 - 10:00 - Inauguration by Ms. Pauline Dingli of the Malta Tourism Authority on behalf of the Minister for Tourism and Culture, the Hon. Francis Zammit Dimech
- Addresses by:
- *Mr. Josef N. Grech, Chief Executive, FIS*
- *Mr. Ivica Trumbic, Director PAP/RAC*
10.00 - 10.45 - Beach Management - a sub-set of ICAM – *Prof. Allan Williams*
10.45 - 12.30 - Conceptualisation of beach management - *Dr Anton Micallef*

14.30 - 15.30 Beach types – *Dr A. Micallef*
15.30- 16.30 Beach management issues – *Dr A. Micallef*

Tuesday, July 3:

- 09.30 - 10.15 - Beach Awards and Certification – *Prof. A. Williams*
10.15 - 10.35 - Bathing Area Registration and Evaluation – *Dr A. Micallef*
10.35 - 11.15 - Discussion

11.45 - 12.40 - Bathing Water Quality – *Mr. Charles Bonnici*
12.40 - 13.00 - A review of the current status of the ICAM Protocol – *Mr. I. Trumbic*
13.00 - 13.30 - Discussion & closing remarks
13.30 - Closure of the workshop

ANNEX IV

Main Issues Raised During Discussions

It was agreed that a number of points/queries raised by workshop participants during discussion sessions should be addressed within the final Workshop Report. The section below reflects the main issues raised and replies to such concern. This text should eventually be incorporated into the final text of the document Guidelines for bathing area management in the Mediterranean.

- *To whom are the proposed beach management guidelines addressed? (Managers / Policy makers etc).*

Clark (1992, and pers. comm) referring to general ICAM principles argued that land and sea uses must be planned and managed in combination and that management boundaries be issue-based and adaptive. This is extremely pertinent to beach management as the sea edge is the fulcrum of any coastal management programme. ICAM is a process that concerns all Governmental levels to various degrees in various countries. Therefore beach management, being a sub-set of ICAM, would not necessarily involve Governmental Policy makers but rather the statutory authority that legally is responsible for the coast e.g. local council/state/municipality. The guidelines should involve discussions between delegated personnel within such organisations and the person(s) responsible for beach management across a spectrum of beach types (e.g. including any concession / commercial entities / NGOs etc involved).

Clark, J.R 1992. Integrated Management of Coastal Zones. FAO Fisheries Technical paper, No 327, FAO, Rome.

- *To whom is beach quality evaluation addressed? (Managers / beach users)*

Beach quality evaluation is addressed to managers as it reflects an effective management tool. In addition, to beach users it represents a means of offering a better-informed choice of beaches within any designated area.

- *At what level should beach management guidelines be applied ?*

By definition, beach management guidelines should be applied at a local level, but application should be adhered to initially at regional levels in the case of countries with large coastlines, and at a national level in the case of countries with small coastlines, e.g. Bosnia – Herzegovina, Malta, Slovenia

- *Are the steps of the proposed Beach Management Model correct?*

The ICAM process as proposed by the 1995 UNEP / Regional Seas report on '*Guidelines for Integrated Management of Coastal and Marine Areas*' (UNEP Regional Seas Reports and Studies No. 161) regarding the phases, stages and activities of an ICAM process suggests the following sequence:

Initiation of ICAM:

a) Preparatory activities (issue factors, boundaries, prepare to initiate ICAM

Plan:

- a) Preparation of activities (Goals and Objectives, definition of boundaries, problem identification. Identification of gaps, legal requirements.

- b) Analysis & forecasting. (Surveys of missing data, analysis of nat/soc-econ systems, scenario selection.
- c) Definition of goals & strategies.
- d) Integration of detailed plans

Implementation

- a) Implementation of plans
- b) Monitoring & evaluation

As described below, the content of the proposed Bathing Area Management Model (BAMM) reflects very closely that of the ICAM process described above. Similarly the proposed sequence stages are very comparable. The Initiation & Implementation stages are extremely similar, however the Bathing Area Management Model expands upon the *Plan* stage of the ICAM process. The 4 phases of the Planning stage involved in the ICAM model (see above) have been refined and extended in the following manner (see underlined italics):

Policy definition (in line with existing ICAM process in individual countries with respect to beach management).

Planning. *This involves stating aims / objectives of beach management, legal requirements needed, delineation of management responsibilities and integration of a beach management plan.*

Data gathering (*beach typology, problem identification, user preferences and priorities etc*)

Analysis (*data processing of the above*).

Evaluation (*of results obtained e.g. leading to possible revision of management plan*).

Implementation

Monitoring & control

Full details of the above may be found in Section 1.2 of the Workshop Report

- *Why should we carry out beach management in the first place?*

The beach is a major tourist destination for Mediterranean tourists and currently there is a need for an umbrella overview for management of these areas. Too often it is carried out in an *ad hoc* practical basis with no clear theoretical under-pinning. This document aims to correct this by suggesting that the main issues facing beach users/managers be systematically analysed and solved via pro-action rather than retrogressive action.

In addition, sound beach management:

- Leads to an effective utilisation of an increasingly valuable socio-economic and in places ecological national resource.
- Provides an encouragement to overseas / local tourism.
- Leads to an increase in quality of recreational opportunities.
- Contributes to an enhancement of nearby urban settlements.
- Enhances coastal protection. Facilitates monitoring, regulation, planning and decision-making.

➤ *Should water quality be examined in Rural / Remote bathing areas*

Wherever possible strict adherence to national / international water quality monitoring standards is highly recommended for ***all*** bathing areas. However it is recognised that particularly in countries with extensive coastlines, water quality monitoring in remote / rural areas might not be feasible. A practical solution to deciding where such monitoring should be carried out might be to consider an occupancy rate of over 50% of a beach's carrying capacity as a sign of high numbers of bathers, thus justifying adherence to strict water quality monitoring.

➤ *What is meant by 'beach sensitive areas' ?*

Sensitive areas are usually areas designated by the competent authorities in individual countries as a result of some natural or cultural phenomena that are either unique or have a value that is difficult to quantify, but nevertheless important either to ecology, culture or science. For example, dunes are under threat all over the world, so protection should be a key aim in dune systems. Similarly, turtle breeding sites are scarce – only circa 8-900 sites being known in the Mediterranean. In the turtle breeding season bright lights etc should be banned from the vicinity of a beach, people prohibited from the beach at dusk, demarcation of potential turtle sites should be clearly indicated by e.g. poles and people prohibited from sitting in these areas (towels shade nests from the sun) and beach managers must be key players in the fencing off of any turtle nests.

➤ *Can one recommend initiatives for fishermen to bring ashore sea debris?*

Yes, it is recommended that a beach litter management strategy should include the removal of any dis-incentives for fishermen to bring ashore sea debris caught in their nets (e.g. current practice in some Mediterranean countries to charge fishermen for depositing of such litter in shore-based facilities).

➤ *Should carrying capacity assessments be applied to dune areas or not?*

It is recommended that beach carrying capacity assessments should never incorporate dunes where present, as they are very vulnerable sites. Dunes should be preserved and rehabilitated if possible

➤ *Can BBQ areas / stands be recommended as a control measure? Where?*

It is recommended that on popular bathing areas, BBQ areas should be set-aside with facilities provided as a permanent fixture at the back of the beach. It is suggested that this would be an effective means to control the negative impacts and haphazard practice of such activities, such as the spread of charcoal residues and potentially hazardous debris (e.g. broken glass) across the beach. People would not be encouraged to cook in communal areas which would naturally also provide adequate refuse depositories.

➤ *Should hazard risk assessment be included in beach management guidelines?*

In line with current guidelines stipulated in the EC Bathing Water Quality Directive, where beach profiles (including aspects of risk assessment) are stipulated, it is recommended that competent beach-related risk assessment programmes (e.g. UK Royal Life Saving Society Risk Assessment Matrix) should be carried out at every bathing area. This would identify all known risks and the probability of such risks occurring e.g. high-low. Major risks could be tabulated so that the beach user is aware of them. This would be a sound document in case of litigation procedures. It is mandatory in the UK, unlike the provision of lifeguards, which is not, unless specified in any risk assessment programme. This should be carried out at the local level for each bathing area.

➤ *Recommend NALG Protocol for litter evaluation*

It is recommended that the Protocol promoted by the UK's National Aquatic Litter Group be used by all beach managers, so that a permanent record is kept of litter items on a beach. Where possible a sourcing exercise should be carried out by the local manager, in order to ascertain the origin of the litter e.g. riverine, beach user, off shore. Once sourcing is established, it might be possible to apply measures to cut down litter from that particular source.

➤ *What are the boundary limits of a Bathing area ?*

A beach manager should be cognisant of issues which impinge upon his / her beach but dealing with issues arising from distant sources cannot be considered within his / her remit. The bathing area concept was developed to stress the importance of a holistic approach to beach management. The immediate limits of a beach manger's responsibilities would normally be from the landward edge (seawall / dune line) to the seaward limit normally extending to the bathing area limit marked by zonation buoys.

- *Recommendation of the Bathing Area Registration and Evaluation (BARE) technique.*
- *BARE technique as a beach management tool?*

The BARE technique is primarily recommended as an effective and easy to use *beach management tool*. Whilst also serving the purpose of providing an award / classification measure, it is considered that the latter should be secondary to good management practice that will result in an improvement in beach quality. BARE is an holistic approach that provides the beach manager with not just a detailed fact list of the beach 's surrounding area, but also provides a methodology with which he/she can upgrade beach quality.

The BARE approach is recommended as it improves on other beach rating / award schemes on a number of issues. It:

1. Evaluates not only the beach itself but the bathing area as a whole (i.e. the beach together with that area within walking distance and generally visible from the beach).
2. Considers a wider variety of beach types other than resort and urban.
3. Classes bathing areas according to a rating system that focuses on five main beach-related issues that have been shown to rate highly in beach user preferences and priorities.
4. Provides a final bathing area classification not only as a guide to beach choice or an incentive for enhanced advertising potential but primarily as a tool to identify priority needs in management.

➤ *Beach related bacteria.*

In addressing issues of concern relating to health and safety, beach managers should also consider aspects of bacterial contamination present in most beaches and the recommendation that wherever possible beach users should utilise a towel when lying on a beach so as to cut down the risk of skin contamination.

➤ *Provision of portable toilet facilities on a beach.*

With respect to the potential problems of disposing of sewage from portable toilets that utilise chemical treatment, it is recommended that urban /village beaches should have permanent toilets located at the back of the beach and linked to the main sewage system.