

# Multi-sectoral approach to water management in the Mediterranean

Author: Center for Environment and Development for the Arab Region and Europe

Source: NOSTRUM-DSS Deliverable D2-4

## What is Nostrum-DSS?

It is a Co-ordination Action, funded by the EC FP6, which aims to improve governance and planning in the field of sustainable water management in the Mediterranean area:

- by establishing a network between the science, policy, and civil society spheres,
- by fostering active involvement of the relevant stakeholders,
- through the development and dissemination of Best Practices Guidelines for the design and implementation of DSS tools for IWRM.

## What are the Nostrum-DSS Leaflet Series?

These short documents summarise the main output of the project and represent an **entry door** to the wide range of products and resources available on the project's web site. They are composed of three kind of leaflets:

- Case studies leaflets
- Policy leaflet
- Technical leaflet

## To whom is this leaflet addressed?

As part of the Policy leaflet series, this document is mainly addressed to **policy and decision makers** interested in gaining insights on how *DSS tools and approaches* can support them in their everyday job, but may be useful to researchers and practitioners too.

For further information see the NOSTRUM-DSS website:

→ <http://www.nostrum-dss.eu>

This leaflet is the sole responsibility of the author(s) and does not represent the opinion of the EC, nor is the EC responsible for any use that might be made of the information appearing herein.

## The current situation

In general, the weight of a sector in the national economy does only rarely reflect its water use patterns. Water management in the Mediterranean has always been strongly linked with agriculture due to its importance to make the region water scarce countries self sufficient in food supply. Hence, agriculture is by far the main water user in the region but it contributes comparatively much less than the other sectors, such as industry and tourism, to the national GDP and is highly subsidised. Tourism is importantly contributing to the economy in most of the countries of the Mediterranean basin. Industry has great relevance in the socio-economic structure of the Mediterranean countries and its role is expected to be enhanced in the next years, in those countries of the southern shore of the Mediterranean where development is ongoing and is attracting external capitals.

On an the average water used for irrigated agriculture is lower in the northern countries (52.7%) than on the southern (75.2%) due to rainfall availability. The high peak of the seasonal tourist flows season poses great concerns of water availability and often leads to conflicts among users. For what concerns the industrial sector, the water use is expected to strongly increase in the coming years, especially in the South-Mediterranean countries.

Overall, the water demand in the Mediterranean region is expected to rise over the next few years because of the population growth (mainly in the southern rim), the increasing standards of living and the ever rising tourism arrivals.

All the sectors are responsible for the increasing water pollution and the depletion of resources in the region. The vast majority of the population has access to adequate water supply and sanitation, while there is still space for improvement in Turkey and Morocco where only about 62% of housing units have piped water and in-house toilet facilities, respectively.

See the NOSTRUM-DSS Meta-guidelines

→ <http://www.nostrum-dss.eu>

- Keyword: Problem Analysis

## Main shortcomings

The water supply in most countries is regulated by the central government and the public authorities. However, the legislation is often scarcely or unsatisfactorily

implemented, because of the lack of enforcement measures, the insufficient level of resources (human, structural, financial) and the inefficiency or slowness of application procedures; overlapping of jurisdiction is also a shortcoming.

See the NOSTRUM-DSS leaflet on Governance and water management in the Mediterranean

## Experiences from the Nostrum-DSS Case Studies

### Algeria

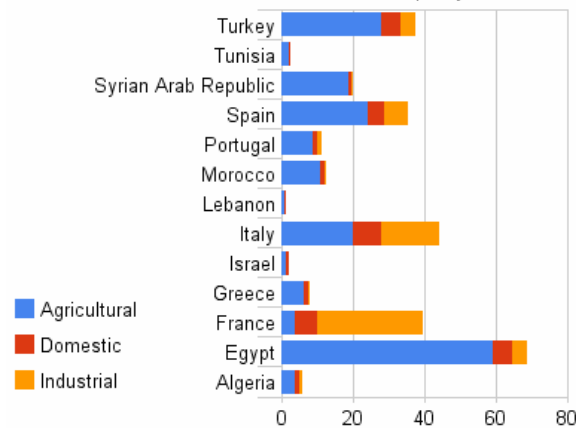
*In the Great Sebkeha of Oran, the conflicting water uses are representative of the different interests of the region: economic development in the northern part and traditional agriculture in the south.*

### Tunisia

*In the Djerffara plain, water legislation ruling groundwater uses is not effectively implemented because of its contradiction with the traditional water rights scheme.*

## WATER USE PER SECTOR

Water withdrawal in Billion cubic meter per year



Source: FAO Aquastat

To see how DSS can support the implementation of IWRM principles see the **NOSTRUM-DSS Meta-Guidelines**

→ | <http://www.nostrum-dss.eu>

*Home » Final products » Policy support » Meta-guidelines*

- Keyword: Water policy instruments
- Keywords: Actions and Monitoring, Policy, Plan Implementation, Legal Framework, Institutional Framework
- Keyword: IWRM Concept and principles

## Ways to go

Some recommendations:

- A comprehensive monitoring program which should target all sectors, but with high priority the tourist and the industry water users is needed. Subsequently, the development and or enhancement of accurate databases for the reservoirs and watersheds management should be carried out with high coordination of the responsible agencies at the national level.
- The application of an aggressive and rigorous maintenance program for most northern countries (i.e. leak detection, new pipes, meters, etc.) to tackle the widespread problem of leakages which affects the water distribution system.
- The establishment of the necessary legal, institutional and economic framework for all the above actions in the spirit of WFD already adopted in the northern part of the region should be spread to the southern one.

The improvement of the decision making through less centralized procedures and the development and use of DSS should be acknowledged.

## Improve DSS application

Water Authorities are still not too much attracted by the development and use of DSS to support the implementation of integrated water management practices.

- This reluctance is based on the fact that decision-makers are not always convinced on the purpose served by these tools, their usefulness and advantages and they prefer the traditional ways of reaching decisions.
- In addition although there is an increasing trend in involving stakeholders in decision making, their weight and actions are weak compared to the official decision makers, generally speaking still prefer have full control of this process.

Despite the existence of many scientific studies, the academic and scientific community is rarely involved in the decision making process. This aspect is even more critical when considering the high need for specialists; the lack of expertise is in fact a major constraint in the application of DSS for Water resource management.

To see examples of successful DSS applications see the other **NOSTRUM-DSS Policy leaflets**:

→ | <http://www.nostrum-dss.eu>

*Home » Final products » Policy support » Policy leaflets*

- NOSTRUM-DSS leaflet on Public Participation
- NOSTRUM-DSS leaflet on DSS implementation

To see how to bridge science and policy spheres see the **NOSTRUM-DSS final declaration**:

→ | <http://www.nostrum-dss.eu>

*Home » Final products » Final declaration*

