EUROMED

EURO-MEDITERRANEAN PARLIAMENTARY ASSEMBLY

AD HOC COMMITTEE ON ENERGY, ENVIRONMENT AND WATER

REPORT

Water Management

Presented by the Co-rapporteurs

MM. Abdellah BENTOUMI (Algeria) and
Robert DEL PICCHIA (France)

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I. DRAFT RECOMMENDATIONS

The Ad-hoc Committee on Energy, Environment and Water

1. Considers that institutional and administrative reforms in the water sectors of the countries belonging to the Euro-Mediterranean partnership should be based on the following principles:

- sustainable management of water resources;
- improvements in the provision of water and sewage purification services based on decentralisation;
- planning and management of hydropower plants ;
- protection and optimisation of available water resources, exploring new resources and rationalisation of water consumption ;
- integrated and participatory water management with improved stakeholder involvement based on the creation of associations;
- transparent and realistic tariff structures which take into account the water volumes consumed and make it possible to develop infrastructures in an economically viable manner;

2. Is of the opinion that water management requires the construction and maintenance of hydropower plants, the rehabilitation of drinking-water networks, avoidance of all forms of water squandering and a generalised utilisation of wastewater after treatment, particularly in the agricultural sector ;

3. Considers that the preservation of land and water resources needs to be addressed through both regional and international cooperation and expresses the wish that projects focused on improvements in water management be carried out within the context of the Union for the Mediterranean.

4. Invites all countries of the Euro-Mediterranean partnership to undertake the following efforts :

- setting up initial and ongoing training schemes centred on environmental issues and water resources;
- concluding partnership agreements between the academic community and the water sector;
- promoting research and development related to water resources;

- launching awareness raising and communication campaigns targeting the general public and highlighting sustainable use of water resources;

- setting up observatories with the objective of having warning systems available regarding natural disasters in the wake of droughts or floods;

- reforming legislation and regulations relating to water resources ;

- establishing a public water authority and a water policing system:

- investing in wastewater treatment for agricultural irrigation purposes:

- encouraging investments in « clean » seawater desalination technologies:

- giving assistance to developing countries to promote water supply and resource management ;

- fostering technology transfers relating to water resources.

II. EXPLANATORY STATEMENT

Water is one of the great challenges of the 21st century. This challenge will be especially difficult to tackle for the Middle East and North-Africa, as there is no other region in the world where water is scarcer. The region has 1% of worldwide freshwater resources at its disposal but has to cater to 5% of the world's population. Water management is rendered particularly difficult by the fact that 60% of the region's watercourses run through several countries.

Mediterranean countries have always been confronted with the need to manage water resources in order to subsist and prosper. Today, populations have become much larger, and there is a steadily growing demand for water to supply cities and agricultural areas, whereas water resources have remained more or less stable. Hence, water has become an inhibiting factor for the development of most of the Mediterranean countries and, thus, poses a vital challenge at the economic, social and political levels.

As a scarce resource in the Mediterranean region, water is subject to multiple demands. Water stress is particularly pronounced throughout the region. In this context, demographic evolution is a main factor. It is exacerbated by the rapid pace of urbanisation which leads to a greater concentration of people and activities in coastal areas. In the countries to the South, where population figures triple within one generation, the demand for resources, and particularly water, is growing at a rapid pace. In addition, the limited water exchange with the open oceans makes the sea very susceptible to pollution, with pollution levels having risen significantly since the 1970s.

It must be noted that the Mediterranean region is confronted by an accumulation of diverse problems. Water resources are scarce and very unevenly distributed, and not all of these can be exploited and utilised to the same extent. The abundance or scarcity of water is less pronounced in absolute figures than in relation to demand levels, which are also disparate and unevenly distributed.

Globally speaking, we currently find a particularly high demand for agricultural water in the Mediterranean world, where irrigation is required almost universally. Absorbing 80%, agriculture is actually the number one consumer of water in the region, far outstripping domestic (14 %) and industrial use (6 %). These figures point both to the inadequate availability of drinking water for households and to a certain lag in industrial development, but they demonstrate first and foremost that priority needs to be given to the rationalisation of water used for irrigation.

Pressure on water resources for people's everyday lives is uneven but already pronounced. In future, it will become even stronger, particularly in areas where it is already significant, leading to a widening of the gap between the North and the South.

Conflicting demands are going to multiply, particularly as between urban and agricultural uses, but also as regards water demands for hydroelectric power production or between needs for water usage and security or environmental concerns. Some situations actually harbour high potential for conflict.

Globally, water requirements are going to rise. In certain countries of the South they could double or even triple. According to forecasts for 2025, the share of agriculture in total demand will remain predominant but may decrease slightly.

Because of urbanisation pressures, water supply for cities is going to become a crucial problem. The rapidly growing demand necessitates efforts, within a relatively short period, to ensure the tapping and supply of steadily growing volumes of water over longer distances.

The unstoppable rise in demand resulting from population growth is the primary and most worrying conclusion to be drawn from forecasts. Moreover, water quality is at risk because of shortcomings in water treatment and purification. In some cases, the overexploitation of water leads to a dramatic decrease in groundwater levels and to a salinisation of freshwater resources.

As there are few still untapped water resources available in the Mediterranean region, sudden water shortages are a problem to be reckoned with. According to certain estimates, almost half of the Mediterranean population will be confronted with water deficiencies or shortages by 2025. In the countries where resources are decreasing most quickly, the demand for water is going to rise most strongly.

In addition, climate change will also have an impact on water resources. It will in particular lead to a heightened occurrence of extreme phenomena, such as droughts or floods, increasing both their frequency and intensity. These phenomena will make resources less readily exploitable while increasing needs for regulation.

As their possibilities for exploiting conventional water sources are limited, numerous countries are trying to develop new supply routes, mainly through water imports and non-conventional water production methods.

Wastewater recycling will be the first and foremost means of increasing water supply. The reuse of recycled water, particularly in agriculture, still requires technical progress and scientific testing before it can be applied on a large scale. At the same time, some countries are lagging behind as regards urban water treatment and purification, which will make it difficult for them to catch up, while the volumes of wastewater produced are increasing substantially.

Desalination of seawater and brackish subterranean water is already practised, but the cost is still high and the technique involves considerable consumption of energy.

Today, it is generally considered that when it comes to satisfying water demand by acting on the supply-side, margins of manoeuvre have gone or will soon be gone, as natural resources are entirely exploited and diversification of supply is getting more and more expensive.

An increasing frequency of water shortages and overexploitation suggest a preference for acting instead on the way in which water is used.

Improved demand management seems to be a promising route.

An important percentage of the available water is used poorly or insufficiently in Mediterranean countries. A third of the water produced and distributed to provide drinking water for cities and villages is lost along the networks or squandered through misuse. Almost half of the irrigation water, supplied by facilities installed at great cost

to the community, is lost during transport, because of poorly maintained conduits leading to the fields, and by a choice of crops that consume too much water. Owing to a lack of recycling plants, leaks and losses in the system and also inadequate process efficiency, many industries not only use a great deal more water than necessary but they also impair water quality. Efficiency levels in water use are also far from satisfactory both in drinking-water supply and irrigation systems. These volumes of lost or squandered water constitute an important untapped source, so that demand-side management would be more efficient than other solutions for the water supply issue. Water saving options need to be considered in every aspect of water management.

In most Mediterranean countries, a more economical use of water and, thus, a decrease in demand, would save a quantity of water nearly as large as the additional water resources that would be required to cover expected increases in water demand over the next 20 years. It is generally recognised that saving most of the water lost or squandered is technically feasible and would be a great deal less costly than stepping up water production to cover projected future needs. Hence, demand-side management should be accorded as much attention as supply-side management.

Such an approach requires not only profound changes in strategy, but also in the nature of investments and in individual and collective behaviour, all of them traditionally geared to increasing supplies. As much benefit could be derived from improving the way in which water is used as from intensifying the exploitation of water resources.

An improved management of water demand and use requires a system that is both more integrated and more participatory, which is in turn inseparably linked to questions of regional planning and environmental management. It would be advisable to involve the users in a better manner, for instance in the development and maintenance of irrigation networks, through the creation of user associations. One should also improve the management of the water sector, which is currently often characterised by deficiencies and overstaffing. Restructuring efforts might consider a decentralisation of water supply services.

Acting on the demand-side also requires that the real cost of exploiting this resource and its environmental impact be carried over into the charges paid by users. It is therefore indispensable to introduce a realistic tariff structure that takes into account the water volumes consumed and ensures that the cost of exploiting the resource is covered realistically. Such a tariff policy is essential to make infrastructure development economically viable.

Nor must one neglect the establishment of cooperation, both at regional and international level, focused on the preservation of land and water resources. From this point of view, the Union for the Mediterranean, with its focus on concrete projects, offers a real opportunity for improving water management in the region.

Last but not least, it would be recommendable to increase research efforts and bring them together in a regional and/or international framework in order to develop technological solutions geared to the importance of the issue at stake.