

Some recommendations for the future

In order to improve the coverage of Mediterranean inventories and the harmonisation of data, a high priority needs to be given to promoting the setting up of national inventories in those countries where information about wetlands is incomplete or out of date.

As well as this targeted action, the level of detail should be improved and compatibility between inventories ensured, in anticipation of a number of activities:

- Promoting the use of new technologies such as remote sensing and on-line databases.
 - Gathering specific qualitative and quantitative data for each site in order to obtain information about current status and trends.
 - Centralising data with a view to facilitating their sharing and updating.
 - Using a standardised methodology that enables comparative analyses to be carried out compatible with the major international programmes (Ramsar, Natura 2000, etc.).
- If the MedWet methodology (see www.wetlandwis.net) were brought into general use, this would allow the majority of these points to be addressed.

The next stage, which is just as important, is the distribution of the results of wetland inventories to land managers, political decision-makers and the general public, in order to:

- Improve the awareness of decision-makers in favour of sustainable management and the protection of wetlands.
- Inform the public of the functions and possible uses of wetlands in the context of sustainable development.

→ These have now become high-priority actions for the "Mediterranean Wetlands Observatory", which is currently taking shape in the framework of MedWet, at the instigation of the Tour du Valat.



For more than 50 years, the Tour du Valat, a public-benefit Foundation, has been developing multidisciplinary research programmes on the functioning of Mediterranean wetlands. Its teams have dedicated themselves to "halting the loss and degradation of these habitats and their natural resources, restoring them and promoting their rational use".



The mission of the MedWet Initiative (created in 1996) is to apply the principles of the Ramsar Convention in a practical way throughout the Mediterranean world. Its main objectives are to reinforce institutions, adapt legal frameworks, develop national strategies in favour of wetlands, devise and communicate methods and tools for sustainable management, train stakeholders and improve the awareness of decision-makers.

The MedWet Inventories working group : Agenzia regionale per la protezione ambientale della Toscana (ARPAT, Italy), Instituto da Conservação da Natureza (ICN, Portugal), Fondation Tour du Valat (TdV, France), The Greek Biotope / Wetland Centre (EKBY, Greece), University of Tartu (Estonia).



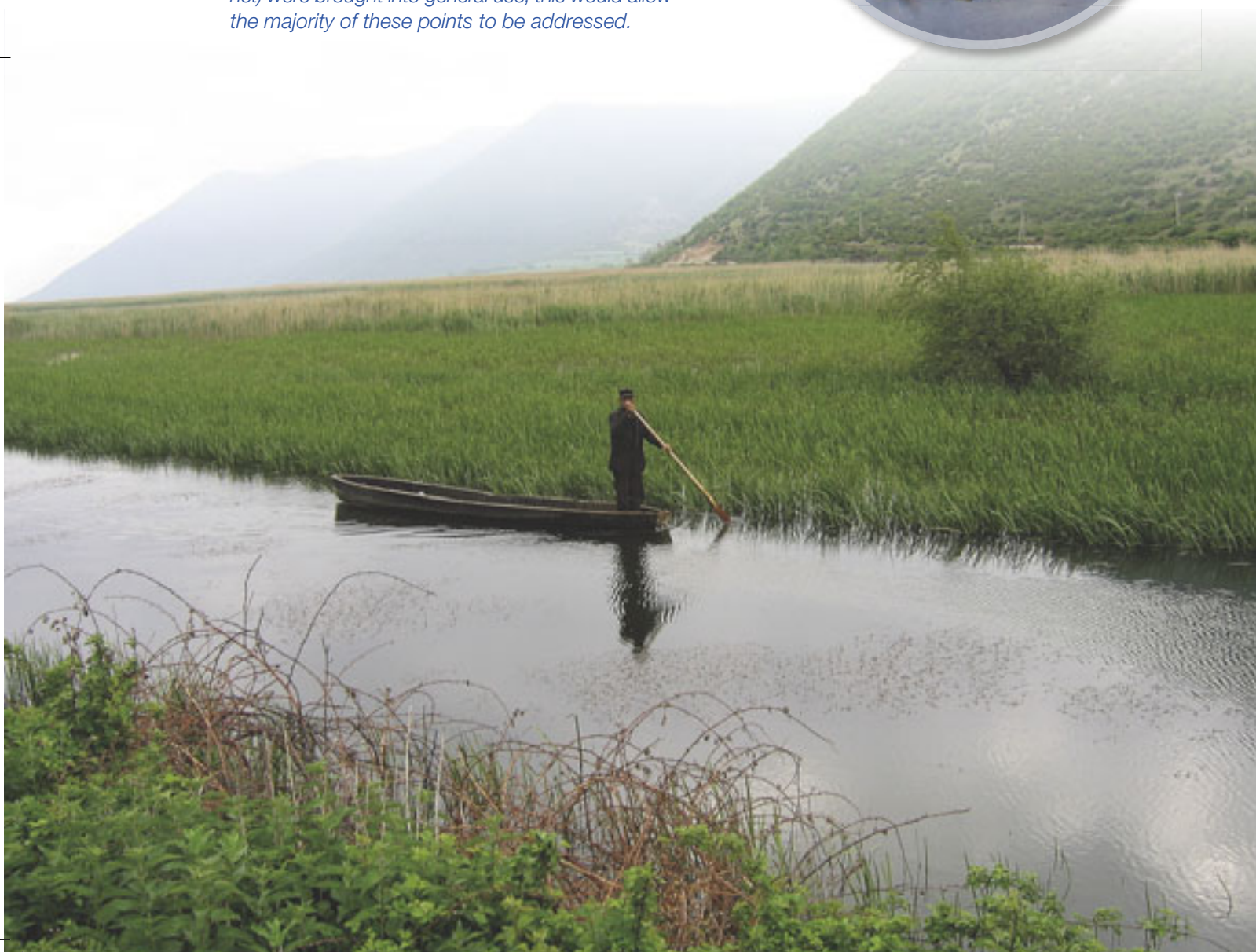
The TOTAL Foundation has decided to provide financial support for improving knowledge about wetlands in the Mediterranean and is contributing to scientific research at the Tour du Valat, in particular by facilitating the transfer of results via awareness-raising activities and appropriate forms of communication.

Our sincerest thanks to the network of colleagues who have provided us with information about the status of wetland inventories in the countries discussed in the survey:

Basheer ABULELAISH (Gaza Strip and West Bank), Nabil ASSAF (Lebanon), Hichem AZAFZAF (Tunisia), Sahar BARARI (Jordan), Gordana BELTRAM (Slovenia), Magdalena BERNUES (Spain), Amar BOUMEZBEUR (Algeria), Serhan CAGIRANKAYA (Turkey), Mariarita CANALE PAROLA (Italy), Mario CENNI (Italy), Genc COMO (Albania), Mohamed DAKKI (Morocco), Stevens DARRIN (Malta), Akram DARWISH (Syria), Pierre DE FOS DU RAU (Libya), Andreas DEMETROPOULOS (Cyprus), Eno DOBBIBA (Albania), Joao Carlos FARINHA (Portugal), Eleni FITOKA (Greece), Elizabete FONSECA (Portugal), Mustapha FOUDA (Egypt), Marie-Therese GAMBIN (Malta), Carole GENTY (France), Nicos GEORGIADES (Cyprus), Mehmet GOLGE (Turkey), Myroula HADJICHRISTOFOROU (Cyprus), Yiannis KAPANIDIS (Greece), Darzen KOTROSAN (Bosnia-Herzegovina), Mihaljlo MARKOVIC (Bosnia-Herzegovina), Branko MICEVSKI (FYROM), Tanyo MICHEV (Bulgaria), Marieta MIMA (Albania), Christina PANTAZI (Cyprus), Eric PARENT (France), Brigita PETROV (Serbia), Jasminka RADOVIC (Croatia), Darko SAVELJIC (Montenegro), Michael SMART (Tunisia), Adel SOLIMAN (Egypt), Maya STOYNEVA (Bulgaria), Lina YAMOUT (Lebanon), Violeta ZUNA (Albania), Francesca ANTONELLI (WWF MedPo), Vlatka DUMBOVIC RUZIC (Croatia).

For further information on the status of wetland inventories in the Mediterranean region, you can download from our Internet site www.tourduvalat.org the two-part report by Pierre Caessteker: http://www.tourduvalat.org/nos_programmes/observatoires_biodiversite_et_politiques_publiques/observatoire_des_zones_humides_mediterraneennes

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Le Sambuc - 13200 Arles - France
Tél. : + 33 (0)4 90 97 20 13
Fax: + 33 (0)4 90 97 20 19
secretariat@tourduvalat.org
www.tourduvalat.org





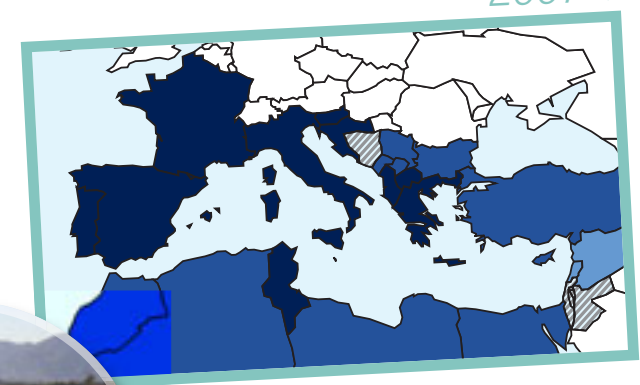
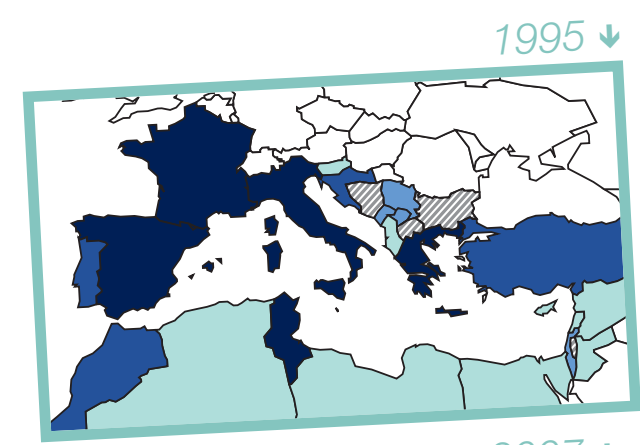
Wetlands provide mankind with invaluable services and resources, among others: drinking water, protection against erosion, flood mitigation, a basis for fishing and agriculture, tourism, and a reservoir of biodiversity. However in the Mediterranean, more than anywhere else, economic development has occurred to the detriment of wetlands, many of which have been drained or filled in. The remaining sites are now threatened by excessive population pressure and global warming.

It was in order to curb this trend that the MedWet Initiative - the Mediterranean wetlands forum bringing together 25 countries, 3 international conventions, the European Union and the UNDP, as well as 7 environmental NGOs and scientific centres - came into being in 1993. From the outset, MedWet has sought to follow the recommendations of the Ramsar convention by encouraging each country to produce an inventory of its wetlands, in order to facilitate the elaboration of national policies for wetlands, take them into account in the planning process, and support their more rational use.

The development of National Inventories from 1995 to 2007

A global effort but unequal from country to country

In 1995, an initial condition statement in respect of the inventories carried out by each country was published (Hecker & Tomas-Vives, 1995). At that time, only 5 countries had produced an inventory. Little information was available from North Africa, the Middle East and the Balkans. **Twelve years on, a new state of affairs can be reported: 11 countries have completed their inventories while 7 others have produced a preliminary inventory.** Progress has been made especially in the Balkan countries, and to a lesser extent in the Maghreb. Two-thirds of the Mediterranean region now appears to be covered, although with gaps still remaining in the Middle East. In practical terms, the number of wetlands catalogued has increased from 2655 to 22618, with an increase in total area from 1 287 177 to 4 543 388 hectares.



Legend:
 ■ National inventory of wetlands
 ■ Preliminary national inventory of wetlands
 ■ List of wetlands only
 ■ Patchy information concerning some sites
 ■ No information available



Objectives of creating an inventory

- To identify priority sites for improved conservation, management and utilisation.
- To determine the ecological and socio-economic aspects of each site.
- To bring together the baseline data necessary for monitoring future changes.
- To enable analyses to be carried out of the trends taking place at the national and international scale.
- To raise awareness among decision-makers regarding the planning and implementation of sustainable development.

What is a wetlands inventory?

A system for identifying and locating wetlands, showing their numbers in a given region together with their characteristics (surface area, types of habitats recorded, notable flora and fauna, human activities and impacts, degree of protection, etc.).

The reasons why the information is patchy and of variable quality

Incomplete harmonisation of inventories



At present, the wetland inventories use a range of different methodologies, which are not compatible from one country to another.

Methodologies for National Wetland Inventories used in the Mediterranean region ↓

Inventory characteristics	Criteria chosen (varying according to the methodology selected)
1. Definition of wetland	According to: MedWet / Ramsar / Country's own definition
2. Selection of sites to be catalogued	On basis of: Area / Birds / Habitats / Threatened species...
3. Demarcation of wetlands	Presence of: Water / Aquatic vegetation / Hydromorphic soils
4. Scale of assessment of wetlands	Catchment area / Wetlands complex / Site
5. Design of databases	Use of: Ramsar forms / MedWet database / Country's own database...
6. Classification of wetland types	Classification according to: Ramsar / MedWet / Habitat Directive / Country's own classification...
7. Output produced	Report / Maps / On-line database...

In order to provide consistent, efficient inventory tools that are appropriate for Mediterranean wetlands, **Medwet has devised a standard methodology for inventories** that is regularly updated in function of with developments in technology, legislation, and knowledge of these habitats. Various collaborative projects have encouraged the countries which had not yet produced an inventory to adopt the MedWet methodology (www.medwet.org). In 2007, ten countries were using it: Greece, Portugal, Slovenia, Croatia, Albania, FYROM, Cyprus and Morocco. France and Spain have adapted it to some of their regions. Since the end of 2008 Italy has been applying this method throughout the country, an initiative which will perhaps be followed by Turkey. Lastly, even though these countries have not always adopted an inventory-based approach, it can be reported that Egypt, Lebanon and the Gaza Strip territory have had the opportunity to try out the MedWet methodology at some sites.

Differing environmental policies between regions

There are significant differences between the countries of the north, south and east of the Mediterranean, in respect of cultural and economic aspects as well as climate. The variations in the efforts that have been made to better understand and preserve wetlands can be partly explained by these regional features.

- **The European countries** are in general well advanced in this field, their environmental policies having been greatly influenced by the European Union. In producing a national inventory using the MedWet methodology, several Eastern European countries have fulfilled one of the preconditions for their membership of the European Union and their obligations with respect to the Ramsar convention. For the countries of Western Europe, the decentralisation of responsibilities has led to some inter-regional disparities in the progress being made with inventories, with each region setting different priorities.
- **The North African countries** have evidently undertaken some actions in support of the conservation of their wetlands, enabling them in particular to address the requirements of the Ramsar convention. Morocco, Algeria, Tunisia and Egypt have created specific organisations for managing wetlands. Action still needs to be taken however to complete or publicise the results of these inventories.
- **The Middle Eastern countries** have not so far adopted a national inventory approach to their wetlands. Geopolitical instability and ongoing problems with water supplies are the reasons why the preservation of wetlands is not, at present, a high priority. However, an inventory project could be taken on by local non-governmental organisations which, as in Lebanon and Jordan, have initiated international collaboration in order to improve dialogue and training.



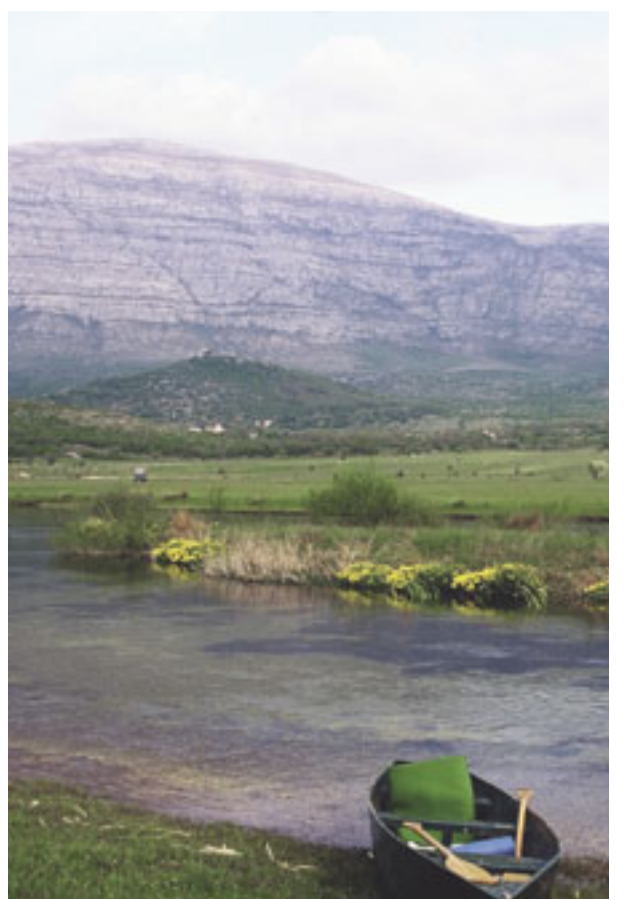
The benefits to be gained from a wetlands inventory

The Croatian example

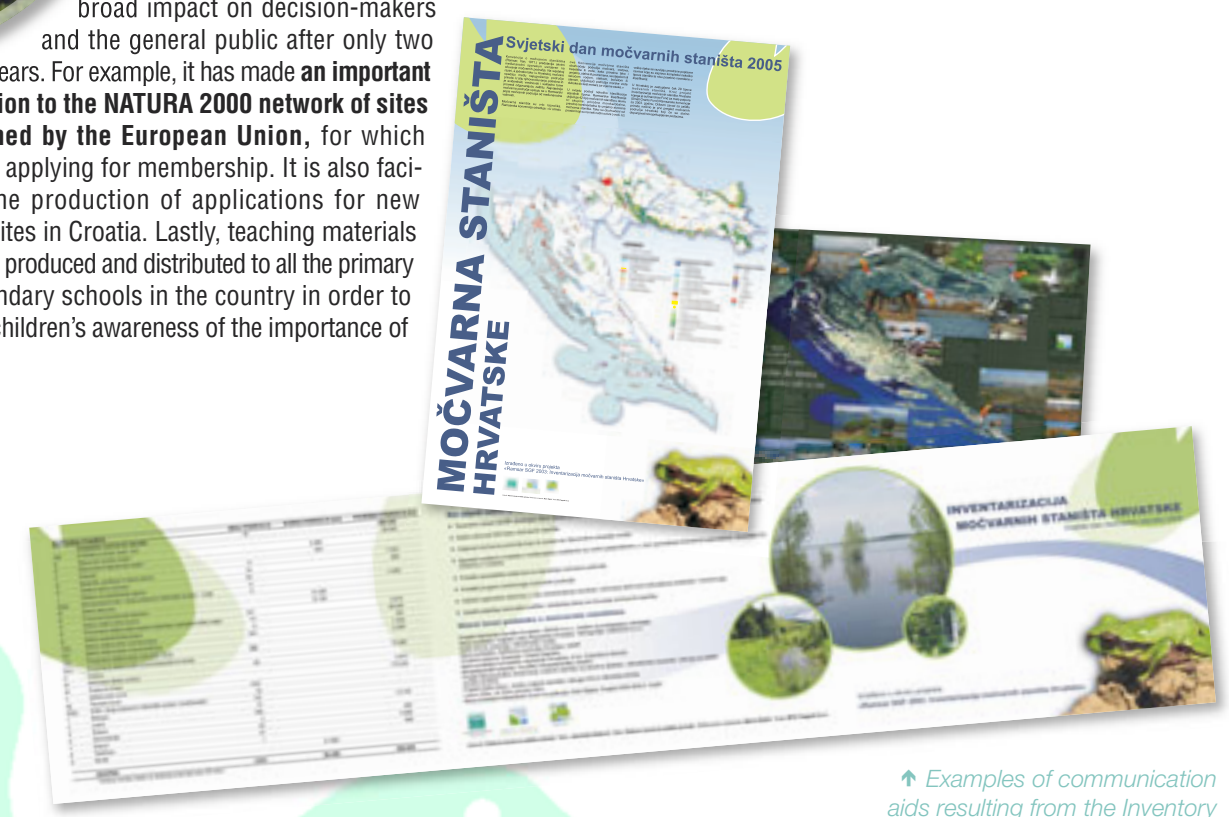
Croatia is a country of variable relief and climate, resulting in a wide diversity of wetlands. **The SINP** - a Croatian national institute working for the protection of the environment - **between 2003 and 2006 took on the production of a complete inventory of all the country's wetlands**, in particular to protect and possibly restore new sites.

This project, known as CRO-WET, has enabled 3883 sites to be identified and entered in a geographically referenced information system (GIS) database. The regions with the most wetlands have been identified, i.e. the floodplains of the major rivers such as the Danube. A large number of "minor" sites, such as ponds and streams, which have often been neglected in favour of more extensive wetlands, have also been included in the inventory. In total, **Croatian wetlands cover 390,885 hectares** and include 56,516 kilometres of watercourses and coastline, **6.9% of the country's land area**. Interactive maps showing the locations of the 37 categories of wetland present in Croatia can be accessed on line (www.cro-nen.hr/map) and provide information for each site.

Since it was put into use, the CRO-WET database has had a broad impact on decision-makers and the general public after only two years. For example, it has made **an important contribution to the NATURA 2000 network of sites established by the European Union**, for which Croatia is applying for membership. It is also facilitating the production of applications for new Ramsar sites in Croatia. Lastly, teaching materials have been produced and distributed to all the primary and secondary schools in the country in order to improve children's awareness of the importance of wetlands.



In future, there will be many potential benefits from this database in the context of sustainable development: as an aid to land use planning and the production of local development plans; helping with the calculation of the costs and benefits of the ecological assets of various areas, etc.



↑ Examples of communication aids resulting from the Inventory