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INTRODUCTION

Felicita Scapini

The key words in this manual are *diversity* and *integration*. The subjects of study are diverse: the Mediterranean coasts, low or high, with different exposure, small or wide tidal ranges, beaches stretching for kilometres or small pocket beaches, degraded or pristine... Sandy beaches are sometimes peaceful resorts, ideal for sun bathing and relaxing, at other times they are terrifying places because of the force of winds and waves. The seasonal differences in the Mediterranean region are often dramatic, from summer droughts to heavy winter rainfall and floods (Braudel, 1985). Also diverse are the uses of beaches, with fishing villages, coastal cities, ports, natural reserves, mass tourism resorts or elite tourism enclaves. We would like to add marine research stations to this list, but there are not many in the Mediterranean, particularly on the southern coasts.

Modern tourists are largely peaceful but tourism itself creates much damage to the environment. This is in contrast to travellers and explorers in the past who may have carried guns for their own defence but did little damage (Leed, 1995). Activities linked to tourism can be as harmful to the environment as conflicts and wars used to be. Tourism often reduces diversity, construction along coasts destroys natural and cultural heritage. When we speak of the Mediterranean, we must specify which coast, northern, southern, eastern, western, European, non European, Arabic speaking, French, Italian, Spanish, Greek..., and be aware of the cultural and natural diversity.

The Mediterranean is the only internal sea bordered by different continents, Europe, Africa and Asia. These three continents are thus separated or linked, depending on the point of view, by the same sea. The threefold origin of lands explains the diversity of fauna and flora, as well of civilisations. There is one particular plant common on each side of the Mediterranean, the olive tree. Interestingly, this plant is one of the most ancient symbols of peace. The ancient wisdom used to say that the Mediterranean consists of the places where olive trees grow (Matvejević, 1987). Nowadays a common feature of the influence of the Mediterranean sea is the diffusion of plastic debris on the coasts, either abandoned by beach users or deposited by the sea during storms (Löfgren, 2001). Such plastic debris appears as a unifying culture. But such culture is a poor one, less diversified than the ancient ones, which used to exchange valuable products such as silk, olive oil and spices.

Looking back to the past history of the region, it appears that major threats to peace in the region have been the attempts of unification, either starting from the

northern coast or from the south, for example the ancient Roman and Punic conflicts. The concept of *integration* should take the place of *unification*. In the past the Mediterranean experienced the Greek-Roman cultural integration and the Arabic one. The current Mediterranean heritage takes much from both. Systems theory explains how integration is achieved. In a complex system diverse elements interact and integrate without losing their characteristics to the advantage of the system. A well integrated system is buffered against disturbing factors. But a system becomes weak as elements get fewer and interactions are disrupted.

The purpose of this manual is to make environmental managers and policy makers aware of the existing diversity in Mediterranean sandy and low coasts, environments highly threatened by economic development, and of the value of coastal diversity in view of sustainable development. This manual proposes concrete tools and practical methods. It shows that the conservation of natural heritage is not only important theoretically but also feasible in reality. The manual presents the experience of the three year “MECO project”. This project (1998-2001) was financially supported by the European Commission in the framework of the International Cooperation Programme with Mediterranean Partner Countries. The project was entitled *Bases for the Integrated Sustainable Management of Mediterranean Sensitive Coastal Ecosystems*. The acronym MECO takes the initials of the key words, MEditerranean, COasts and ECOsystem, its meaning is thus manifold. Manifold are also the *bases* or perspectives, geographic, geomorphological, biological and socio-economic. The partnership is composed of scientists with different cultural backgrounds and of coastal managers. The partner countries included Italy, Malta, Morocco, Portugal, Tunisia and the United Kingdom. Based on a multidisciplinary starting point, the MECO partnership conducted integrated research. Practical integration was achieved in the field, where scientists with different backgrounds came together and interacted, each taking advantage of the experience of the others.

It was important for this purpose to focus on a few specific study sites. These will be described in detail in the manual (Chapter 2). Their diversity will appear clearly, the choice being not theoretically guided, but dictated by practical reasons. Partners in Morocco, Tunisia and Malta, each proposed one or two local case-study sites, which were of interest for the country, as well as representative of the Mediterranean diversity and issues. In a second phase, integration was practically achieved through meetings in each country, near the study site, where the different baseline studies were discussed and synthesised. The value, weaknesses, potentialities, constraints and management of each study site were studied. A major challenge was the diversity of languages, not only the national languages, which were in great measure shared by the partnership, but by the discipline specific languages. Geographers, geologists, biologists, socio-economists and coastal managers had to explain specific concepts and methods to each other; each participant had to understand other points of view and spatial scales.

The methods, achievements and guidelines developed from the research are presented in this manual and represent a baseline starting point for the sustainable coastal management in the Mediterranean. Managers and policy makers often

urgently ask scientists for inputs. Sometimes such inputs take considerable time or are not in a suitable format. Scientific recommendations are not always developed in an easily applicable format for practical implementation. This manual responds to this problem. It has two target readers, coastal managers and scientists willing to contribute to a sustainable coastal management. The manual is also recommended for use in degree and masters courses in coastal management in the Mediterranean region.

The manual starts with a framework section (Chapter 1) to establish key concepts and perspectives. Coastal managers are then taken through practical site characterization (Chapter 2), audits which will be useful in relation to sustainability (Chapter 3), the competencies that will be necessary and, last but not least, what support is available in the Mediterranean to apply the proposed methodology (this information is at the end of each section of Chapter 3 on techniques). Relevant specific concepts are explained in each section. Scientists will learn how different disciplines can contribute to site characterization, audits and identifying indicators of change (Chapters 3 and 4), the type of information coastal managers need to develop management plans and how a management plan is done in practice (Chapter 5). Real examples are used in the manual including specific methodologies used at particular sites; the choice of the concepts presented was dictated by their usefulness; the methods proposed have been proven to achieve useful results.

Diversity is still present in the manual: diversity of languages, points of view and styles of presentation. We are giving to readers a product of the Mediterranean heritage. Such diversity should be the base for future developments and integration. In fact, we hope that this manual is not an end point, but will be the *baseline* for further evolution. Readers are asked to contact us and pose their criticisms and share their different experiences.

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