



THE CONTRIBUTION OF LOCAL AND REGIONAL AUTHORITIES TO THE WATER STRATEGY OF THE UNION FOR THE MEDITERRANEAN

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1. Foreword

Water management represents a major challenge to all the stockholders concerned, in terms of the socio-economic development of the Mediterranean Region and more specifically for its southern and eastern shores.

During the ministerial conference held on 22 December 2008 in Jordan within the framework of the “Barcelona Process: Union for the Mediterranean”, local and regional authorities were invited to become involved in the future Water Strategy for the Mediterranean.

Local and regional authorities confirmed their commitment to meet the challenges for improved water governance and the implementation of more efficient strategies by subscribing the Istanbul Water Consensus during the 5th World Water Forum.

It is within this context that the conference in Lyon will consolidate the participation of local and regional authorities in the construction of a Water Strategy for the Mediterranean, by means of a joint, collaborative, and concrete contribution.

Through this contribution to the water strategy of the Union for the Mediterranean, local and regional authorities engage themselves to pursue a new course of action whose objectives will be discussed and formalized during the conference in Lyon.

Water management in the Euro-Mediterranean region—a challenge of increasing proportions—is analyzed through four thematic issues established by the Water Strategy for the Mediterranean: governance, financing, demand management, and climate change.

Being the political authorities that are the closest to the population, local and regional governments know precisely people’s needs and expectations. They know that water related problems and water scarcity are among the most sensitive common concerns. Moreover, they have a long experience in decentralized cooperation in the Mediterranean region and this exchange of experience and know how contributes to finding the solutions most adapted to each specific case.

As their representative organ, UCLG wishes to participate in the elaboration of this Strategy to contribute with its experience of many years in the Mediterranean, as well as with prospective studies.

In doing so UCLG wishes to contribute to the relatively recent realization that great challenges such as the Millennium Development Goals cannot be achieved without the massive involvement of all stakeholders, in particular local populations and their closest representatives.

This is the significance of the contribution of local and regional authorities to the elaboration of a Water Strategy for the Mediterranean. Local and regional authorities want their projects to be taken into account within the framework of the UfM and to benefit from the institutional and financial support of States and donors.



2. Summary

Local and regional authorities hope and advocate for the adoption and implementation of a Water Strategy for the Mediterranean that will allow them to fully play their role in this field: complementary to the role of national authorities, the essential function of local and regional authorities endeavors not only to assure the well-being of their constituents but also to open up to the Mediterranean region in which they may find a source of cooperation and solidarity.

The contribution of local and regional authorities to the Water Strategy for the Mediterranean covers the four thematic areas adopted by the Ministerial Conference held in Jordan in December 2008, which are:

- Water governance (Local Consultation Committees): Promoting the effective participation of local and regional authorities in the preparatory stages, the elaboration, and the implementation of strategies is one of the best means to achieve good governance. To do so, it is necessary to consolidate the consultation process and to promote new procedures and methods. The responsibilities of local and regional authorities must be clearly defined to enable them to fully play their role within the context of decentralization. They need to have the powers, but also the necessary human and financial resources.
- Water and financing: Local and regional authorities propose to take the initiative to position themselves at the point where decision-making and actions intersect. A contractual approach involving the different political, technical, and financial levels (Operations Contracts) will underlie this initiative. The scope of these contracts (local, provincial, regional, etc.) shall correspond to the territorial characteristics and specificities of the interested parties. There may be Agglomeration Contracts, Basin Contracts, or Groundwater Contracts in order to mobilize the necessary financial resources on the basis of common objectives.
- Water demand management: Local and regional authorities are fully aware of the key role they must play in water demand control and regulation in their territory as they relay national strategies at local levels. With the creation of a Demand Management Committee, it would be possible to define clearly the responsibilities and roles of actors (central government, local and regional authorities, technical and financial partners, users, industrials, etc.).
- Adaptation to climate change: Different studies tend to confirm the severe impact of climate change in the Mediterranean. Devastating floods and long periods of drought are characteristic of the region. The action of local and regional authorities concerns the adaptation of their territories and the elaboration of long-term strategies with enhanced capacities for urban and territorial planning. It is necessary to associate local and regional authorities to national plans seeking to alleviate and adapt to climate change and to facilitate their access to the resources required.

These committees or contracts should be set up gradually avoiding any additional administrative “red tape”. An initial stage would set examples in order to determine optimum modalities and to encourage countries, ultimately the decision-makers, to replicate the principle.



Decentralized cooperation between local governments is a lever to support these initiatives, to favor exchanges and facilitate the transfer of know how and technology and to spread innovative experiences. Local and regional authorities of the Mediterranean have a long experience of cooperation in these fields, cooperation that must be encouraged and supported.

Our contribution here is proof of our commitment to build in the Mediterranean an area of peace and security in terms of water resources but also to improve existing conditions and to deliver quality services to citizens North, South, and East of the Mediterranean.

Our contribution takes into consideration the specificities of our territories as well as major contemporary challenges like climate change. We request National States to take into account our contribution and to incorporate it in the Water Strategy of the Union for the Mediterranean that will be discussed and adopted during the next conference of the UfM in Spain.



3. The Mediterranean Commission of UCLG

The Commission is proof of the prominent position of the Mediterranean within UCLG on account of:

- the strong presence of UCLG in eastern, northern, and southern regions of the Mediterranean;
- the large amount of networks and cooperation tools in the area aimed at the promotion of harmonized regional development.

The Commission's objective is to promote:

- the initiatives of local and regional authorities in the Mediterranean;
- contacts, exchanges, and dialogue that will make possible sharing experiences and will bring closer elected representatives and decision-makers who are often isolated by economic and cultural barriers or by conflicts;
- greater awareness of the major role of local and regional authorities in the elaboration and implementation of development policies;
- taking into consideration, at local government levels, the major political challenges of the Mediterranean.

Environmental concerns, especially water related issues, are one of the areas in which the action of the Mediterranean Commission may be developed efficiently and successfully. This is why the Commission has decided to contribute to the "water" component of the Union for the Mediterranean and especially to the elaboration of the Water Strategy for the Mediterranean that is one of the objectives adopted by the Ministerial Conference on Water held in Jordan in December 2008.

4. The Facts on Water in the Mediterranean

There are many areas of concern related to water issues in the Mediterranean, particularly in the South and East:

- highly unequal distribution of water resources, with countries that have reached (or are close to) water stress levels;
- population growth and economic development, particularly in the tourism sector, that will inevitably lead to a steady increase in water needs;
- very large displacements of populations to large coastal cities result in increased difficulties for water abstraction and for the conservation of the environment;
- agriculture maintains its structuring role and has no other alternative but to develop to feed the population even though the necessary changes aimed at a more rational and efficient approach have not been completed;
- forecasts by experts describe the Mediterranean basin as one of the hot points where the negative consequences of the climate change will be felt more strongly;
- a turbulent geopolitical context makes cooperation between neighbors difficult, particularly with regard to problems that are nevertheless vital, such as sharing water resources.



5. The Union for the Mediterranean and the Water Strategy for the Mediterranean

Since its launch during the Paris Summit (13 July 2008), the Union for the Mediterranean (UfM) has considered sustainable development and particularly water management as key points that will determine the future of the Euro-Mediterranean zone. In this perspective, the UfM programmed a ministerial conference on water with the following objectives:

- give water management the priority it deserves;
- plan de elaboration of a long-term water strategy for the Mediterranean;
- prepare and launch, within the framework of reinforced cooperation, concrete projects that could improve the well-being of populations and at the same time contribute to the economic and social development of territories.

The conference was held in December 2008 in Jordan. It was the true launching of the Union for the Mediterranean for water related issues.

Ministers noted the general situation of water resources and its related concerns. To meet the challenges identified, they decided that:

- all the countries should adopt jointly a long-term strategy;
- it would be advisable to prepare concrete projects, consistent with the strategy, to meet the needs of the population and to implement such projects within the framework of extensive cooperation between countries and institutions, stating that the projects should address five major priority concerns.

Concerning the Strategy, the conference defined its main principles, essentially, to:

- tackle problems that go beyond the means of any one country or organization;
- search for and take into account available data on climate change and environmental needs;
- build the strategy taking into consideration all kinds of water and all user groups for an integrated management at basin level;
- include a two-fold general objective: the conservation of water quality and the balance between water supply and demand;
- define and implement specific measurable objectives;
- use any and all tools that will allow reaching these objectives, whether technical, legal, economic, or institutional, emphasizing a local approach and the participation of civil society;
- develop and exploit all scientific, technical, or technological resources available.



Four major areas that should be covered by the strategy were identified:

- water governance,
- addressing the future consequences of climate change,
- optimizing water financing,
- water demand management.

The conference also defined a framework for cooperation—institutional and financial—for the elaboration of the strategy. Ministers entrusted the elaboration of the strategy to a group of experts. Finally, Ministers suggested that the Strategy be adopted during the next Ministerial Conference on Water to be held in the first semester of 2010 so that it may be presented at the next Summit of the Union for the Mediterranean.

The first Ministerial Meeting on sustainable development was held on 25 June 2009 in Paris, and included a workshop on water and the environment.

The meeting and the workshop provided opportunities to assess the progress made in the preparation of the water strategy for the Mediterranean and welcomed initiatives aimed at contributing to its preparation, in particular, the conferences in Cairo and Lyon.

A list of projects already financed (4) was drawn up as well as a list of projects to be finalized (over one hundred).

In September 2009, Athens hosted a meeting of the Experts Group in charge of implementing the conclusions of the Jordan Conference and especially of the elaboration of the strategy. Work for the preparation of the preliminary version of the Strategy was organized during the meeting in which the terms of reference were also adopted. The participation of the Mediterranean Commission of UCLG in this preparation process was specifically mentioned.



6. Local and Regional Authorities and the Water Strategy for the Mediterranean

In this document, the term “local authorities” refers to all levels of subnational governments:

- in charge of a city—from the smallest city to the urban megalopolis—or of a territorial entity of greater dimensions;
- with elected officials who have their own competences.

The difference in size and economic development evidently generates equally different concerns, objectives, competences, and means. Authorities in charge of one city are generally more concerned with the functioning of their water and sanitation services and the quality of their immediate environment, which in turn explains their interest in everything that concerns de-pollution. Whereas authorities in charge of larger or more diverse territories focus more on problems related to water management at basin level or to the preservation of natural water environments.

All local authorities stand within a sometimes restrictive legal framework, yet being the closest to the population (users or not) allows them to assume an essential role in the divulgation of information, during consultations and as actors that may influence decisions to actually improve access to water, and the conservation of water quality and the protection of the environment.

The three main principles underlying all their actions are:

- subsidiarity which enables them to find their legitimate place within the different levels of power,
- the resolute objective of achieving citizen participation,
- co-ownership of actions that makes them assume their responsibilities in consultation and with due respect to other stakeholders.

Moreover, these authorities experience a growing need to place their problems within the framework of the Mediterranean Region and to try to reap all the benefits of reinforced cooperation.

The Forum of local authorities of June 2008 in Marseilles emphasized the importance of local governance for development and stressed the need to implement a more rational integrated management of water resources, to work simultaneously on the supply and demand and to set up a decision-making process within a participatory framework gathering all stakeholders. It also mentioned water and sanitation as a priority thematic area of cooperation between local authorities.



During the 5th World Water Forum, local authorities subscribed the Istanbul Water Consensus, which recapitulates their experience with regard to water and sanitation, as well as their objectives and demands. Local authorities particularly look forward to obtain a legal framework and the technical, financial, and human resources that will allow them to:

- make and execute appropriate decisions to manage water resources efficiently, ensure a balance between the supply and demand, give true priority to access for all and to become involved in the protection of the environment through a proactive policy concerning sanitation;
- put into practice the political strategies decided at national or regional levels;
- place their action within a context of adaptation to climate change and encourage efforts of professionals and scientists in order to better apprehend the impact of these changes on the capacity of water services to manage available resources for the greatest benefit to all users.



7. Contribution of Local and Regional Authorities

The contribution of local and regional authorities to the Water Strategy for the Mediterranean covers the four thematic areas adopted by the Ministerial Conference held in Jordan in December 2008. These four topics are discussed in this document exploring for each one their current situation, perceptible changes, the corresponding objectives and means, along with several operational proposals.

Water and Governance

A product of political and cultural specificities, the role of local and regional authorities in the field of water management is multifaceted and varies greatly from one country to another.

With an adequate supply of resources, water management focused for a long time on the mobilization of new resources to meet or to stimulate demand. But when resources become inadequate, decisions that go beyond strictly technical aspects must be made. They deal with the socio-cultural elements of water issues, and it becomes necessary to give a key role to local and regional authorities (and through them, to the users) that are in the best position to deal with these aspects.

Most local authorities in European Mediterranean countries have had for quite some time strong autonomous powers for the organization and management of water services, and the corresponding political and structural measures have been taken: water laws, decentralization, a European Water Framework Directive, etc. Decentralization has taken different forms, but in general, the central government establishes the legal and regulatory framework while basin authorities define long-term strategies and take the necessary decisions.

In the Mediterranean, in particular, and due to events that are increasingly frequent such as river swellings and flooding, it is necessary to divide territories into zones according to the risks of floods in order to limit the construction of urban structures or to regulate activities that are not compatible with these risks.

Local and regional authorities should participate in the implementation of water catchment protection perimeters, for surface waters and groundwater, in order to limit pollution from waste or other activities that may affect the water quality.

South and East of the Mediterranean region, the situation is very different from one country to another. In some, local authorities—particularly in big cities—are largely autonomous concerning water management, in others the central government essentially retains decision-making powers, while others have prepared the participation of local authorities but lack an adequate organization framework to ensure such participation. This sometimes creates problems at local levels and particularly an inadequate participation of users in the decision-making process.



Local actors, in particular civil society actors, are not fully aware of the respective roles of the central government and local authorities and are not able to find the structures that will allow them to become truly involved in the process.

The central government generally has a predominant role in resource management while local authorities have gradually gained some control over services management (water and sanitation). Technical solutions are put into practice or at least are well identified. Nevertheless, sometimes it is difficult to make the correct decisions when local authorities do not effectively adhere to projects or reforms if they have not been involved in their elaboration.

In the field of water, the principles of subsidiarity and multilevel governance are particularly important because it is the responsibility of the State, and of local and regional authorities, to undertake those actions that will allow finding solutions to water-related problems. Citizen participation in the decision-making process, regardless of the level at which these decisions are taken, should be considered as a crucial factor for good governance that will be possible through participatory management mechanisms.

The participation of local authorities in the decision-making process and planning strategies for water resources is vital inasmuch as the preservation and sustainable spatial planning of their territory falls within their competence. It is also a key element to increase the efficiency of water planning and management.

The relatively recent evolution toward the effective participation of local authorities takes place at the same time as a more fundamental change. The traditional vision in which nature is subordinate to man and according to which the sectoral management of water should satisfy immediate needs is being replaced by a growing awareness of environmental challenges.

In this perspective, the contribution of local authorities will be pivotal, if the necessary legal competences and the corresponding technical and human capacities are ensured. In some countries, this may require extensive institutional reforms along with considerable efforts to transfer prerogatives and knowledge to subnational levels of government.

In the field of water, local and regional authorities wish to give priority to the following strategic areas:

- developing the best possible active consultation locally,
- building the sector's capacity and knowledge, with training and awareness raising actions aimed at setting up efficient operations and careful management of resources.
- associating in an integrated and prospective action the fields of water and sanitation to other areas that will become inseparable over the medium term such as energy, agriculture, the environment in general, and spatial planning.

As they gradually achieve these objectives, local and regional authorities will gain a global vision of problems and will mobilize all stakeholders to warrant true solidarity among users and to guarantee better services.



Local and regional authorities generally exercise their planning and management role over one or several adjoining catchment basins and the transitional waters, groundwater and coastal waters, associated to those basins. They must therefore be able to have some control over these areas to meet the water supply needs of the population, optimize water management, maintain the integrity of water systems, and solve problems related to water deficits.

Local and regional authorities should be involved in the decision-making and planning of water resources in these areas. Many of the applicable measures to achieve planning objectives fall within the competences of local and regional authorities, and this concerns the elaboration and the implementation of such measures.

We know the adequate context for planning and development is an integrated management of water resources in which the economic, environmental, and social components of sustainable development are reconciled. To work within this context, it is necessary to dispose of an “organizational tool” to initiate and to define consultation mechanisms.

That is why local authorities suggest that measures be taken for an effective participatory management through the creation of Local Consultation Committees that in a given territory (most often the territory covered by a service) would gather local authorities, users, and local representatives of central administrations. In these committees, stakeholders would gradually elaborate the foundations of a common action, would initiate strategies for integrated water management and contribute to more efficient services. Clearly, it would be necessary to have a stimulating legal framework and adequate human and financial means. It could lead the way to the most appropriate form of decentralization when countries decide that the necessary conditions have been met.

Through these committees, a dialogue may be engaged between decision-makers and local and regional authorities for the implementation of tariff policies that will gradually allow introducing cost-recovery mechanisms, at least in the sanitation sector, and in particular for operating and maintenance expenditures in an initial stage. Decentralization will thus take place in a context of shared commitment by all stakeholders.

The creation of these Committees should not entail more administrative or financial charges; those expenses that cannot be reduced will be offset by benefits derived from simpler procedures and faster decision-making.



Water and Financing

Financing needs for water and sanitation are considerable and concern investments as well as operating expenditures and related training costs. They often represent 2 to 3% of the gross domestic product (GDP) while the amounts actually invested generally do not exceed 1% of GDP.

For example, upgrading wastewater treatment plants and the construction of new systems in anticipation of the urban population growth would require around 10 billion Euros by 2025, plus 300 to 600 million Euros per year for operating expenses.

For the 2005-2010 period, the approximate cost for the de-pollution of the Mediterranean would amount to 500 million euros per year, which exceeds by far not only the funds traditionally invested but also the estimates of national action plans.

Local and regional authorities should promote the establishment of economic instruments that impose taxes on industrial wastewater to cover treatment and recycling.

Throughout the Mediterranean, there is a wide range of financing mechanisms for projects led by local authorities (funds granted by local and international banking institutions, State grants, subsidies or solidarity funds-at national or at basin level–equalization, fees or taxes, redistribution, revenues from water, etc.). These often lack legibility and are not guaranteed to last, making it even more difficult to mobilize public and/or private funds.

In this field, there have been efforts to improve legibility (for example by grouping different activities of the EIB in Mediterranean partner countries under the FEMIP) and the coordination between donors, but work remains to be done.

Nevertheless, sometimes it is still difficult to mobilize political decision-makers and technical and financial operators in a collaborative and efficient approach.

There are many ongoing initiatives and financial cooperation instruments in the Mediterranean region, often supported by technical assistance programs.

Among these initiatives engaged in the Euro-Mediterranean process there is, for example, the European Neighbourhood Policy Instrument (ENPI) whose indicative budget allocation for 2007-2010 is 5,621.20 million euros. It includes transnational programs, transfrontier cooperation, and facilities for good governance.

Southern Mediterranean countries are also engaged in a wide range of projects within the framework of bilateral actions. For instance, during the Board Meeting held on 26 June 2008, the French Development Agency (AFD) assigned approximately 320 million euros to projects for potable water supply and for urban and rural sanitation.



All investment programs in southern Mediterranean countries are effectively undertaken with the assurance of technical assistance, for example, the Facility for Euro-Mediterranean Investment and Partnership (FEMIP) or the French Fund for the World Environment (Fonds Français pour l'Environnement Mondial, FFEM).

Local and regional authorities propose to take the initiative to “lead the movement otherwise” and to position themselves at the point where decision-making and actions intersect. This proposal seeks not only to support the strategy but above all to participate in the definition of means, the execution of actions and their follow-up and assessment.

Contractual commitments –for example: Operations Contracts– between the central government, local authorities, and technical and financial partners will form the bedrock of this mechanism. The contracts could apply to long-term action programs (five years, for example) elaborated through consultation and including a set of indicators to evaluate results. Each contract would state specifically the commitments of each party. A Steering Committee would be in charge of supervising the progress and of evaluating the programs.

During the elaboration of these contractual commitments, discussions on the different issues at stake will be possible through the consultation process, and the guidelines will be determined according to the general interest leading to effective and sustainable actions. They would guarantee the necessary financing for the duration of the Contract and also should allow a synergy of complementary financing that, in the absence of a global framework, would be less efficient individually.

The geographical outline of these mechanisms could correspond, locally or regionally, to large urban agglomerations, catchment areas, or groundwaters.

Contractual commitments (such as: “Agglomeration Contract”, “Basin Contract”, “Groundwater Contract”) would ensure an orderly, gradual, and controlled synergy of actions of strategic plans.

A similar contractualization of commitments could be applied at Mediterranean level.

One of the challenges of the Union for the Mediterranean is to restore the quality of water in the Mediterranean polluted by urban waste, agriculture, and industry. It is the mission of the “Horizon 2020” Program.

Local authorities are full-fledged actors and responsible for the de-pollution of their wastewater. They are fully conscious of the problem and of available technical solutions, and in the face of the huge budgets required, they often have no other alternative but to invest gradually.

In order to efficiently reinforce de-pollution in the Mediterranean, action programs should be organized at supra-national level and on the basis of contractual commitments.



In this area, an option could be to implement and test a mechanism that would guarantee the successful financial and technical completion of the projects envisaged. Therefore, the proposal of local authorities would aim at organizing and implementing with a wide range of partners the “Quality Contract of the Mediterranean”.

The first stage of this initiative could be launched by a group of local and regional authorities that having faced obstacles to obtain the necessary funding would suggest to their national governments and to fund donors to enter into contractual agreements that could make them less reluctant to provide their support. Other entities concerned could (and probably should) adhere to this strategy.

In terms of the strategic guidelines already defined by governmental organizations the “Quality Contract of the Mediterranean” would involve (for all de-pollution projects) consolidating the commitment of local contracting authorities with local, national, and international banking institutions, as well as with other financing sources and stakeholders. It would imply specific quality commitments throughout all the stages of the projects from the preliminary studies to the operations of structures implemented or the evolution in prices.

Local and regional authorities, grouped in one single document, would undertake a contractual commitment between themselves and with banking institutions for a specific period of time (five years, for example) to lead their projects to a successful completion.

The size of the local authorities signing the “Quality Contract of the Mediterranean” is yet to be defined. An initial Contract could concern large cities. The Union for the Mediterranean could follow-up and evaluate the progress made by these long-term operational programs through a Specific Committee.

This type of contracts, led globally by local and regional authorities, could favorably meet the demands of international fund donors who seek clear, prospective, and true commitments from project leaders.



Water Demand Management

For almost twenty years, the reduction in water resources (of considerable proportions in the Mediterranean region due to aggravated pollution and coastal groundwater overdrafting) together with the quick rise in water needs have led officials in charge of water management to pay more attention to uses of water “supplied” to the different user groups and to take action in this area, in other words, to act on the “demand”.

Controlling and regulating demand and developing water-saving solutions in order to maximize social and economic advantages and benefits constitute the fundamental elements of demand management that has become a crucial component of all water management policies.

Already demand management principles have been adopted by all countries in the Mediterranean basin that have declared their joint commitment to put them into practice in both Turin and Saragossa declarations and within the framework of the Mediterranean Commission on Sustainable Development. This engagement has produced water laws. However, in several countries, particularly in the South, there are no concrete results so far.

Helping to accelerate the delayed implementation of measures consistent with demand management policies is one of the priority objectives that should mobilize Mediterranean partners at all levels.

In the realization of this objective, the role and responsibilities of local authorities are crucial because of the local nature of most demand management actions and the need to encourage the participation and project ownership by local authorities and users.

Depending on the size of the local government, the roles are somewhat different. Municipal authorities have the possibility to take action on domestic and industrial waters through their water and sanitation services, while territorial authorities covering larger or more diverse zones tend to focus their efforts toward the integrated management of regional resources.

Local and regional authorities are fully aware of the key role they must play in water demand control and regulation in their territory. They wish to commit to this role fully:

- by relaying national guidelines,
- as legitimate actors of local policies, particularly to secure ownership of the main principles of water demand management by local decision-makers and representatives of the different user groups.



But their action cannot be fully effective unless the roles of the different actors (central government, basin authorities, local and regional authorities, users and social and economic decision-makers) involved in the implementation of the policy are clearly defined and their actions coordinated.

To this effect, we suggest creating at local level a "Demand Management Committee" gathering political officials, local managers of water resources, users (individuals, businesses, irrigation users), and representatives of the central administration.

These committees would supervise how the measures and recommendations of the national strategy are put into practice and adapted at local level, their effective implementation (use of traditional or innovative techniques, use of the most recent data processing technology, awareness raising initiatives, etc.) and would periodically evaluate results. In order to perform this evaluation, it is necessary to have quantitative indicators on a few parameters. The indicators, prepared in such a way that they may be compared from one site to another, would be collected at Mediterranean scale. The analysis of their variations would then seek to improve conditions for all the sites.

The coordination of Demand Management Committees and Local Consultation Committees mentioned earlier (more specifically oriented to governance issues) would be determined on an individual basis.

An effective involvement of local authorities in such a demand management policy is only possible if some basic conditions are met:

- a legal framework granting the necessary powers for this policy;
- technical and human resources that will allow local authorities to efficiently manage the wide range of technical and relational aspects involved in the policy;
- economic means, and particularly the necessary autonomy to adapt prices to achieve lower consumption goals, taking into account local social constraints.

Several responsibility levels would be involved in the coordinated and global actions required to guarantee the most efficient demand management: national, local (local authorities) individual. Local authorities seem the most adequate to coordinate these different decision levels.

Local and regional authorities should promote the introduction of economic instruments to impose taxes on polluters but also to encourage treatment, recycling, and reutilization of domestic and industrial wastewater.



Adaptation to Climate Change

Climate contrasts in the Mediterranean generate specific problems in all areas related to urban management. The geographical characteristics of the Mediterranean basin make it particularly vulnerable to unpredictable climate changes, such as extreme phenomena, most often floods and droughts that seem to increase in frequency and strength. These phenomena have a strong impact on the population, the environment, and the economy of regions. In response, most of the time the populations affected take short to medium-term preventive and protection measures to lower their impact—only occasionally are these measures taken over the long-term.

Local authorities must tackle problems faced by their city and on a larger scale by their territory using urban management and land planning tools. Within this context, water related problems are most prominent.

Hypotheses on major climate changes have led to different studies and models, which tend to demonstrate that being a “Hot Point”, the Mediterranean Basin will be particularly affected.

Within this framework, each Country or Region concerned reacts according to its specificities, which may be climatic, economic, or human.

Local authorities tend to increasingly optimize their water resources. They use non-conventional water resources. They build flood protection structures, reshape their land planning schemes, and adapt agriculture and the economy to the new climate conditions they will probably face in the future. It is advisable to make sure that immediate decisions to adapt to these changes are part of a long-term perspective aimed at reducing the global vulnerability of territories.

In some countries local and regional authorities are responsible for spatial planning actions. Adequate spatial planning that takes into account flood risks is a good course of action to adapt to climate change.

There is increasing water scarcity in the Mediterranean region due to recurring periods of drought that may become even worse with climate change. It is precisely within this context that local and regional authorities must remain vigilant to ensure the diversity of water supply sources, integrating in a global management approach surface waters and groundwater, promoting recycling and reutilization of wastewater, and making sure the water supply is adapted to the necessary proportions. The creation of additional infrastructure for water supply (storage installations, [decanting] or utilization of alternative resources) may be a critical factor to improve water supply and they must be envisaged as supplementary options. Energy efficiency, the impact of greenhouse gasses associated to the costs for water treatment and conveyance, are essential elements that should be taken into account before making decisions on possible sources of supply.



Considering the environmental, economic, and social challenges, sustainable development policies aim at a two-fold objective: lowering the pressure on resources and developing life styles that may adapt to new conditions and particularly those resulting from climate change.

This transformation requires unprecedented efforts in research and development because we do not currently dispose of all the necessary knowledge and technologies.

Local authorities should catalyze their actions on knowledge and emergent technologies. Clearly, they are in the best position to:

- assess local needs in terms of new technologies and strategies,
- evaluate the proposals and the results of their execution,
- organize with other local authorities the necessary synergies.

Consequently, in the process of adapting to climate changes, the role of local authorities that are the closest to the field (realities and constraints) will increasingly consist in actions to guide, support, encourage and even to stimulate Research and Development in its fields of competence and particularly in the field of water.

The strategy could have several components: technical (eco-technologies, hydrogeology, alternatives resources, etc.) or sociological (ability to adapt, involvement of the population, etc.)

The framework for its implementation could be a Contract to Stimulate Research. The contract could be between two parties in a direct partnership between one local government and one research institution, or between several parties by networking several research institutions and several local governments, an arrangement that would certainly generate added value.

This mechanism could be favored in the process of setting up decentralized cooperation programs between local governments that could be encouraged to include a chapter on "Applied Research".

The best approach could be the promotion of a Water Network of Excellence that would benefit from the irreplaceable knowledge of local authorities on operational realities.

Our proposal is consistent with the objectives of the Water Strategy for the Mediterranean aimed at meeting the needs of the population and future challenges, objectives that seek to "develop and exploit for the benefit of all, scientific, technical, and technological tools in these fields".

It would also be advisable to consider making local and regional authorities eligible for direct access to some of the international funds allocated to adaptation to climate change, whether they concern investments, adapting to new technologies, research, or for actions oriented to populations that could be affected by these changes. Their position close to the field and the population will allow them to maximize the efficiency of these funds.