MEDITERRANEAN ACTION PLAN

MEDITERRANEAN COMMISSION
FOR SUSTAINABLE DEVELOPPEMENT

UNEP

Workshop

Water demand management

Fréjus, 12-13 Septembre 1997

Framework Document

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Background and objectives of the Workshop

The water issue is now at the core of common Mediterranean concerns.

It will be all the more so in the future if we consider that water demands in the region have globally increased by 60 % in the last 25 years, and considering the foreseeable speed of demographic growth, in 2025 almost no country in the South will have water availability superior to that of 500 m^3 *per capita* per year which corresponds to the vital needs of the population.

These concerns have been widely expressed by the most qualified authorities either at national or regional level by way of the Mediterranean structures concerned.

Chapter XVIII of Agenda MED 21, a Mediterranean version of Agenda 21 issued from UNCED, is a reminder among other things, that, on the scale of all Mediterranean basin countries, it is necessary that « in-depth prospective studies foresee the medium and long-term evolution of countries that already suffer from serious water shortages and recommend the most appropriate solutions to mitigate their effect ».

MAP phase II noted the more ambitious objectives of the Mediterranean Action Plan in the Barcelona Convention, renewed in 1995, by including the issue of sustainable use of water resources in its priorities.

The creation in 1996 of the Mediterranean Commission on Sustainable Development (MCSD) expresses the political will of the governments of the region and of the European Union to develop a regional and sub-regional co-operation. These levels are considered to be adapted to the promotion of the integration of environmental concerns into development policies.

As water management is at the core of any sustainable development, when withdrawals approach the magnitude resource availability, it is with this in mind that MCSD has devoted the year 1997 to examining, among other short-term priorities, this topic from the demand viewpoint.

Managers of this task, Tunisia and Morocco benefit from the contributions of the members of the working group composed of Libya, Egypt, Italy, France, Malta, Spain, Israel, Cyprus, the European Community as well as of WWF, CEFIC, MIO-ESCDE, APNEK and CEDARE.

The MAP Centres, Priority Actions Programme and more particularly the Blue Plan Regional Activity, provide the scientific and logistic support to this activity which is presently materialised by the progress report of the task manager presented, under the reference UNEP(OCA)/MED WG.124/Inf.6, to MCSD second meeting in Palma in May 1997.

Water demand in the Mediterranean region is characterised by:
- large disparities among countries (ratio from 1 to 10);
- the weight of irrigation (64 % of the demand);
- the requirements of tourism that increase the priority demand of communities for drinking water (13 % of the demand);
- a strong summer demand and a coastal concentration.

In some countries this has caused stronger and stronger pressures on resources and increasing scarcity.

Four large groups of countries are already distinguishing themselves according to their water demand and resources in 2025.

1. Countries where *per capita* total water demand is high and where water availabilities remain considerable until the year 2025 and beyond, allowing an increase in *per capita* consumption.

2. Countries where *per capita* total water demand is high, where *per capita* consumption should remain stable, and where the large current water resources will meet total water demand until the year 2025, but will face scarcity.

3. Countries where *per capita* total water demand is under 500 m^3/year and which are condemned to decrease, from the year 2000, the *per capita* consumption in order to meet global demand.

4. Countries where *per capita* total water demand is close to 1000 m^3/year and which are condemned to decrease, from the year 2000, the *per capita* consumption in order to meet the global demand.

It has become obvious that with the exception of the countries in the first group, demand management by public domain should optimise the use of a finite resource and respect its other functions: maintaining the ecosystems and the quality of life of the Mediterranean peoples.

Within this particular context, the Workshop « Management of water demand » aims at assessing at their proper levels the water savings that can be achieved and at estimating yields and costs in terms of technical and economic feasibility.

- How and up to what point is best to save water in the towns, in industry and in agriculture?
- How and with what kind of incentives to redistribute available resources among sectors and categories of use on the basis of real quantitative and qualitative needs, given that the available resources are of different quality?
- What are the weak spots (losses, waste etc.) in the various sectors of Mediterranean water demand, and how to mitigate adverse effects and prevent future scarcity ?

The Workshop will try to clarify the inherent inconsistencies or failures of the systems adopted which might render them ineffective in the future.

The output of the workshop would be to identify the scientific, technical, economic, financial, legal, organisational, psychological or political obstacles which hinder sustainable demand management.

The evaluation of the relative weight of each of the factors identified should lead to the formulation of relevant recommendations on each of the aspects studied adapted to the situation of the different groups of countries, according to the threatening risk of scarcity

The working documents of the Workshop

1. « issues of water demands management of water demand in Mediterranean countries»:
   an introductory note that recalls the objectives, ways, means and tools for demand management as well as the feasibility of the water savings envisaged.
2. Synthesis document of fact sheets for each country.
   This is an attempt to improve, standardise and up-date the information on water uses in the Mediterranean countries.
3. Framework notes for the 3 working groups that deal with the different aspects of water demand management:
   - socio-economic aspects
   - institutional and legal aspects
   - technical aspects.

They detail the key issues to be discussed to reach the results expected from the Workshop.

Expected Workshop outputs

The synthesised recommendations of the Workshop should be translated into action proposals intended for the national officials responsible for water policy, managers, economic actors and users.

The final output of the activity would be an action plan addressed to the representatives of the Contracting parties of the Barcelona Convention who will gather in Tunis in November 1997.

Realistic and adapted to the diversity of situations, this plan would aim at controlling demand within the larger strategic context of sustainable water management in the Mediterranean.

ANNEXE

FRAMEWORK NOTES FOR THE WORKING GROUPS:

WG1 : ***Socio-economic aspects***

WG2 : ***Institutonal aspects***

WG3 : ***Technical aspects***

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working group 1

Socio-Economic Aspects:

September 1997

The working groups concentrate on a set of management tools and instruments applied to all sectors of use. The objective is to perform the following on the basis of participants' experience:

- Determine the status of application of economic, financial and socio-cultural instruments in Mediterranean countries;
- Evaluate their degree of adaptation and efficiency by sectors of use;
- Identify difficulties and successful outcomes of applying these instruments;
- Point out cases of similarity among countries;
- Suggest initiatives of socio-cultural nature that are likely to improve water demand management.

The issues proposed in this way are not restrictive. Their objective is to stimulate the discussion.

Any additional issues suggested by the participants are welcome.

Instruments and tools

These are, in part, economic and financial instruments, and in part socio-cultural ones, and particularly:

- Estimation of costs relative to technical operations, and sharing of their charges;
- Financial incentives influencing the actors' attitude: pricing, allowances, fees, subsidies, tax reduction;
- Education, information, sensibilisation influencing actors' behaviour.

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Main issues to be discussed

- What are the socio-economic instruments best adapted to sectors of use, and the main drawbacks of their utilisation? Which ones are most efficient for water saving and/or for increasing the efficiency of uses?
  (a model of notation table concerning the three working groups will be distributed)
- Is it possible to evaluate economic costs of water use drawbacks in different countries? For example, water distribution and conveyance losses?
- Is it possible to evaluate water demand elasticity in main sectors related to the price and levies charges concerning the users? i.e. impact of the price variations on demands.
- How and by which types of incentives can the resources be distributed among sectors and use categories depending on real qualitative and quantitative needs, as well as on the existing availability at different quality levels (more or less brackish water, more or less treated waste water)?
- What is the optimum ratio between the efforts related to the improvement of efficiency of irrigation water use, and drainage water reuse?
- Are the specific objectives of intermediate agents (producers-distributors) compatible with the objectives of water demand management?
- Would the penalties for abusive water use according to criteria to be defined ("counter-saving" fees) be appropriate.
- …….

Brief review of national and regional experience

- What is the state of applicaton of these economic, financial and socio-cultural instruments?
- What are the results and achievements of the implementation by instruments and sectors?
- What are the main impediments and difficulties of implementation by instruments and sectors?

Future?

- What are the projects and prospects, at national level, to develop the relevant management instrument?
- What are the strategic ways and recommendations proposed for discussion at the workshop?

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working group 2

Institutional and Legal Aspects:

September 1997

The working groups concentrate on a set of management tools and instruments applied to all sectors of use. The objective is to perform the following on the basis of participants' experience:

- Determine the status of application of economic, financial and socio-cultural instruments in Mediterranean countries;
- Evaluate their degree of adaptation and efficiency by sectors of use;
- Identify difficulties and successful outcomes of applying these instruments;
- Point out cases of similarity among countries;
- Suggest initiatives of socio-cultural nature that are likely to improve water demand management.

The issues proposed in this way are not restrictive. Their objective is to stimulate the discussion.

Any additional issues suggested by the participants are welcome.

Instruments and tools

These are legal, institutional, legislative and regulatory instruments of water demand management, and particularly:

- Legal and legislative basis for implementation of management instruments (economic and technical);
- Institutional organisation appropriate to national, regional and local levels;
- Legal and legislative measures encouraging the participation of all the users and influencing the actors' behaviour.

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PRIORITY ACTIONS PROGRAMME

Main issues to be discussed

- What are, in your opinion, the best adapted institutional and legal instruments according t sectors of use, and the main drawbacks of their use? Which of them are most efficient for water saving and / or for increasing the efficiency of uses?
  (a model of notation table concerning the three working groups will be distributed).
- What are the legal facilities for intervention into water demand management?
- Does the water law in force present impediments to water demand management of common interest?
- Is it necessary to establish regulatory standards (in quantity) in order to prevent abusive uses?
- Does the allocation of competencies among sectorial administration centres facilitate the demand management?
- What is the role of regional public services and institutions in managing water demand?
- Are there user committees, and are they involved in water management according to different sectors (effectiveness, difficulties?).
- What is the role of intermediate agents in water demand management (producers/distributors)? Are their objectives convergent or divergent to those defined for demand management?
- What are the rules particularly established for dividing the water among different sectors of use during the period of fluctuations due to shortage of water? What are the compromise solutions? Are the ware restrictions efficient?

Brief review of national and regional experience

- What is the state of application of these legal, legislative and regulatory instruments?
- What are the results and achievements of the implementation by instruments and sectors?
- What are the main impediments and difficulties of implementation by instruments and sectors?

Future?

- What are the projects and prospects, at national level, for development of the relevant management instruments?
- What are the strategic ways and recommendations proposed for discussion at the closing workshop debate?

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working group 3

Technical Aspects:

September 1997

The working groups concentrate on a set of management tools and instruments applied to all sectors of use. The objective is to perform the following on the basis of participants' experience:

- Determine the status of application of economic, financial and socio-cultural instruments in Mediterranean countries;
- Evaluate their degree of adaptation and efficiency by sectors of use;
- Identify difficulties and successful outcomes of applying these instruments;
- Point out cases of similarity among countries;
- Suggest initiatives of socio-cultural nature that are likely to improve water demand management.

The issues proposed in this way are not restrictive. Their objective is to stimulate the discussion.

Any additional issues suggested by the participants are welcome.

Instruments and tools

These are technical instruments of water demand management, and particularly:

- Methods to research and reduce water conveyance losses (drinking water, irrigation);
- Regulation methods of water supply to reservoirs in order to reduce overflow discharge;
- Methods of research and reduction of leakage concerning domestic, non-domestic and industrial uses;

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- Recycling methods in industrial and domestic sectors;
- Efficient irrigation methods (sprinkling, micro-irrigation…);
- Optimisation of water distribution in irrigation networks (automation…);
- Treatment process, or waste and drainage water reclamation for reuse purposes;
- Methods of understanding, follow-up and planning of water demands, primarily in agriculture, but also concerning urban and industrial waters; metering distributed water.

Main issues to be discussed

- What are, in your opinion, the best-adapted technical instruments according to sectors of use, and the main drawbacks of their use? Which of them are most efficient for water saving and / or for increasing the efficiency of uses?

  (a model of notation table concerning the three working groups will be distributed).
- What are the impediments or difficulties (economic, cultural, human capacity) in implementing different methods?
- Is there any technical progress related to these different instruments and by sectors?

  What are the priority research objectives?
- In which cases can substitutes for water use be envisaged and developed?
- What are the desirable transfer technologies that could contribute to management demand?
- Are there any more appropriate methods to socio-economic and cultural conditions of the countries?
- Is there any possibility to improve the productivity of agricultural uses, especially through the selection of crops?

Brief review of national and regional experiences

- What is the state of application of these technical instruments?
- What are the results and achievements of the implementation, by instruments and sectors?
- What are the main impediments and difficulties of implementation by instruments and sectors?

Future?

- What are the projects and prospects for development of the relevant management instruments?
- What are the strategic ways and recommendations proposed for discussion at the closing workshop debate?

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