

**SIXTH FRAMEWORK PROGRAMME  
PRIORITY [Specific measures in support of international  
cooperation-Mediterranean Partner Countries (MPC)]**



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**COORDINATION ACTION**

***“Proposal Part B”***

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Project full title: **MEDITERRANEAN DIALOGUE ON INTEGRATED WATER MANAGEMENT**

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## Proposal summary page

Proposal full title: **M**editerranean Dia**L**ogue on Integrated Water Man**A**gement

Proposal acronym: **MELIA**

### Strategic objectives addressed:

MELIA is a Coordinated Action (CA) aimed at the establishment of a strategic dialogue between research centres, governments, regulators, users and providers, in the field of Integrated Water Resources Management, one of the leading topics identified by the Monitoring Committee of the Euro-Mediterranean Partnership in Science, Technology and Innovation, as a key field for the sustainable development of the Mediterranean countries. The participation in this CA of key stakeholders from EU countries and Mediterranean partner countries allows integrating this action in the general purpose of opening the European Research Area to the Mediterranean space and the application of the principles and actions of the European Water Framework Directive (WFD) to this area. The particular strategic objective of MELIA is to contribute to the improvement of the regional water planning management under scarcity condition to enhance sustainable development in the Mediterranean region, according with the Key activity B.1.1. of the INCO Work Programme 2004. In particular, the specific objective of MELIA is the fostering and handling of dialogue and communication among its 63 relevant partners, to build-up and share a common knowledge and awareness (at different level of players) that, by being disseminated to legislators, political decisors and water users and providers, would contribute to the sustainable management of limited water resources in the Mediterranean.

### Proposal abstract:

Despite the important number of research projects in the water management, monitoring of water resources and water related technology, performed at local, regional or Euro-Mediterranean scale, and the strong commitment of the EU in the support of the Integrated Water Resources Management in its development cooperation policy (COM(2002)132), there exist a general perception that water management models are still constructed from points of view that ignores contributions from all the key stake-holders, specially users and citizens, determinant for the impact on the territory of water schemes and the satisfaction of the water demand, specially from the sustainability point of view. Research in this topic is of common interest of the EU and its Mediterranean countries partners in view of the economic integration of both sides of the Mediterranean area. Another general perception in the Mediterranean area is the lack of visibility of the important role that Science and Technology play in the sustainable development of the region. Part of these problems is due to communication gaps between political and administrative institutions, scientists, cultural workers, lawyers, economist, end-users and citizens. The Coordinated Action MELIA aims at structuring an open dialogue between experts from both sides of the Mediterranean and among the key stakeholders concerned and affected by water use and management, such as scientists and professionals, decision makers, policy makers, water providers, citizens. This dialogue intend to create a Forum where water players can share knowledge, find consensus and propose new perspectives on the emerging needs and appropriate integration of knowledge for integrated water management, in a region of scarce resources such as all the Mediterranean basin countries.

The main targets of MELIA are:

- Building a knowledge base for integrated water resources management planning, based on integrating contributions from the wider spectra of perspectives, able to be used by the large spectrum of stakeholders.
- Develop a Mediterranean-wide awareness of the social (cultural and participatory), economic and technological issues related to water management.
- Propose participatory mechanisms and prevention tools to avoid conflicts between regions, states and different waters users.
- Provides legislative and administrative bodies with criteria and arguments agreed/consensued by a wide representation of social, economic, scientific and political actors from different countries, to support sustainable water policies and economy.
- Provide the intellectual basis and the indicators to perform a benchmarking exercise of Integrated Water resources management in the Mediterranean area

### Preamble

The issue of limited water resources is indicated by INCO as a priority key in the Mediterranean due to the character of limiting factor for sustainable development. The term “limited water resource” is today largely used when dealing with areas under water scarcity condition, but different meanings are attributed to the terms “limited” and “resource”. Therefore, before entering into the description of the project goals and activities, it seems necessary to clarify under what meaning the terms “limited” and “resource” are here addressed. The term “resource”, when attributed to water, is seen by many authors as that yield of water naturally available within the ecosystem. Other authors give to the term “resource”, when linked to water, a broader meaning, including also that portion of water yield accessible or provided through infrastructures or other means. MELIA addresses the term “resource” with a broader sense, including both natural occurrence of water yields and water accessibility. The term “limited”, when linked to water, is generally associated to the geo-hydro-meteorological context (low or absent rainfalls, erratic rainfall pattern, low yield water bodies, low rate of recharges, dry pattern geomorphology) that gives the perception of natural scarcity or absence of water directly linked with the physical condition of an area. In many Northern and Southern Mediterranean countries, the occurrence of natural water bodies and natural water yields are today very limited, although in some of these countries climatic conditions could be favourable. For example, the southern-most part of the Andalusia (Southern Spain), in spite of the fact that it is influenced by the very humid climate linked to the Atlantic circulation, is also characterised by very low annual mean rainfall. In this area, natural water provision constitutes a big problem. There are also areas with favourable or abundant occurrence of natural water resources (in aquifers or river networks), but if water infrastructures are not in place, or do not perform well or do not meet with the increasing demand, water become a limited resource. Also the contamination of water bodies constitutes a serious constraint to the availability of natural water yields. In practice, there are many factors (natural and non-natural) and variables influencing the interpretation of the term “limited” when referred water resources. Very often, limitation of water resources in the Mediterranean is due to the simultaneous occurrence of many factors. In this view, MELIA addresses the problem of integration linked to the management of water resources in the Mediterranean, considering that both physical and non-physical factors occur in determining the degree of limitation.

### **B.1 Scientific and technological objectives of the project. Quality of coordination and state of the art.**

#### Why MELIA ?

Despite the important number of research projects performed at local, regional and Euro-Mediterranean scale, there exist a general perception that water management models and schemes are still constructed from points of view that ignores contributions from all the key stake-holders, specially users and citizens, and local cultural and economic sensibility, which are determinant to generate the necessary efficiency of water planning and management, and the collective concern on its issues. Another general perception in the Mediterranean area is the lack of visibility of the important role that Science and Technology play in the sustainable development of the region. Part of these problems is due to communication gaps between political bodies, administrative institutions, scientists, sociologists, lawyers, economists, end-users and citizens. MELIA aims at structuring a dialogue among the key stakeholders concerned and affected by water use and management, such as scientists, professionals, decision makers, policy makers, water providers, and citizens. This dialogue aims at providing water players with new tools and perspectives on the emerging needs and appropriate integration of knowledge for water management, in a region of scarce resources such as the Mediterranean basin.

#### Scientific and technological objectives

The main objective of the Co-ordination Action (CA) “MELIA” is to contribute to the improvement of effective regional water management under scarcity condition to enhance sustainable development in the Mediterranean region. In particular, the specific objective of MELIA is the technical, socio-economic and political exploitation of the dialogue and communication among its 63 relevant partners and other experts, to build-up and share a common knowledge and awareness (at different level of players) that would contribute to the sustainable management of water in the Mediterranean region. MELIA aims at providing research review, knowledgebase, debate-dialogue, communication, dissemination, analysis, knowledge transfer and share, co-ordination among the various categories of players (Researchers –RES, Decision-Policy-Makers – DPM, End users /Providers– USER, Small-Medium Enterprises – SME, Non Governmental Organisations – NGO), public access to information, a shared/common conceptual

framework for recommendation to policy and decision makers on integrated water management in the Mediterranean.

MELIA will be dealt in a way that the new common knowledgebase, conceptual frames and recommendation will be built also through the co-ordination and harmonisation of inputs from other relevant project actions in which most of the partners are or were involved as co-ordinator or members.

Moreover, MELIA will constantly look after the need of a full integration of Mediterranean water actions and policies with the three main dimensions of sustainable development (natural, social and economic dimensions).

In this view, MELIA will:

- a. Establish a Euro-Mediterranean-wide structure to enable communication and dialogue between Researchers, Policy and Decision Makers (governmental institutions such Ministries), water users, basins managers, associations, non-profit organisations aiming at finding the common grounds based on a sound knowledge management for a sustainable development, and the correct and effective management of water resources, with the aim of setting a Reference System to support decisions making in normal regulation process and situations of water crisis. The dialogue will indirectly constitute a platform for enhancing the attribution of common meanings to technical and non-technical terms and the use of a common semantic (see also paragraph B.1.5. "Other issues"), and the acceptance of common standards to be used in technical cooperation or the application of common indicators
- b. Promote and facilitate continuous Internet, media and other means, based dialogue with citizens, through project partners acting as national focal points. This is foreseen to listen to the "voice" of the citizens, collect their thoughts, understand their different positions, define hierarchical list of public concerns and insert them in building knowledgebase.
- c. Link activities to the real needs and concerns of the Mediterranean countries.
- d. Disseminate and easy the access to the relevant common knowledge.
- e. Discuss and prepare a comprehensive conceptual framework to plan regional sustainable water management based on an efficient system and policy setting.
- f. Create a gateway for the introduction of the criteria and tools of the "Water Directive" in the Mediterranean countries

The main objective will be reached through the achievement of the following project specific milestones:

- Shared/common conceptual frame and knowledge on Water Culture
- Shared/common conceptual frame and knowledge for a correct assessment of Technological Perspectives in Water Management in the Mediterranean
- Shared/common conceptual frame and knowledge on Rational Use of Water Resources
- Shared/common conceptual frame and knowledge on Water Value
- Shared/common conceptual frame and knowledge on Water Policy
- Shared/common conceptual frame and knowledge on Prevention and Mitigation of Water Conflicts
- Shared/common frame and model/s of Water Participatory Management and Water Governance
- Build an accessible common integrated-comprehensive-dynamic knowledge on water management in the Mediterranean
- Granted mobilisation for the effective share and transfer of knowledge built during the project
- Recommendation on the application of the Water Framework Directive and exploratory benchmarking exercise
- Performance, social and sustainability indicators.

The above objective will be achieved through the implementation of the following principal activities:

- a. The realisation of a series of 7 workshops at six monthly intervals. These workshops address issues, methodologies and debate linked to different water issues, and are included in Work Packages 1, 2, 3, 4, 5, 6, 11:
  - i. Water Culture (WC) (WP1)
  - ii. Assessment of Technological Perspectives in Water Management in the Mediterranean (WTECH) (WP2)
  - iii. Rational use of water resources (RUW) (WP3)
  - iv. Water Value (WPRICE) (WP4)
  - v. Water policy (WLP) (WP5)
  - vi. Prevention and Mitigation of Water Conflicts (WCF) (WP6)
  - vii. Recommendation on the application of the Water Framework Directive and exploratory benchmarking exercise (BENCH) (WP11)
- b. The realisation of 10 working visits preparatory to the workshops
- c. The realisation of 8 seminars for knowledge share and transfer
- d. One International Conference

- e. The analysis of output from implemented dialogue with external players and “citizens” and the analysis of water scarcity and policy indicators
- f. The construction of an internet-based integrated-dynamic knowledgebase
- g. The design, realisation and maintenance of comprehensive internet-based Information and Knowledge Systems Management (ISM and KSM)
- h. The design, realisation and implementation of the MELIA Internet-based Forum
- i. Preparation of three Videos on Water Culture, Women and Water and Water Conflicts
- j. Preparation of brochures, leaflets, CD-ROMs, newsletters for dissemination and establishment of contacts in each of the participating countries and at international level with communication media
- k. Promoting internal and external networking to stimulate interest, awareness and communication.

A number of important aspects will be taken into account when carrying out MELIA, to ensure that:

- joint efforts of partners and Steering Committee (SC) will be made for establishing a permanent regional public dialogue with citizens and Institutions;
- existing relevant Networks, Forums, databases, projects are well connected or integrated into MELIA or will be invited to share expertise and knowledge;
- the integrated and enlarged participation of the South-Mediterranean countries through the most ample range of players is ensured;
- indicators, conceptual frames, indications and recommendation to policy and decision makers should arise only from the most ample dialogue, debate and consensus of all the categories of players;
- continuous interaction with the INCO-MED (Research Directorate General of the EC) and the Monitoring Committee of the Euro-Med RTD Cooperation, will be maintained during the CA lifetime.

#### Indicators

Specific objectives achievement is measurable through the following indicators:

- number of accesses and inputs (statements or questions) uploaded by external players and citizens in the web-site and FORUM for the all project duration
- number of participants to Workshops
- number of participants to International Conference
- number of “women” related issues tackled in the project, number of women participating to each project event and n° of specific recommendations produced
- number of Users and Decision-Policy Makers participating to the International Conference and Workshops
- number and quality of technical-scientific contribution and proceedings presented at the workshops assessed by external referees
- quality of conference and workshops proceedings as evaluated by the attendants
- number of mailed proceedings
- number of mailed brochures and leaflets
- customer questionnaire on satisfaction for seminars
- number and quality (international Editor) of short thematic monographs
- number of partners’ signatures in consensus reports
- number of relevant indicators agreed by all partners
- number of entries to Forum and Virtual Campus
- number of scientific publications in international and national magazines
- number and quality of dissemination products produced by Melia presented or reported by public media of different countries

#### State of the art

Water availability is a prerequisite for the sustainable development of the Mediterranean region. Major current and future problems with fresh water resources in this region arise from the pressure to meet the food, agricultural, human settlement and industrial needs of a fast-growing population <sup>(1)</sup>. Population in South Mediterranean is increasing, leading to growing demands for water resources, dramatic reduction of water yields, exacerbating conflicts, and to a more pollution which also reduces the availability of water to meet with human needs <sup>(2)</sup>. There is no doubt that for the Mediterranean regions under water scarcity conditions, the integrated approach to manage limited water resources has to be an essential requirement for the sustainable development. The scarcity of water and low reliability of supply services and infrastructures are important constraint for the socio-economic development of the South Mediterranean countries and of some parts of the Northern and Eastern Mediterranean countries. Water

scarcity is taking a terrible toll on people everywhere in the Mediterranean, especially in southern Mediterranean. In the world, at least 1.7 billion people do not have adequate drinking water supply and at least 3 billions lack access to proper sanitation <sup>(1)</sup>. The major challenge facing water planners and decision makers is that while the water yields of southern Mediterranean countries are constant or reducing, demand for water increases steadily for the different uses and for the different areas, this being also the cause of the continuous emerging of water conflicts between cities, regions, states and different types of users such as agriculture, urban areas, industry, tourism, and also environmental concerns <sup>(1)(3)(4)</sup>. In the Southern Mediterranean like in other parts of the world, problems are not only due to the low natural yields of water bodies but problems are also linked to the systemic dimension of the water services <sup>(5)(6)</sup>. In addition, the low quality of water bodies <sup>(5)</sup> and climate change <sup>(7)(5)</sup> constitute a serious constrain to the use of water resources and influences the management strategies. In view of what it has been described above, there are no doubts that there is an increasing need of trans-disciplinary approach and comprehensive knowledgebase to enhance “integrated” and sustainable water planning and management, which takes into account simultaneously all the constrains described above and insert them rationally in a sufficiently long-term physical-socio-economic scenario.

Management of limited water resources has taken many different forms and directions throughout the Mediterranean. Researchers and decision makers have long sought ways of capturing, storing, re-cycling and redirecting freshwater resources in efforts to reduce their vulnerability to irregular river flows and unpredictable rain patterns. Early agriculture based society lead to a certain concentration of efforts in “agricultural” water, while the growing urbanisation is requiring now advances in the science of civil engineering and hydrology as water supplies had often to be brought from long distances <sup>(8)</sup> or extracted from the sea by expensive desalination techniques. The emerging “modernisation” is routinely and dramatically modifying the hydrological cycle through the construction of massive engineering projects. However, as the new millennium dawns, the dynamic process of managing water resources and demand is changing. There are many components to this change: a shift away from sole reliance on finding new sources of supply to address perceived new demand; a growing awareness on the importance of preventing and mitigating water conflicts; a growing emphasis on incorporating ecological values into water policy; a re-emphasis on meeting basic human needs for water services; and a conscious breaking of the ties between economic growth and water use. A reliance on physical solution continues to dominate traditional water planning approaches, but this approach is facing increasing opposition. In the same time new methods are being developed to meet the demand of growing population in the Mediterranean without requiring major new construction or new large-scale water transfers <sup>(2)(8)</sup>. Focus is gradually shifting to explore efficiency improvement as a mean to save resources, implementing options for managing demand and reallocate water among user to reduce projected gaps and meet future needs. A meaningful change towards a new approach and a new way of thinking has to begin with an open discussion of the ultimate ends of water policy. It is time now to place a high value on maintaining the integrity of the ecosystem when using water resources. There are growing calls for the costs and benefits of water developments to be distributed in a more equitable manner. And more and more efforts must be made to understand and meet the diverse interests and needs of all relevant stakeholders <sup>(9)(10)</sup>. As an alternative to new infrastructures, efforts are now underway to rethink water planning and management, putting emphasis on the principles of integration between water policy and the three main dimension of sustainable development: environmental, cultural (and social), economic <sup>(10)(11)(12)</sup>. However, also the new alternative approaches fail if they are not consolidated through the exercise of participatory management, communication among interested stakeholders, water players and citizens, application of subsidiarity, building of a common knowledge, increasing mutual awareness of interested parties<sup>1</sup>.

Unfortunately, beside the impact on the ecosystem<sup>2</sup> due to the natural water withdrawal, the situation shows today that water production systems (urban, agricultural, industrial) perform poorly in the Southern and many parts of the Northern and Eastern Mediterranean. In many places, lack of policies or low awareness and inadequate management has lead to dramatic misuse and misallocation of water in the different uses. There is a need to deal with the local and regional management of water resources within a comprehensive framework, in which policies can be formulated, project can be prepared and integration can be envisaged applying as much as possible the “subsidiarity principle” and its application at the rivers basin level. Without sufficient water supply, any intensification of urban, agricultural and industrial inputs and outputs remains a risk to be avoided, especially by low-income water users (like for example farmers or small communities). To secure water is also a precondition for the application of modern low-water

<sup>1</sup> *Water planning produces effects if consensus is based on the adequate participatory approach and communication, from local scale (among different type of users, among decision-policy makers and users) to regional scale (between decision makers, users and relevant representatives of different countries). The expression and the respect of the mutual interests among parties is the dynamics to reach consensus and implement water management.*

<sup>2</sup> *Including impact on quality of water, soil and biological life.*

consumption technologies. Management needs to be improved, both at users and system level. In practice, these improvements will continue to prove hard to realise, and they will require more time to debate and consensus reaching than improvements in the physical infrastructure and techniques<sup>(13)</sup>.

The literature is rich with regard to small- to medium scale technological trials / projects (end-user scale) and assessment of water management options: - ) water use efficiency through agronomy, physiology, plant breeding and soil management; -) water distribution system performance through engineering, modelling and system management; -) use of unconventional waters through experimentation of recycled water, saline water, groundwater, drainage and runoff water; -) social-cultural models and participatory approach, technical aspects and socio-economic analysis. All the above options have been extensively addressed in dedicated literature, never or rarely assessed together by using a matrix of integration. Notably, water use efficiency and its application for crop use are well illustrated<sup>(14) (15) (16)</sup>. Research and studies on water conservation or distribution system optimisation for different uses have been also extensively carried out, as well unconventional water use is analysed for different types like saline<sup>(17) (18)</sup> or waste waters<sup>(17) (19)</sup>. Participatory approach is also extensively addressed<sup>(20) (21) (22) (23)</sup>. However, regardless the type of water resources developments pathways, the most recent literature and field experience have revealed the need for integrated efforts in water management supported by national institutions and both regional and international organisations, focusing on the following points: -) establishment and application of water management policies coherent with the emerging need of ensuring sustainable development; -) developing coherent national-regional policies that include strategies of developing limited water resources; -) improving the efficiency of public administration at the local and central level; -) appraising water actions from the point of view of culture, economics, environment (including health); -) overseeing the promotion and enforcement of national legislation and guidelines for best practices; -) setting new and more coherent water pricing and water governance; -) creating a knowledgebase to settle water conflicts among users and at trans-boundary scale..

The literature lacks an adequate overview of water management experiences throughout the Mediterranean and lacks the tentative assessment / modelling of results which could be achieved by comparing, integrating and up-scaling of local (small scale) experiences, accounting also the active public participation and community involvement. Significant challenges still remain in the areas of technological, managerial and policy innovation and adaptation, human resources development, gender roles in water issues, building and share common knowledge, gathering a new frame and consensus on the use of indicators<sup>(24)</sup>, development of common perspectives for benchmarking. Constraints are of two kinds: -) local level projects are scattered and fragmented throughout the countries, often different standards are used and results are difficult to be compared and integrated<sup>(13)</sup>; -) in the same time water management practices are difficult to standardise throughout the Mediterranean, since they vary from country to country and from basin to basin<sup>(25)</sup>. In addition, management is still lacking the full participatory approach and active involvement of citizens. These constraints make difficult the application of the EU Water Framework Directive (WFD).

The WFD considers water quality management at an international scale, i.e. covering river basins (including groundwater) of 15 EU countries and 13 Candidate countries. This legislative text may be considered as a model and a reference for water management issues. Its implementation through the management of river basin districts makes it a powerful tool to detect pollution trends and decide upon possible remediation or prevention actions. The recent approval of the global EU Water Initiative at the Johannesburg summit, directly linked to the experience gained with the WFD, gives a signal that such an approach could be exported outside Europe and that water quality management could be, on the long term, envisaged at the global scale, following the model set out by the WFD. This issue is, therefore, of worldwide concern and has a clear strategic importance with regard to sustainable development, since the monitoring of environmental changes at the planet level should be viewed at the global scale. In this context, exchanging and transferring knowledge on low cost measurement technologies (screening methods) would be of particularly high value for laboratories from Third countries, specially the Mediterranean countries with an enormous commercial flow to and from the EU.

In addition, the existing literature<sup>(13) (14) (26)</sup> and statements of International Organisations<sup>(27) (28)</sup> has also proved that CWRM (Comprehensive Water Resources Management) is needed, based on decentralised management of water resources with the active participation of all water users. The analytical framework requires the examination of water resources by considering potential uses and possible effects, especially environmental ones. The participation of key stakeholders and appropriate incentive or income generating water management practices are necessary to ensure sustainable water management.

The European Commission, particularly the Research Directorate General – International Cooperation (INCO), has funded some shared cost actions in water management and there is a significant number of



physical and socio-economic data and information on water resources in the Mediterranean. Research has produced results and sometimes drafts guidelines, mainly with a group of researchers, but it still needs proper national and trans-boundary spreading and consensus among relevant decision makers and users before it can be effective. The INCO has always recognised the importance and urgency of promoting – in the Mediterranean – ample and deep vertical-horizontal communication and dialogue on water.

To overcome communication constrain and facilitate regional coordination, several Thematic Networks (TN) have been funded by INCO in the Mediterranean or the Energy, Environment and Sustainable Development (EESD) programme. Worth of mention are the recently funded Thematic Network WASAMED, FOGGARA, WADAMED, MED-REUNET, SED-Net and DESURVEY respectively dealing with -) Water Saving in Mediterranean Agriculture, -) Valorisation of traditional water techniques of European and Saharan drainage tunnels, -) Agricultural water management in the Maghreb region; -) Waste water reclamation and reuse in the Mediterranean, -) Abatement of water pollution from contaminated land, landfills and sediments –) Assessing and Monitoring of Desertification. The above thematic networks are relevant since they address communication and knowledge in specific aspects of water management like water saving in agriculture, water culture or unconventional waters. In the same time they do not directly extend the communication in the other aspects of water management like urban and industrial use or water conflict. And they do not extend the participation to water users and decision makers in urban and industrial sector. However, the knowledge built in these network need to be capitalised within a more ample project like MELIA. Other TNs funded by INCO are worth of mention like “Geo-information for Sustainable Management of Land and Water Resources in the Mediterranean Region” started in 2001 but restricted to geo-information system for water and land. It can provide information to MELIA and links to external partners. Link with the EC funded research project CORETECH and (addressing unconventional water reuse in Mediterranean) will be made, as well with the TN on “Sustainable policies for promotion of water conservation technologies and practices” (INCO-DEV Asia) for comparison and sharing of experience with partners of other parts of the world. Worth of mention are also the networks EMWIS (Euro-Mediterranean Information System on the know-how in the Water sector) and SEMIDE, both providing information exchange among Euro-Mediterranean countries on water resources, and the ERA-Net SSA IWRM.Net aimed at creating a Coordinated Action of the several European national and regional research programs dealing with Integrated Water Management. In general, many EU funded research projects have made good achievements in collecting information and designing water management models. On the contrary, their impact on the territory has been limited due to: i-) the communication gaps still existing among top-level institutions / scientists and local communities (and water users) within the country; ii-) the lack of networking among different Mediterranean countries to enhance regional water management in the Mediterranean; iii-) lack of intra-water thematic integration; iv) lack of integration between water sector policy and driven criteria for sustainability: environment, socio-cultural, economic. Existing national governmental structures as well as international institutions involved in the region have a great role to play in the promotion of integrated water management for sustainable development. Nevertheless, their involvement is often fragmented and lacks of participatory approach<sup>(29)</sup> with the joint involvement of scientists, decision makers, local communities. Also bottom-up stimulation approach is still lacking.

#### *Innovation of MELIA and enhanced co-ordination*

As described above, in spite of several research activities and models of water management have been carried out locally in Mediterranean countries, little has been done to develop national and regional open water dialogues with the perspective of a durable co-operation and harmonisation in the Mediterranean. This is basically due to the fact that poorly established regional networking and co-ordination is in place in the Mediterranean, which would produce the necessary impulse to establish communication among countries, share experience and define objectives and tasks of a regional framework of cooperation and dialogue. Thus, in spite a considerable amount of information is available, a major need for increased efforts to dialogue, communication, share experiences, raise public awareness of actual and future problems and harmonise actions among Mediterranean countries still remains strong.

MELIA enhances a strong and comprehensive dialogue on the management of limited water resources, which has never been addressed in this way in the past, and based on: -) the use of strong Information technologies tools able to handle fora, information exchanges, libraries and other knowledge management instruments; -) the most ample participation of researchers, users and policy-decision makers, and – through them – co-ordination with other project actions; -) dialogue with citizens, stimulated and facilitated by the different project partners; -) creation of a strong and common “integrated” knowledgebase, incorporating also citizens' different views; - ) integration of the various aspects of water management and coordination with similar initiatives carried out at the EU scale; -) formulation of and

agreement on the knowledgebase that must be built-up and shared to enhance sustainable water management and new approach to the use of indicators for the adaptation of water policies. Moreover, other relevant not-solved problems concern: -) the understanding of the water yield dynamics in function of water saving and the extrapolation of saved water yields at large scale through user-catchment-basin up-scaling: -) the temporal scale of processes involving water fluxes. In fact, the temporal scale of processes is much longer than the time span disposed by single programme or projects aiming at reducing the impact on freshwater or improving yields. It is of utmost importance to increase concern and awareness on reversibility – irreversibility ratio of physical processes affecting water yields taking into account the cultural frame where the awareness is raised. Therefore, MELIA will establish an integrated and huge co-operation to address regional integration and planning within the proper temporal-spatial boundary conditions. The project does not intend to be only a 4-year exercise lasting till EU funds are available. In fact, a relevant number of project partner is already networking since 1995, thank to the willingness and self-founding. The network will exist also after the EU funding with the impulse given by the relevant Ministries involved as partners of MELIA. Of course, the CA will also support qualified co-ordination, dialogue, dissemination and share of experience. In addition, one further innovative aspect is surely represented by the unique and exceptional large partnership of MELIA, covering the Mediterranean basin, boosting the effective participatory approach of the different categories of players. Many difficulties and constraints have been encountered in the past by the various organisations (including the EC) in putting together such an important and Mediterranean-wide network to reach the necessary critical mass to enhance impact on the territory at national and regional level.

For cultural and historical reasons, institutional partners from different South Mediterranean countries face quite often the reality of possible trans-boundary water conflicts and are reluctant to dialogue. In conclusion, the establishment of MELIA, with the participation of the various categories of players from the Mediterranean countries (for a total of 63 partners) is an important milestone and essential to help the EC for affirm proper Euro-Mediterranean co-operation.

## References

- (1) Hamdy A, Lacirignola C. – 1999 – Mediterranean water resources: major challenges towards the 21st century – CIHEAM/IAMB, March 1999.
- (2) Gleick H. P. – 1993 – Water crises: a guide to the world's fresh water resources. Ed. Gleick H. P. Oxford University Press (Oxford, New York)
- (3) Mostert E. – 1998 – A framework for conflict resolution. *Water International*, Volume 23, Number 4, Pages 206-215, December 1998.
- (4) Kliot N., Shmueli D. – 1998 – Real and institutional frameworks for managing the common Arab-Israeli Water Resources. *Water International*, Volume 23, Number 4, Pages 216-226, December 1998
- (5) World Commission on Water – 2000 – A report of the World Commission on Water for the 21<sup>st</sup> century. *Water International*, Volume 25, Number 2, Pages 284-302, June 2000.
- (6) Abu-Sharar T.M., Battikhi A.M. – 2002 – Water resources management under competitive sectoral demand: a case study from Jordan. *Water International*, Volume 27, Number 3, Pages 364-378, September 2002.
- (7) Muttiah R. S., Wurbs R. A. – 2002 – Modelling the impacts of climate change on water supply reliabilities. *Water International*, Volume 27, Number 3, Pages 407-419, September 2002.
- (8) Gleick H.P – 2000 – The changing water paradigm: a look at twenty-first century water resources development. *Water International*, Volume 25, Number 1, Pages 127-138, March 2000.
- (9) Gleick H.P – 1996 – Basin water requirements for human activities: meeting basic needs. *Water International*. Volume 21, Pages 83-82.
- (10) Clayton A., Radcliffe N. – 1996 – Sustainability : a systems approach. *Earthscan*, London
- (11) Turner R.K. – 1991 – Environment, economics and ethics in Pearce, D (ed). *Blueprint 2. Greening the World Economy*, pp 209-224, Earthscan, London.
- (12) Hardi P, Zdan T. – 1997 – Assessing sustainable development: principles in practice. *International Institute for Sustainable Development*, Winnipeg.
- (13) Hamdy A., Lacirignola C., Trisorio-Liuzzi G. – 2001 – Water saving and Increasing Water Productivity: Challenges and Options. In *Proceeding of Advanced short course on "Water Saving and Increasing Water Productivity. Advanced short course"* – EC –CIHEAM-NWRC-NCRTT-UoJ-ICARDA – Amman, Jordan, pp. 1.1 – 1.51.
- (14) Hoffman G.J., Howell T.A. and Solomon K.H. – 1990 – Management of Farm Irrigation Systems – Eds. G.J. Hoffman, Howell T.A. and Solomon K.H. ASAE publisher.
- (15) Lieth Helmut and Lohmann M. – 2000 – Cashcrop Halophytes for future halophyte growers – *UNESCO MAB program and EU Concerted Action project IC18CT96-0055*. ISSN 09336-3114 N° 20.
- (16) Tanij K.K. – 1990 - Agricultural salinity assessment and management – 1990 – Ed. K.K. Tanji - ASAE publisher.

- <sup>(17)</sup> Non-conventional water resources practices and management – 1999 - In: *Special session of the Non-conventional water resources subnetworks of CIHEAM* – Rabat, 1999 – EU DGDevelopment and CIHEAM publisher.
- <sup>(18)</sup> A. Hamdy Farag – 1993 – Saline irrigation practices and management – In.: Towards the rational use of high salinity tolerant plants. *Eds. H. Lieth and A. Al Masoom, Kluwer Academic Publisher*. Vol. 2: 353-370.
- <sup>(19)</sup> Hamdy A. – 1999 - Use of low quality water for irrigation: major challenges. Halophyte uses in different climates, Backhuys Publisher, Leiden, The Netherlands. Vol. II, pp. 1-18.
- <sup>(20)</sup> Biggs S.D. – 1995 – Contentions coalitions in participatory technology development: challenger to the new orthodoxy. The Limit of participation. *Intermediate Technology*, London
- <sup>(21)</sup> Ison R. 1993 – Participative ecodesign: a new paradigm for professional practice. *Proceedings: Epidemiology Chapter, Australian Veterinary Association Annual Conference*, Gold Coast, Australian College of Veterinary Scientists, Cobar, Australia, pp. 41-50.
- <sup>(22)</sup> Groenfeld D. & Svendsen M. – 2000 - Case studies in Participatory Irrigation Management. *World Bank Institute*, Washington, D.C.
- <sup>(23)</sup> El-Kady M., Hamdy A. – 2002 – Gender and Water Resources Management in the Mediterranean. *Proceedings: Workshop on Gender and Water Resources Management in the Mediterranean* (First Regional Conference on Perspectives of Arab Water Cooperation). EC-CIHEAM, Cairo, October 12-14, 2002.
- <sup>(24)</sup> Bell S., Morse S. – 1999 – Sustainability Indicators. *Earthscan*, London.
- <sup>(25)</sup> Horst L.C. – 1983 – Irrigation system – Alternative design concepts. *Irrigation Management Network Paper 7c April*. Overseas Development Institute.
- <sup>(26)</sup> IWMI – 2000 – Water supply and water demand in 2025 – *International Water Management Institute*, Colombo, Sri Lanka.
- <sup>(27)</sup> FAO – 1989 – The state of food and agriculture 1989: world and regional reviews; sustainable development and natural resources management. FAO, UN Rome, 191 pp.
- <sup>(28)</sup> IHE-UNDP – 1991 – A strategy for water sector capacity building. *Proceedings of the UNDP symposium, Delft, The Netherlands, 3-4 June 1991. IHE Report series n. 24*.
- <sup>(29)</sup> Oblitas K. & Raymond Peter J. – 1999 - *Transferring Irrigation Management to Farmers in Andhra Pradesh*. *World Bank Technical Paper N°. 449*.

## B.2 Relevance to the objectives of the INCO specific measures

Before entering into the discussion related to the INCO specific measure, it is worth to address the global strategies and dimension the European Union has developed in relation to the South Mediterranean, accounting that INCO-Med objectives have been defined accordingly. The Communication of the Commission to the Council and the European Parliament "Water management in developing countries policy and priorities for EU development cooperation" (COM(2002)132 final), clearly identified Integrated Water Resources Management as a critical area of the development policy, intending to reconcile competing needs and uses. It is also stated in the Communication that "there is a shift from individual technical project toward holistic programme approach, addressing such as capacity building, local-level management, full stakeholder participation including particularly the women, hygiene education, awareness-raising, establishment of public-private partnerships- all of which include a built-in concern for long-term sustainability of both resources and services". Issues such as the water price are strongly affected by cultural backgrounds, and the technical approaches to this problem should be analyzed under the light of such backgrounds. MELIA, as a Coordinated Action, tries to use the running and previous experience of research projects (regional, national or international), and particular initiatives and experiences of the administrations of basins across the Mediterranean area, to analyze them and identify, if possible, good practices that could be of general interest.

### EU and Mediterranean dimension

The EU has made the Mediterranean a key priority<sup>3</sup> because in the long run, peaceful and prosperous Europe is impossible without a strong and stable Mediterranean. The 9<sup>th</sup> Monitoring Committee (MoCo) of the Euro Mediterranean Partnership in Science, Technology and Innovation, formed by High representatives of the EU members States and the Mediterranean Partners included in the Barcelona Process, declares its will to facilitate the concertation of policies at bilateral and multilateral levels, fostering the systematic exchange of information, experiences, mutual learning and development of synergies, supporting the EU commitment to create a shared area of social and economic welfare in the Mediterranean region<sup>1</sup>. Environment - including the good management and the protection of natural resources (water, soil ...etc), in the arid or semi-arid areas of the Southern and Eastern Mediterranean - is among the six priorities to support Euro-Mediterranean co-operation<sup>1,4</sup> and it considers the sustainability of water resources an absolute priority<sup>5,6</sup>. The MoCo also considers Water as one of the crucial fields for the sustainable development of the Mediterranean area. The various involvement of EU actors in the Mediterranean region tend to increase and consolidated cultural and economic exchange with the countries of this region. Also, the view of a more consistent co-operation of the EU and the Southern and Eastern Mediterranean countries, together with the implementation of the Water Framework Directive, creates new demand and new opportunities for the EU water related research and technological development. Conscious of the importance of water issues in achieving the objectives set in the Conference of Barcelona, the EU wants to give impulse to the Euro-Mediterranean partnership also in the field of water management.

On the other hand, the EU believes that water scarcity could become an important threaten for the stability and peace in the Mediterranean, since potential for national and trans-boundary water conflicts is increasing in the region. In the same time, water scarcity inducing abandon of land or reduction of productivity is in itself a problem that could affect the socio-economic stability of the countries affected, provoking undesirable migrations, and threatening the sustainable development in the Euro-Mediterranean region.

The increasing pressure on water resources, arising mainly from agriculture, and secondary from growing urban areas and emerging tourism and industry has turned into a major stress factor for freshwaters, particularly in the Southern and Eastern Mediterranean region for the unbalance between water withdrawal and water availability. Additional pressures arise from natural variability in water yields due to climate change. Water demand could undergo major changes also as consequence of the establishment of the Euro-Mediterranean free trade area (target 2010) especially if the latter is meant to cover agricultural products. It is expected that after 2015/2020, available water supplies will increasingly fall below demand. It is therefore necessary to find ways of increasing supply while limiting demand so that water does not become a source of internal or external violence in the countries to the south and east of the EU.

<sup>3</sup> *The Barcelona Process, five years 1995-2000*

<sup>4</sup> *The network EMWIS is an information and knowledge tool for the Euro-Mediterranean partnership to implement the Actions Plans defined in the EU-Med Conference on Local Water Management of Turin in 1999. Links between MELIA and these networks are envisaged.*

<sup>5</sup> *Euro-Mediterranean Conference on Water Management held in Marseilles, 25-26 Nov. 1996*

<sup>6</sup> *Euro-Mediterranean Ministerial Conference on Local Water Management of Turin, 18-19 Oct. 1999*

The efficient use of water in the Mediterranean is thus an important issue for Europe and a number of policies and mechanisms are being used and formulated to ensure sustainable use of water in the long term. Moreover, if in the past the efforts were concentrated on the supply-side, now they are aimed also to influence water uses and demand. Irrigated agriculture consumption represents in Southern and Eastern Mediterranean countries about 80% of total withdrawal from freshwaters. In order to settle a sustainable water management these countries now faces three priorities: to raise awareness on the problems and integrate public opinion as an actor, increase water productivity/efficiency/system performance – ‘more crop for drop’ -, and save water for other uses. Water saving at basin, irrigation system, on-farm levels and even at domestic level is important to develop sustainable water management and foster development in the Mediterranean region. EU’ policies on water also focus on a more rational use of water, its protection and its conservation respecting the natural equilibrium and the rights of future generations<sup>7,8,9,10,11</sup>

Technical solutions to water management and water sharing problems require at the minimum, an underlying level of political support by the parties concerned, both inside and between states. Without this overall political acceptance, technical cooperation, essential to find political agreement, cannot operate. Political acceptance of technical exploration of water problems, both inside and between states, is the preliminary requirement for effective technical planning and management. The political debate can only operate using a conceptual and technical framework shared and, if possible, common to and understood by all. Political water co-operation with neighboring countries can only rest on a common technical appreciation of the situation.

MELIA aims to increase knowledge-base, dissemination, communication and awareness in sustainable water management through a consensual debate among stakeholders, because, while recognising the importance of particular questions that can emerge from specific national, regional and local situations and conditions, there is a general agreements on the need to establishing a common approach to face more successfully and effectively the challenges of water management in a holistic way, based on a robust and ‘general’ logical framework that enables the identification and assessment of alternative water strategies under the wide range of technical and socio-economic conditions prevailing in the region and in the context of different long term socio-economic and climatic scenarios. By this way, MELIA will contribute to these specific EU’ policies and can contribute to build ability to develop realistic scenarios and shared visions of future in the Mediterranean area. On the other hand, the holistic approach used by MELIA can be used as an experimental bench to support the setting and validation of a consistent and permanent RTD system in the Mediterranean partners countries by analysing the performance of the integrated approach described in the Work Packages to a common regional problem. MELIA will also give an important contribution to the setting of EU and regional policies<sup>12</sup> and initiatives more appropriate to the different situations and contexts while the dissemination of information to all categories of local actors could help the effectiveness of the regulation in force. By enhancing a real interaction between researchers of different backgrounds, regulators, administrators and water operators of different Mediterranean countries, MELIA will contribute to reduce regional disparities in technological and managerial knowledge in water related fields and will support new research initiatives at national and international level. MELIA provides also knowledge, technologies assessment and guidelines to implement successful regional water planning and matching increasing demands.

#### INCO dimension and its specific objective

Under the thematic issue “B.1” Environment of the call for proposal, INCO calls for Co-ordination Action and Specific Targeted Research Projects in sub-issue B.1.1. “Comprehensive water policy and integrated planning”. More specifically, the INCO-MED programme addresses elements like improved water planning and management for enhancing water supplies, with sensitivity to local physical, economic and cultural conditions, the research on transboundary water quantity and quality, the conflict resolution and the promotion of co-operative policy initiatives and, finally, a comprehensive planning of the allocation of water to different users, and the social acceptability of the decisions. These elements are integrated within the concept of integration water management. Water management includes an ample frame of concepts-approaches (see par. B.1.1 of this proposal) and it concerns all the Mediterranean populations

<sup>7</sup> *Water Framework Directive OJ L 327, 22.12.2000*

<sup>8</sup> *Protection of Groundwater, EC Directive 80/68*

<sup>9</sup> EC, JRS, DGXII, Freshwater. A Challenge for Research and Innovation, 1998. EUR 18098 EN

<sup>10</sup> Pricing policies for enhancing the sustainability of water resources, COM (2000) 417 final

<sup>11</sup> *EU Preparatory act 15.10.30,10-Management and efficiency use of space, environment and natural resources.*

<sup>12</sup> *Resolution of the Council and the Representatives of the Governments of the Member States, meeting within the Council of 1 Feb. 1993 on a Community programme of policy and action in relation to the environment and sustainable development-A European Community Programme of policy and action in relation to the environment and sustainable development. Official Journal n° C 138, 17/05/1993, pp. 0001-0004*

and the different type of uses: urban, agriculture, industry / commercial. The direct results of a modern integrated water management are expressed by the improvement in both environment and socio-economics, which are basic factors ensuring sustainable development. In fact, the results of an adequate integrated and sustainable water management would be expressed by: -) the improving of water consumption by users, resulting from a higher awareness of the problems linked to the availability of an scarce and valuable resource (addresses in par. B.1.2), -) the release of pressure on the environment, particularly on freshwaters (surface water and groundwater) by an appropriate strategy of water treatment and re-use (addressed in par. B.1.3); -) an increased water budget available and re-allocated to support socio-economic development, among which the most essential are sanitary conditions and productivity; -) a reduction of the increasing competition and conflict from local to regional scale (including trans-boundary basins) (also addressed by par. B.1.1.).

The INCO thematic issue “Comprehensive water policy and integrated planning” really address a key issue in the Mediterranean Area. It is envisaged that by year 2025 some 1.3 billion people in the world, many of them in South Mediterranean, will live in areas with chronic water scarcity. This means that even if they develop freshwater resources they will not have enough water to maintain even the 1990 per capita levels of use for agriculture, domestic, industrial and environmental purposes.

The immediate answer to the raised questions is linked to the agricultural sector which is the cause of the main freshwater withdrawals (and partly to the projected trends of industrial, tourist and urban water uses) and depends on the capability of the Mediterranean countries to improve water use: to increase global awareness of water saving, reduce water losses, improve system performance, improve water saving related technologies, to increase water use efficiency and crop productivity, recycling waste water as additional water sources, and enhance the sustainable use of water resources. Taking also into account the cultural and socio-economics frames of the different societies, because, as highlighted in the recent literature, absence or inadequate rational use of water is often related to lack of awareness, lack of knowledge, low communication among key players, inadequate modalities of participatory management (bottom-up decision making), poor water planning, and lack of regional relevance. With regard to regional relevance, various types of projects in water saving in agriculture are carried out at local scale, scattered in the various countries of the Mediterranean but poorly linked with each other. Their results should be better linked and shared among the different Mediterranean key players to enhance co-ordination for regional water saving. This could also help to manage possible trans-boundary water conflicts in the future. The proposed Co-ordination Action MELIA is in line with the thematic issue of INCO-Mediterranean Partner Countries, addressing integrated water management, focusing on the relevant aspects and opportunities (see Par. B.1.1). Integration of the several aspects of water management with the dimensions of sustainable development (environment, social, economic) is the most effective way to contribute to address properly the integrated water management, and this is the essential feature considered by the proposed action. MELIA tries to attain these ambitious objectives by the establishment of a space of dialog between actors dealing with the different issues linked to Water Management in the Mediterranean countries, with the objective of providing consensual conceptual frame, opinions, assessment of options and actions to the development of an integrated and sustainable Water Policy and Management, in accordance with the EU Mediterranean policies, the Water Initiative and the implementation of the European Water Framework Directive, as tools to support the cultural, commercial, industrial and human exchanges between the EU and the Mediterranean countries, which in many occasions are limited by an inappropriate water quality in practices related to human consumption, agriculture or industry.

MELIA proposes a set of actions to integrate past experiences of scientific co-operation either at the European scale or at the EU-Med scale in water related issues, with the particular social, legal, cultural and economic frames of the Mediterranean countries and the European “acquis”, in order to provide a minimum consensual shared and – if possible – common frame of reference to tackle political and managerial issues. By so doing, the CA intends to provide reference methodologies to support the creation of the Euro-Mediterranean Research Area in the field of water and to share expertise between the EU and the Mediterranean countries in the domains of integrated water management in the scenario of increasing demand by different sectors such as agriculture, industry, tourist development, urban growth, etc., competing for a scarce resource.

MELIA integrates participants from different countries, professional horizons, such as scientists, lawyers, historians, policy makers, engineers, economist, sociologist, etc, water providers and water users, as well as policy makers and administrators, with the aims to search and define common grounds and frames of interests necessary to develop a true sustainable scientific, social and economic approach of the water management in all Mediterranean countries. The assessment of technological solutions analysis and recommendations associated to the several problems of water management, such as capture, transport, waste water treatment and reuse, desalination, plant breeding for efficient water and nutrient use, etc., must be made with consideration to the specific legal, cultural and socio-economic frame of each country

or regional area; hence, the importance of the trans-sector dialog proposed by MELIA. Water is not only a source of conflicts between users from different social and economical sectors but also, and more important, from neighbours sovereign states. After political recognition of the need to reconcile internal or external tensions and constraints, work would be better carried out first at a technical level rather than at a political level. Political agreement will of course be eventually necessary, for the best possible compromise solutions to problems of water sharing either inside or between countries. Countries need to learn to prioritize technically their water supply and demand in order to maintain political stability in the area. There is an urgent need to offers instruments to tackle these problems by considering the different interests and by favouring the dialogue between the parties, first based on the share of a common knowledgebase, and second on the agreement to use scientific based technical references to provide ways of solution to conflict of interest, and avoid the use of force as the unique argument in the water related confrontations, in accordance with the objectives of the Barcelona Declaration of 1995 on the Euro-Mediterranean dialog.

### B.3 Potential impact

The Barcelona Declaration establishing the premises of the Euro-Mediterranean Partnerships declares:

*“The participants recognise that the traditions of culture, civilisation throughout the Mediterranean region, dialogue between these cultures and exchanges of human, scientific and technological level are an essential factor in bringing their peoples closer, promoting understanding between them and improving their perception of each other (...)”*

In this view, co-operation should focus on:

- Promoting research and development and tackling the problem of widening gap in scientific-technological achievement, taking into account of the principle of mutual advantage.
- Stepping up exchanges of experience in the relevant scientific sectors and policies which might best enable the Mediterranean partners to reduce the gap between them and their European neighbours and to promote the transfer of technology”

On the other hand, the above mentioned Communication on “Water management in Developing Countries Policy and Priorities for EU Development Co-operation” (COM(2002)132 final), when addressing the objectives of putting the Integrated Water Resources Management into practice, identifies the following issues:

- Awareness and participation
- Institutional strengthening and management
- Management by demand
- Expanding the knowledge base
- Coordination
- Water related actions for its different uses: water supply and sanitation, water for food, protecting and restoring water resources and ecosystems, sustainable water use for energy and industry, management of water-related hazards and of coastal areas.
- Key global challenges: transboundary water management and conflict prevention, implications of climate change on access to water for the poor, impacts of trade on water management

These ambitious objectives cannot be achieved without the mutual understanding of the cultural and socio-economic background, as well as the political and societal interests of the Mediterranean partners. Co-operation without mutual interest sometimes lacks the necessary public support of the citizens and their representatives. Even though the mutual interest is evident, lack of consideration to the conceptual frames of each partner around an issue can lead to the failure of the co-operation. The support to the European co-operation policies on water issues in the Mediterranean area is better achieved by listening to the groups that have tackled the water issues in forums, through the participation of regulators, end users, scientists, professionals, social and cultural operators. The problem is not the lack of information but the lack of a common knowledge. And in particular the lack of an equally distributed knowledge among the stakeholders and water players when negotiating their interests.. Moreover, there is also a lack of bottom-up participation in negotiating and promoting water management options.

MELIA will provide a public platform to disseminate common integrated-dynamic knowledgebase, identification of challenges, organise debates and seek consensus among stakeholders involved in water demands, legislators, administrators, water providers and even media and public. One important task of this consensus process is the creation of tools in view of the implementation of the Water Directive.

MELIA aims at opening a dialog between stakeholder interested in the water management of the Mediterranean area, in order to explore the possibility to define a common frame of reference and actions to support a sustainable approach to the integrated water management in this area, based on the contributions from the previous and running scientific and technical project of co-operation, and the identification of the cultural, legal, economic and political frames that mark the arena of dialog. An immediate positive impact of the project is foreseen on the partners directly participating in building and sharing the knowledgebase. In fact, many of them are dealing – in their own country – with water decision making, regulatory aspects and management issues in the Mediterranean. In this regard, it is drawn the attention to the fact that important categories of water stakeholders like Water River Authorities, Ministries, Municipalities, user associations are partners of MELIA.

The expected knowledge base created by MELIA is aimed at tackling water management issues in the WHOLE Mediterranean Area, not only in its Eastern and South sides. Many problems are similar in all sides of the Mediterranean Sea, and the cultural bases to handle these problems have been the same for centuries. The solutions should, nevertheless, be adapted to the peculiar actual cultural and economic



context of each country or region, but the experiences from all sides will certainly help to improve the instruments of management, decisions making and conflict prevention. MELIA intend to create European added value besides its contribution to the policies of international co-operation and support to the development of the countries neighbour to Europe.

MELIA will provide the Mediterranean countries with an instrument of integration of the positions and interests of different stakeholder at local and regional scale, and a knowledge base and a shared/common conceptual frame to discuss issues and conflict within the country among different economic and social sectors, and with neighbouring countries in issues related to water. The potential impact is not limited to these important topics, MELIA aims at the establishment of a reference system to support legislators and administrators in the highly sensitive objective of supporting development under the premises of sustainability. The participation of a large variety of stakeholder, the focus on some important aspects such as the role of women in the water management and the cultural traditions related to water, and a proper dissemination of the results of this consensus exercise with participation of experts from different countries, professional backgrounds and economic interests, will be significant steps in promoting a broad concern on the issues at stake and gaining support of the citizens to a sustainable management of water.

The European Countries will benefit from MELIA in finding partners and forums to discuss issues related to the implementation of the Water Directive, the Mediterranean Agenda and other political initiatives. Worth of mention is the evident benefit of sharing knowledge and expertise in problems solutions affecting not only the Southern and Eastern Mediterranean countries, but also a significant part of the Mediterranean Europe. The approach to the cultural heritage on water management in the area will benefit the recovering of lost expertise and, perhaps, the identification of practices and traditions to tackle old and new problems related to water management. The assessment of technologies adapted to the Mediterranean context, will support the industrial and technological co-operation between all sides of the Mediterranean and the feasibility of the realisation of the Mediterranean Free Trade area, targeted for 2010.

The participants of MELIA will profit from the exchange of expertise and the networking produced as a result of the co-ordination activities performed. The creation of a knowledgebase on sustainable integrated water management based on contributions from different countries and sectors will provide a starting point to engage co-operation activities, at all levels, and the basis to enhance benchmarking exercise and the identification of best practices in the Mediterranean Area.

MELIA tries to gather experiences from research project carried out at European and Euro-Mediterranean level, in order to build up a common conceptual frame at the national and regional scale to integrate the water demands from different users, within the context of the necessary sustainable development of the Mediterranean region, therefore taking into account not only technical solutions, but also the rationale underlying the decisions making processes and their limits.

Furthermore, one of the most important activities related to MELIA will be the dissemination of results of debate and consensus along all the chain of public, private, political and administrative stakeholders and citizens (as ultimate users of water services), and the raising of public awareness of the problems related with water management by means of instrument of mass diffusion, such as TV reportage, pamphlets and press release. Therefore, the exploitation of the results of this CA will be performed at different levels:

- The most important levels is to contribute to the creation and maintenance of a Reference System on Integrated Water Management, conceived as a network of expertise and a knowledge and information support system, to provide advise to policy makers at European or Mediterranean national level. This Reference System should be based in a permanent structure dealing with Mediterranean issues, that will be identified by the Steering Committee, and where the resources, in terms of human capital and knowledge, accumulated by the MELIA, could be also used to help regulators, at European, national or regional levels, administrators and other stakeholder, on issues related to water management in the Mediterranean area.
- Other level of exploitation is directed to create a platform of exchange of experiences and expertise on water management, in order to identify good practices in water use and handling, water conflict prevention, social participation on water issues, with special attention to the role of women in the water management, and technological assessment. The technical reports on identification of good practices will be disseminated among water companies, local or regional administration and other important users or providers.

Raising awareness of the common citizens of the concepts related to the sustainable management of water and the importance of dealing with the different problems and interests at stake. In this sense, MELIA will produce materials on different issues related to water to be disseminated by different media instruments: newspapers, TV, radio, etc. Three videos describing the contribution to the Water Culture of the different peoples living in the Mediterranean shores, the situation of Water conflicts in the Mediterranean Area, and the role of Women in the Water management will be produced.

### **B.3.1 Contributions to standards**

MELIA aims at creating consensus and common knowledgebase on future development of water resources in the Mediterranean Area. This implies the identification of common accepted indicators that will need standards to qualify and/or quantify performances. The EU Water Framework Directive (WFD) is probably the most significant legislative instrument in the water field that was introduced on an international basis for many years. It covers a whole environmental sector, water, in one legislative instrument, and it moves towards integrated environmental management outlined in the 6<sup>th</sup> Environmental Action Programme of the EU. Its implementation entails not simply the application of new technical standards, but a requirement to introduce a whole new regime of management, based on river basins, irrespective of existing administrative constraints as in the case of trans-boundaries rivers. The Directive takes a broad view of water management and has in its key objectives the prevention of any further deterioration of water bodies, and the protection and enhancement of the status of aquatic ecosystems and associated wetlands. It aims to promote sustainable water consumption and will contribute to mitigating the effects of floods and droughts.

Water management policy as set out in the WFD is focussed on water as it flows through river basins to the sea, and its provisions apply to all waters - inland surface water, groundwater, transitional (estuarine) and coastal waters. An integrated approach is introduced for water quality and water quantity matters, and of surface and groundwater issues, and the Directive introduces a framework for water management based on river basin districts. The overriding objective of the policy is the achievement of "good status" in all waters (as defined the Directive). In this context, the reliability (quality control) and comparability of measurements is a key issue. The main feature relies, in practice, to the ability of laboratories to demonstrate links of their measurements to stated references (e.g. proper units, reference (standardised) methods, reference materials), i.e. the measurement traceability, and stated uncertainties, which to date is far from being achieved for a wide range of measurements. The detection of long term environmental changes, as requested in the WFD, however implicitly relies on the demonstration of such comparability.

The WFD directs Member States to use river basins as the main planning tool for water management. The gathering of information is primarily based on conventional programmes to monitor the quality and quantity of water. In addition to these programmes, there are three other data gathering activities which must be undertaken, namely an analysis of the characteristics of the river basins, the review of human activity on the status of surface and groundwater and an economic analysis of water use.

It is worth to mention the attempt foreseen by MELIA to direct efforts in the harmonisation, integration and regionalisation of water management options, which necessarily requires a certain degree of standardisation

In particular, the dialogue and the common conceptual frames formulated in Work Packages 2, 3, 4, 5, 11 address thematic components that – by default – include also discussion and seek consensus on normative and standardisation:

- Technological Perspective for Water Management (WP2): -) open dialogue on EU water quality standards in relation to the development of water treatment and re-cycling technologies ; -) debate on technological standardisation of Mediterranean Institutions and Agencies, and in particular, adequacy to ISO, UNI, EEN standards in water public and private institutions-agencies of non-EU Mediterranean countries.
- Rational use of water resources (WP3): creation of common view for the standardised application of water saving and water conservation options in homogeneous areas. To this regard, official standards in water saving and conservation do not exist at National, European or International level. The formulation of the conceptual frame will enhance the tentative future development of standards and normative in this sector.
- Water pricing (WP4): efforts are made to formulate possible homogeneous zoning (geographical or factor based zoning) in which existing or new-modelled tariff standards could be use.

- Water policy (WP5): efforts are made to create consensus and common frame on the development of normative and policy that introduce new standards or harmonised non-EU water standards with EU water standards.
- Besides the selection and inventory of parameters and methods, there is a need to discuss and clarify theoretical aspects of method validation and quality assurance (taking into account WFD requirements) for rapid techniques (in site measurement). The activity aims to prepare a guidance document summarising all key elements for achieving the quality control of (biological and chemical) measurements as later performed for monitoring purposes for the various types of waters concerned by the WFD (surface/coastal waters, groundwater) (WP 11).
- The quality control (QC) of monitoring measurements as required by the WFD requires various types of tools, e.g. standards, reference materials (internal quality control), and ways to ensure the best achievable comparability of results through inter-laboratory proficiency testing (external quality control) (WP 11).
- Benchmarking (WP11): debate and conceptual frame made with the aim of defining indicators that need standards for the measurements of selected parameters common to Mediterranean countries within homogeneous context. These standards will help the implementation of future benchmarking in selected areas.

Experiences gained in the monitoring framework of the WFD would hence be extremely valuable to improve measurement practices at the global scale, firstly by exchanging knowledge with countries implementing similar activities at national scale and transferring knowledge and technologies to third countries, especially the Mediterranean countries. An international network aiming to ensure the comparability (and reliability) of measurement data obtained by screening methodologies for water quality management would support the global EU Water Initiative, which aims to promote co-operation between countries sharing in order to better manage their water resources.

## B.4 The consortium and project resources

### Participants' list:

- P1 – Consejo Superior de Investigaciones Científicas – CSIC - Spain  
 P2 – Centre International de Hautes Etudes Agronomiques Méditerranéennes - Istituto Agronomico Mediterraneo of Bari (CIHEAM-IAMB) - Italy  
 P3 – National High School of Hydraulic Studies – ENHS – Algeria  
 P4 – Irrigation and Hydraulic Department, Faculty of Engineering, University of Cairo – IHD – Egypt  
 P5 – The National Authority for Remote Sensing and Space Sciences – NARSS – Egypt  
 P6 – The Faculty of Agriculture, University of Jordan – UOJ - Jordan  
 P7 – Office Internationale de l'Eau - France  
 P8 – Centre de coopération internationale en recherche agronomique pour le développement - CIRAD France  
 P9 – Institut National de Recherches en Génie Rural et Forêts – INGREF -Tunisia  
 P10 – Sustainable Europe Research Institute – SERI - Austria  
 P11 – Institut des Régions Arides, Laboratoire Erémologie & Lutte Contre la Désertification. Médenine – IRA - Tunisia  
 P12 – Institut National Agronomique de Tunisie, INAT-Tunisia  
 P13 – Palestinian Hydrology Group for Water and Environmental Resources Development, Center for Water and Environmental Research and Policy – PHG - Palestine  
 P14 – Department of Geology, Faculty of Science, University of Damascus – UOD - Syria  
 P15 – University Cadi Ayyad, Faculty of Sciences Semlalia – FSSM - Morocco  
 P16 – Institut Agronomique et Vétérinaire Hassan II of Rabat and Agadir – IAV - Maroc  
 P17 – Agricultural structures and irrigation department, Faculty of Agriculture, Cukurova University – CU - Turkey  
 P18 – Middle East Technical University-Water Resources Center – METU-WRC - Turkey  
 P19 – Agricultural Research Institute – ARI - Cyprus  
 P20 – University of Cordoba – UCO - Spain  
 P21 – University of Barcelona, Department of Vegetal Biology, – UB - Spain  
 P22 – Museu d'Arqueologia de Catalunya - MAC - Spain  
 P23 – Universitat Politècnica de Catalunya – UPC - Spain  
 P24 – Piccola Società Cooperativa a.r.l. Ipogea - IPOGEA - Italy  
 P25 – Centro Interdipartimentale per il Diritto e l'Economia dei Mercati, University of Sapienza, Roma - CIDEM - Italy  
 P26 – Agricultural University of Athens – A.U.A. - Greece  
 P27 – University of Osnabruck, Institute for Environmental System Research – USF - Germany  
 P28 – Instituto Superior de Agronomia – ISA - Portugal  
 P29 – Institut Languedocienne de Recherche sur l'Eau et l'Environnement, IFR-ILREE- France  
 P30 – The Institute for Agriculture, University of Malta – IOA - Malta  
 P31 – Italian member of the International Commission on irrigation and drainage (ICID) - ITALICID - Italy  
 P32 – Ministry of Water Resources and Irrigation, Strategic Research Unit – MWRI - Egypt  
 P33 – Ministry of Agriculture National Centre for Agriculture Research and Technology Transfer – NCARTT - Jordan  
 P34 – Center for New Water Technologies - CENTA, Seville, Spain  
 P35 – Istituto Sperimentale Agronomico (Agronomical Research Institute) – ISA - Italy  
 P36 – Malta Resources Authority – MRA - Malta  
 P37 – Ministère de l'Agriculture, Commissariat Regional au Développement Agricole de Zaghuan – MoAT - Tunisia  
 P38 – Ministry of Agriculture – MoA – Palestine  
 P39 – Directorate of Irrigation and Water Uses – Ministry of Agriculture and Agrarian Reform – DIWU - Syria  
 P40 – Office de Mise en Valeur Agricole of Souss Massa, Ministry of Agriculture – ORMVA - Morocco  
 P41 – Centre de Développement de la Région de Tensift – CDRT – Morocco  
 P42 – South Eastern Anatolia Project – Regional Development Administration – GAP-RDA - Turkey  
 P43 – Centro Italiano per la Riqualificazione Fluviale – CIRF - Italy  
 P44 – Red Mediterránea de Organismos de Cuenca (REMOC) (Mediterranean Network of Basin Organisations). Spain  
 P45 – Egyptian Society on Water Resources Conservation – SOWRC – Egypt  
 P46 – Jordan Valley Farmers Association – JVFA – Jordan  
 P47 – Litani River Authority – LRA – Lebanon  
 P48 – Water Service Corporation – WSC – Malta  
 P49 – Groupement d'Interet Collectif d'Irrigation Zghidane – GIC -Tunisia

- P50 – Group Poulina – POULINA - Tunisia
- P51 – Land Research Centre – LRC - Palestine
- P52 – The General Union of Peasant – GUP - Syria
- P53 – Association Taghzout pour le Development – TAG - Morocco
- P54 – Communauté Urbaine de Marrakech – C.U.M. - Morocco
- P55 – Office National de l'Eau Potable - Station de Traitement des Eaux n° 21, Rabat - ONEP - Morocco,
- P56 – Sanliurfa Kisas Water Users Association – KISAS – Turkey
- P57 – General Directorate of Adana Water and Sanitation Bureau – ASKI - Turkey
- P58 – Acquedotto Pugliese SpA – AQP - Italy
- P59 – Consorzio per la bonifica della Capitanata- CBC - Italy
- P60 – Junta Central de Usuarios de Aguas del Valle del Almanzora – J.C.U.A.V.A. - Spain
- P61 – The Arab Center for the Studies of Arid Zones and Dry Lands – ACSAD – Syria
- P62 – National Agriculture Research Foundation, Institute of Iraklio, Department of Water Resources and Environment – N.AG.RE.F. – Greece
- P63 – Alice Production – ALICE – Belgium.

#### Overall description of the Consortium

MELIA is a Consortium of water players involved in water management in the Mediterranean region. The partnership covers the various aspects of water linked to science, technology, environment, economics, culture and social, institutional setting, policy, and in the different uses like agriculture, industry, urban. Another important aspect considered when building up the partnership was to guarantee a balanced geographical and cultural participation, considering also the gender involvement and influence in the management of water, awareness and participatory approach.

In this view, the Consortium is constituted by 63 partners covering all the INCO-MED countries and 7 EU member states: Italy, Spain, Portugal, France, Greece, Germany and Belgium. Turkey, Malta and Cyprus are also covered. As mentioned above, different relevant categories of partners are included in the Consortium to ensure the largest participation and enhance a real participatory approach to integrated water management, complementarities and integration. In table below, the participant institutions are grouped into categories to give an overview of the Consortium composition.

**Table 1: Categories of Partners**

<b>Partner N°.</b>	<b>Type of Institution / Category</b>	<b>Country</b>	<b>Position in the network</b>
P1 co-ordinator and researcher	CSIC	Spain	Co-ordinator
P2 (international organisation, researcher)	CIHEAM - IAMB	Italy	Deputy Co-ordinator Chairing of the Steering Committee
Sub-total:2			
P3, P4, P5, P6, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P25, P26, P27, P28, P29, P30, P35, P62	Research Institutions / Organisations	Algeria, Egypt, Jordan, Malta, Tunisia, Palestine, Syria, Morocco, Turkey, Cyprus, Italy, France Portugal, Spain, Germany, Greece, Austria	Member
Sub-total: 28			
P32, P33, P36, P37, P38, P39, P40, P41, P42, P44	Ministries and Governmental Agencies (Decision-Policy Makers)	Egypt, Jordan, Malta, Tunisia, Palestine, Syria, Morocco, Turkey, Spain	Member
Sub-total: 10			
P46, P47, P48, P49, P52, P53, P54, P55, P56, P57, P58, P59, P60	Users associations, Providers, Municipalities (Adana and Marrakesh)	Jordan, Lebanon, Malta, Tunisia, Syria, Morocco, Turkey, Italy, Spain	Member
Sub-total: 13			
(P2), P7, P61,	International Organisations	Based in Italy (already counted as CIHEAM), Syria, France	Member
Sub-total: 2			
P24, P31, P43, P45, P51	NGOs	Palestine, Egypt, Italy	Member
Sub-total: 5			
P34, P50, P63	Private SMEs	Tunisia, Spain, Belgium	Member
Sub-total: 3			
<b>TOTAL: 63</b>			

### Participants and consortium

The strong asset of the Consortium is given by a real wide participation of the different categories: providers and end-users, water services, no-profit organisations, researchers and ministerial bodies, SMEs. The Ministerial level is represented by bodies of the Ministries of Agriculture (Jordan, Tunisia, Palestine, Syria, Morocco), Ministry of Water Resources (Algeria, Egypt), Ministry of Environment (Malta, Lebanon), Governmental Programme Implementing Agencies (Turkey, Morocco, Spain). In many southern Mediterranean countries the water issue is dealt by the Ministry of Agriculture, that is why these Ministries are involved. Moreover, it is worth of mention the participation of river basin authorities from Lebanon and the Mediterranean Network of Basin Management coordinated by Spain. Water providers for different users from Malta, Italy, Morocco, and Tunisia are also involved.

It is drawn the attention to the difficulties normally encountered in putting together such a Mediterranean-wide network and harmonise partners participation. For cultural and historical reasons, institutional partners from different Mediterranean countries use to function with little coordination and they are not familiar with this kind of huge networking. Moreover, they are also reluctant to share knowledge, particularly on a topic like water. Therefore, the establishment of such a wide Consortium, participated by the various categories of all Mediterranean countries, is in its way an important results. This was possible for the co-ordinator by seeking the co-operation of CIHEAM-IAMB (P2) a Mediterranean intergovernmental institution (see detailed description) promoting networking and knowledge share among a certain numbers of South Mediterranean institutions.

The wide range of categories involved in MELIA and the governmental and intergovernmental status of some partners will help to reach more concrete results and be effective on the territory. The joint participation of Researchers (Universities, Research Institutions), Decision Makers (Ministries) and End-users, Providers, No-profit Organisations, SMEs will put more aware in the National Institutions to improve participatory and bottom-up approach in decision making.

The structure of MELIA includes most of the relevant water stakeholders in the discussion of the issues related to the integrated and sustainable water management in the Mediterranean area. The participants have been selected by taking into account their expertise and experience, role in the chain of interventions related to water management and its use, nationality, participation in other networks and research projects related to water management, and for their high concern and competence in the Mediterranean water issues.

### Main role of partners:

- **Researchers:** their main role is to support the Mediterranean dialogue through their scientific and technical review and analysis to built a knowledgebase, which is scientifically consistent.
- **Decision/policy makers institutions:** their main role is to tune the scientific and technical debate-discussion with the political and legislative perceptions, needs and perspectives. They will also facilitate transmission and dissemination of MELIA to the different legislative bodies and administrations at different scale: local, national, Mediterranean, European.
- **NGOs, users and providers:** this group includes users from different countries and sectors (farmers, citizens, tourist-industry) and water providers for different uses (agricultural, industrial, urban), including also the municipalities (Adana. Marrakesh). Their main role is to bring the technical debate on water to respond the real needs and problems raised by the Mediterranean society from the technical (performance, efficiency, system maintenance), social and economic point of view. They are expected to give impetus to a bottom-up based participatory approach within MELIA when formulating conceptual frames, building knowledgebase and prepare recommendation for decision-policy making.
- **International organisations:** are expected to support promotion and dissemination of the network Mediterranean- and European-wide and consolidate links with other International Organisations and Agencies. They are also expected to tune results (conceptual frames, knowledgebase, recommendation) with European and International strategies and policies, and bring into the project the links with policy-decision makers outside the Mediterranean Region.
- **Private SMEs,** together with users and providers, are expected to generate and stimulate involvement of other Mediterranean SMEs in the water sector, particularly in technology, innovation, knowledge management and creation of dissemination material.

The role of all the participants is to introduce in the debate the particular points of view linked to their scientific-technical domain, or competences, or economic interests, or social and political engagement. In this way, each partner shares expertise with each other to build up a common knowledge, based on

contrasted and accepted facts, which could serve as a ground to propose consensus positions on the different issues introduced in the MELIA Work Packages. All the participants will participate in all the activities of MELIA, using their specific skills and arguments and, more important, they will listen the arguments of the other partners (of other categories and countries). The debate will be ordered and oriented by the use of the scientific and technical state of the art in water management, as well as in other topics such as the water demands and water economy, strategies of water saving, social impact of the water culture, technologies of water reuse, impact of waste, influence of the climate change, impact of the European Water Directive, and other accepted background information elements.

### Specific role of partners

The involvement of partners in each project tasks is provided in Table 1 of Part B.1. However, it is interesting to re-summarise here some relevant operation role of partners.

First, all partners are involved in thematic and operational tasks according with their capacity and experience. All of them are clearly involved in the overall process and required to participate actively in the project dialogue through both in-room and Internet debate/discussion and provide valuable input for the construction of the necessary knowledgebase and to enhance an example or real participative dialogue. Therefore, there are no partners foreseen to participate to MELIA in a passive way and attend seminars, workshops and conference with no practical contribution.

#### *Role of P1*

- a) Project overall scientific and administrative co-ordination
- b) Be officially responsible to the European Commission
- c) Co-ordinate and manage the project internal communication
- d) Stimulate partners in achieving project tasks
- e) Financial support to produce materials and carry on logistics for Workshops
- f) Support financially and technically preparation of CD Rom, leaflets, brochures
- g) Responsible for the preparation of Videos
- h) Prepare project reports
- i) Involvement as Leader of Work Package 11 (Benchmarking and Recommendation)
- j) Manage and co-ordinate partners and technical activities within Work Packages 0 and 11
- k) Create the knowledge management technological arrangements, such as web site, fora of discussion, libraries, etc.

#### *Role of P2*

1. Deputy co-ordinator
2. Chair the Steering Committee
3. Administrative management and co-ordination of Thematic Work Packages (1 to 6)
4. Promote and maintain MELIA visibility toward external European and International Organisations and Network
5. Maintain links with Southern Mediterranean institutions (Ministerial level)
6. Leader and responsible of Work Packages 9 and 10
7. Manage and co-ordinate partners and technical activities within Work Packages 9 and 10
8. Responsible of events related to Work Packages 9 and 10
9. Responsible (technically and financially) of seminars
10. Responsible for the organisation and implementation of the International Conference
11. Assist P1 in the preparation of project reports

#### *Role of P7, P8, P10, P11, P15, P18, P29, P34 (and P1, P2)*

1. Leader responsible of Work Packages: WP0 (P1, P2), WP1 (P11, P24), WP2 (P34, P13), WP3 (P15, P20), WP4 (P18, P27), WP5 (P7, P32), WP6 (P8, P6), WP7 (P10, P51), WP8 (P29, P42), WP9 (P2, P33), WP10 (P2, P10), WP11 (P1, P44)
2. Manage and co-ordinate partners and technical activities within Work Packages
3. Responsible of events related to Work Packages
4. Retrieval of information
5. Review for knowledgebase
6. Conceptual frames
7. Assist P1 and P2 in the preparation of the annual reports



*Role of other partners*

1. Assist Work Packages' Leaders in WPs' activities in which each partner is involved (see also Table 1, Part B.1)
2. Retrieval of information
3. Active participation into MELIA dialogue, events and Internet based Forum

*Scientific quality control*

The following members are responsible of quality control: P1, P2, P7, P15, P18, P27, P50

*Steering Committee*

The partners P1, P2, P11, P15, P18, P29, P32, P33, P39, P51 and P61 will be part of the Steering Committee and participate to the Steering Meetings.

*Contact national points*

The partners P1, P2, P3 (Algeria), P12 (Tunisia), P13 (Palestine), P16 (Morocco), P19 (Cyprus), P26 (Greece), P32 (Egypt), P33 (Jordan), P39 (Syria), P42 (Turkey), P47 (Lebanon), will:

- Act as focal points for their country to help partners in information retrieval
- Help to promote MELIA in own country
- Aware and motivate external relevant players in own country;
- Supply information on existing regulatory framework in own country.

All partners will attend all the foreseen workshops and the international conference. They will coordinate with P1 and the Workshop Leaders to extend invitation to the events to external relevant partners.

*Suitability and complementarities among partners to generate added value to project and co-ordination with other projects*

Research on water management is and has been a priority in national and Euro-Mediterranean projects, especially in the INCO-Med programme. However, it has also been observed that the product of these research programs and projects find difficulties to transform in concrete proposals to improve the efficiency of water use and its management due to the lack of dialog between the different protagonists. It find it also difficult to link with the all chain of decisions in respect to water management. Sometimes, the experts enhance technical solutions for some problems, but often they do not consider the social, economic or political links and implications of technical solution, leading to the failure of the applications of their model. On the other hand, the policy and decision makers make policies or take decisions on water management that imply enormous investment without considering the long-term effects from technical, system maintenance and socio-environmental point of view. In most of the cases, the decisions related to water management ignores the opinion of the end users and do not call for their commitment and participation.

In this view, there is a need for horizontal and vertical integration and dialogue. These are the fundamental justifications behind MELIA. There is little dialog between different sector scientists and between different categories of water players. The achievement of this dialog and the dissemination and exploitations of the recommendations obtained will create real added value at the European and Mediterranean scale. The partnership of MELIA has been structured in a way to include, on the one hand, players with experience in the scientific, technical and socio-economic sectors, experienced in past or on-going European, national or regional projects and networks and committed to a dialog without prejudices. On the other hand, other players such as basin management organisations, water suppliers to cities, industrial groups, agriculture water users, NGO with contrasted experience in day to day management of water related issues, knowing perfectly well the limits of the actual management systems, the expected demand and the possible baseline of the future conflicts. The presence of groups and administrations from different sectors and countries will allow MELIA to create a wide dialogue and Forum to tackle the conflicts related to water availability, on the grounds of up to date scientific and technical knowledge, considering also social, economic and cultural perspectives. In this way MELIA is in the condition to propose consensus scenarios for promoting a convergence of the water policies in the Euro-Mediterranean region.

*Co-ordination with other projects*

Most of the MELIA partners are involved in other projects, which normally address focused research in the different aspects of water. **Some of these projects have been mentioned in the state-of-the-art (B.1 4<sup>th</sup> paragraph).** These projects are often monothematic and participation limited to scientists and professionals in the relevant field. However, it worth mention the strong link of MELIA with the ERA-Net

action IWRM.net, coordinating national or regional EU research programmes, promoted by partner 7 (OIE), dealing with integrated water resources management in the light of the Water Framework Directive. It also happens that results of targeted projects are poorly exploited or poorly integrated each with another. Partners of MELIA will bring other projects reviews into the regional dialogue and will integrate them in the knowledgebase. The projects are selected among the relevant actions funded by the European Commission, other international donors as INBO (International Network of Basin Organisation), World Bank, UNDP, CDR-LRA, and national funding agencies. Many of these projects have been mentioned in the partner's description and some EU relevant ongoing projects and network were mentioned in section 1 (state of the art).

### Description of partners

Due to the huge number of partners the description of each Institution is provided in the Annex 1

### Human and material resources

The main objective of MELIA is not to perform research, but to confront citizens' ideas, the different positions of stakeholders and the different research results and models through the means of debates and dialogue in Workshops, Seminars, Conference and Internet Forum. The main products of MELIA will be consensus background documents and agreements on conflicting issues, by using the Workshops and Conferences, dissemination of material (brochures, leaflets, and proceedings) and raising public and political awareness on the water issues. The resources to be used will relate also to knowledge management and dissemination. The 63 partners of MELIA represent a high human potential of experts and professionals. This is a relevant critical mass of expertise and potential activity to ensure achievement of MELIA targets.

The involvement and participation of the partners in other networks, projects and organisations guarantee a broader representation of external groups and consistent dissemination of the results of the coordination activities. The Steering Committee will play a fundamental role by acting as a bridge with political, legislative and administrative levels for the dissemination of the conclusions, recommendations and other products.

An important activity of all partners of the CA will be to create contacts with their national media to disseminate some of the CA products, such as TV videos, reports, pamphlets, etc, to raise public awareness of the problems of water management.

MELIA will use the facilities and infrastructures of the Work Packages' Leaders and some other partners to carry out Working Visits, Workshops, Seminars and the International Conference. The other resource to be used in MELIA is the Internet based Forum to facilitate and handle the continuous debate and dialogue, and the interaction with the large public (citizens).

Financial resources will be used also to cover the experts' work, and support the mobility and gathering of participants in the projected coordination activities. The production of thematic videos on issues of water culture and water conflicts (see Part B.1), foresees the participation in the project of a small media company that will support media-distribution activities and will produce the dissemination material using the appropriate language.

### Project Effort Form

The project personnel efforts of MELIA are basically due to co-ordination and management to support frontal or distance dialogue and communication, to support analysis, to organise MELIA events, to prepare dissemination and communication material.

From the financial point of view, the financial efforts of MELIA are basically due to:

- co-ordination and management to support frontal or distance dialogue and communication, to support analysis, to organise MELIA events, to prepare dissemination and communication material.
- manpower for the gathering and analysis of documentation, and the preparation of reports
- travelling and subsistence to support participation of the 63 partners to the various MELIA events: working visits, workshops, seminars, conference
- Workshops and Conference proceedings
- communication and dissemination material.

No durable or special equipment are foreseen in the overall project expenses, MELIA partners foresee no sub-contracting. Due to the complexity the network and the high number of partners, all the costs due for general dissemination material, proceedings, communication material, workshops and conference material are allocated in the budget of the Co-ordinator (P1) and Deputy Co-ordinator (P2). This will facilitate the management of the overall budget. All the other partners are provided with money for staff and travelling only.

Project effort **expressed in man/months** is shown in Table 2.

***Table 2:***  
***Coordination Action Effort Form – Full duration of project***

	P1 - CSIC	P2 - CIHEAM	P3 - ENHS	P4 - IHD	P5 - NARSS	P6 - UoJ	P7 - OIE	TOTAL
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	40	26	0	0	0	0	0	66
WP1 – Water Culture	1	2	0	0	0	0	0	3
WP 2 – Assessment of Technological Perspectives in WM	2	0	0	2	2	3	2	11
WP3 – Rational Use of water resources	0	2	2	2	0	2	2	10
WP4 – Water value	1	2	2	0	0	0	0	5
WP5 – Water policy	1	0	0	1	2	1	6	11
WP6 – Prevention and mitigation of water conflicts	1	2	0	0	0	4	0	7
WP7 – Water participatory management and water governance	1	2	0	0	0	0	0	3
WP8 – Building knowledge	1	2	3	2	1	0	1	10
WP9 – Knowledge share	1	6	0	0	0	0	0	7
WP10 –Performance, social and sustainability indicators	0	6	0	0	2	0	0	8
WP11 –Exploratory benchmarking exercise-Recommendations WFD	6	1	0	0	0	0	2	9
<b>Total co-ordination activities</b>	<b>55</b>	<b>51</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>13</b>	<b>150</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	9	0	0	0	0	0	0	9
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	0	0	0
WP3 – Rational Use of water resources	0	0	0	0	0	0	0	0
WP4 – Water value	0	0	0	0	0	0	0	0
WP5 – Water policy	0	0	0	0	0	0	1	1
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	0	0	0	0	0	0	0	0
WP9 – Knowledge share	0	1	0	0	0	0	0	1
WP10 –Performance, social and sustainability indicators	0	1	0	0	0	0	0	1
WP11 –Exploratory benchmarking exercise-Recommendations WFD	1	0	0	0	0	0	0	1
<b>Total Management activities</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>13</b>
<b>Total activities</b>	<b>65</b>	<b>53</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>163</b>

	P8-CIRAD	P9-INGREF	P10-SERI	P11-IRA	P12-INAT	P13 PHG	P14 UoD	Total
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0,5	6	0	0	0	6,5
WP 2 – Assessment of Technological Perspectives in WM	2	2	0	0	4	4	0	12
WP3 – Rational Use of water resources	2	0	0	0	3	1	2	8
WP4 – Water value	3	0	1	0	0	0	0	4
WP5 – Water policy	0	0	1	0	0	0	0	1
WP6 – Prevention and mitigation of water conflicts	6	0	0	0	0	2	2	10
WP7 – Water participatory management and water governance	0	3	6	2	0	0	0	11
WP8 – Building knowledge	0	0	0,5	2	0	1	1	4,5
WP9 – Knowledge share	0	0	0	2	0	0	0	2
WP10 –Performance, social and sustainability indicators	0	0	4	0	0	2	2	8
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	2	0	1	0	0	0	3
<b>Total co-ordination activities</b>	<b>13</b>	<b>7</b>	<b>13</b>	<b>13</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>70</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	1	0	0	0	1
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	0	0	0
WP3 – Rational Use of water resources	0	0	0	0	0	0	0	0
WP4 – Water value	0	0	0	0	0	0	0	0
WP5 – Water policy	0	0	0	0	0	0	0	0
WP6 – Prevention and mitigation of water conflicts	1	0	0	0	0	0	0	1
WP7 – Water participatory management and water governance	0	0	1	0	0	0	0	1
WP8 – Building knowledge	0	0	0	0	0	0	0	0
WP9 – Knowledge share	0	0,00	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	0	0	0	0
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
<b>Total Management activities</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>Total activities</b>	<b>14</b>	<b>7</b>	<b>14</b>	<b>14</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>73</b>

	P15-FSSM	P16-IAV	P17 -UCU	P18 METUCE	P19-ARI	P20 –	P21 –	TOTAL
						UNICOR	UNIBAR	
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	2	3	2	2	1	3	0	13
WP3 – Rational Use of water resources	6	2	2	0	2	4	4	20
WP4 – Water value	0	2	0	6	2	0	0	10
WP5 – Water policy	0	0	0	2	0	0	0	2
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	2	0	3	0	1	0	0	6
WP9 – Knowledge share	2	0	0	0	1	3	3	9
WP10 –Performance, social and sustainability indicators	1	0	0	3	0	0	0	4
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
<b>Total co-ordination activities</b>	<b>13</b>	<b>7</b>	<b>7</b>	<b>13</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>64</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	0	0	0
WP3 – Rational Use of water resources	1	0	0	0	0	0	0	1
WP4 – Water value	0	0	0	1	0	0	0	1
WP5 – Water policy	0	0	0	0	0	0	0	0
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	0	0	0	0	0	0	0	0
WP9 – Knowledge share	0	0,00	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	0	0	0	0
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
<b>Total Management activities</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>Total activities</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>7</b>	<b>10</b>	<b>7</b>	<b>66</b>

	P22 - MUSCAT L	P23 - UPC	P24 - IPOGEA	P25 - CIDEM	P26 – UoA	P27 - USF	P28 - ISupA	TOTAL
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	4	0	5	0	1	0	0	10
WP 2 – Assessment of Technological Perspectives in WM	0	3	0	0	1	0	2	6
WP3 – Rational Use of water resources	0	2	0	0	2	0	2	6
WP4 – Water value	0	0	0	4	0	2	3	9
WP5 – Water policy	0	0	0	1	0	1	0	2
WP6 – Prevention and mitigation of water conflicts	0	0	0	2	0	0	0	2
WP7 – Water participatory management and water governance	0	0	2	2	1	1	0	6
WP8 – Building knowledge	1	2	2	0	1	1	0	7
WP9 – Knowledge share	2	0	0	0	0	0	0	2
WP10 –Performance, social and sustainability indicators	0	0	0	1	0,5	1	0	2,5
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0,5	1	0	1,5
<b>Total co-ordination activities</b>	<b>7</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>54</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	1	0	0	0	0	1
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	0	0	0
WP3 – Rational Use of water resources	0	0	0	0	0	0	0	0
WP4 – Water value	0	0	0	0	0	0	0	0
WP5 – Water policy	0	0	0	0	0	0	0	0
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	0	0	0	0	0	0	0	0
WP9 – Knowledge share	0	0,00	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	0	0	0	0
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
Total Management activities	0	0	1	0	0	0	0	1
<b>Total activities</b>	<b>7,00</b>	<b>7,00</b>	<b>10,00</b>	<b>10,00</b>	<b>7,00</b>	<b>7,00</b>	<b>7,00</b>	<b>55,00</b>



	P29 - IFR-ILEE	P30 – C3ED	P31 - ITALICID	P32 - MWRI	P33 - MOA NCARTT	P34 – CENTA	P35 – ISA	TOTAL
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	2	0	0	0	1	6	3	12
WP3 – Rational Use of water resources	1	0	0	2	2	2	4	11
WP4 – Water value	1	1	0	2	2	0	0	6
WP5 – Water policy	0	2	2	4	0	0	0	8
WP6 – Prevention and mitigation of water conflicts	1	0	2	1	1	0	0	5
WP7 – Water participatory management and water governance	1	1	0	2	1	0	0	5
WP8 – Building knowledge	6	1	2	0	1	0	0	10
WP9 – Knowledge share	0	0	0	2	4	0	0	6
WP10 –Performance, social and sustainability indicators	0	2	0	0	1	0	0	3
WP11 –Exploratory benchmarking exercise-Recommendations WFD	1	0	1	1	1	1	0	5
<b>Total co-ordination activities</b>	<b>13</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>14</b>	<b>9</b>	<b>7</b>	<b>71</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	1	0	1
WP3 – Rational Use of water resources	0	0	0	0	0	0	0	0
WP4 – Water value	0	0	0	0	0	0	0	0
WP5 – Water policy	0	0	0	0	0	0	0	0
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	1	0	0	0	0	0	0	1
WP9 – Knowledge share	0	0,00	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	0	0	0	0
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
<b>Total Management activities</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>
<b>Total activities</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>14</b>	<b>14</b>	<b>10</b>	<b>7</b>	<b>73</b>

	P36 - MRA	P37 - MoW	P38 - MoA	P39 - MAAR	P40 - ORMVA	P41 - CDRT	P42 – GAP-RDA	TOTAL
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	1	0	0	0	1
WP 2 – Assessment of Technological Perspectives in WM	1	1	0	0	1	2	0	5
WP3 – Rational Use of water resources	1	1	0	1	0	0	1	4
WP4 – Water value	1	2	1	1	1	2	1	9
WP5 – Water policy	0	0	2	1	2	2	1	8
WP6 – Prevention and mitigation of water conflicts	1	1	2	1	0	0	1	6
WP7 – Water participatory management and water governance	0	1	0	0	0	0	1	2
WP8 – Building knowledge	1	1	0	1	0	0	4	7
WP9 – Knowledge share	0	0	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	1	0	1	0	1	1	0	4
WP11 –Exploratory benchmarking exercise-Recommendations WFD	1	0	1	1	2	0	1	6
<b>Total co-ordination activities</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>52</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	0	0	0
WP3 – Rational Use of water resources	0	0	0	0	0	0	0	0
WP4 – Water value	0	0	0	0	0	0	0	0
WP5 – Water policy	0	0	0	0	0	0	0	0
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	0	0	0	0	0	0	0	0
WP9 – Knowledge share	0	0,00	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	0	0	0	0
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
<b>Total Management activities</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total activities</b>	<b>7,00</b>	<b>7,00</b>	<b>7,00</b>	<b>7,00</b>	<b>7,00</b>	<b>7,00</b>	<b>10,00</b>	<b>52,00</b>





	P57 - ADANA	P58 - AQP	P59 - CBC	P60 - JCUAVA	P61 - ACSAD	P62 - N.AG.R.F	P63 - Alice	TOTAL
<b>Co-ordination activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	2	2
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	3	0	3
WP3 – Rational Use of water resources	1	1	1	1	0	3	0	7
WP4 – Water value	1	1	1	0	0	0	0	3
WP5 – Water policy	0	1	1	1	1	0	0	4
WP6 – Prevention and mitigation of water conflicts	1	1	1	1	2	0	2	8
WP7 – Water participatory management and water governance	1	0	0	0	1	0	0	2
WP8 – Building knowledge	0	0	0	1	1	1	0	3
WP9 – Knowledge share	0	0	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	1	0	0	1
WP11 –Exploratory benchmarking exercise-Recommendations WFD	1	1	1	1	1	0	0	5
<b>Total co-ordination activities</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>38</b>
<b>Management activities</b>								
WP0 – Co-ordination and management	0	0	0	0	0	0	0	0
WP1 – Water Culture	0	0	0	0	0	0	0	0
WP 2 – Assessment of Technological Perspectives in WM	0	0	0	0	0	0	0	0
WP3 – Rational Use of water resources	0	0	0	0	0	0	0	0
WP4 – Water value	0	0	0	0	0	0	0	0
WP5 – Water policy	0	0	0	0	0	0	0	0
WP6 – Prevention and mitigation of water conflicts	0	0	0	0	0	0	0	0
WP7 – Water participatory management and water governance	0	0	0	0	0	0	0	0
WP8 – Building knowledge	0	0	0	0	0	0	0	0
WP9 – Knowledge share	0	0,00	0	0	0	0	0	0
WP10 –Performance, social and sustainability indicators	0	0	0	0	0	0	0	0
WP11 –Exploratory benchmarking exercise-Recommendations WFD	0	0	0	0	0	0	0	0
<b>Total Management activities</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total activities</b>	<b>5,00</b>	<b>5,00</b>	<b>5,00</b>	<b>5,00</b>	<b>7,00</b>	<b>7,00</b>	<b>4,00</b>	<b>38,00</b>

Table 3:

*Specific allocation of financial resources for travelling and meetings (seminars, workshops) organisations*

Partner N.	N. Working Visits (WV) / partner	Tot. Cost WV/partner	N. of Workshops (WSH) / partner	Total cost WSH / partner	N. of Conferences/partner	Total cost conference/partner	Organisation of Seminars*	TOTALS
1	3	4350	7	8890	1	1360		14611
2	5	7250	7	8890	1	1360	63000	80513
3	3	4350	7	8890	1	1360		14611
4	3	4350	7	8890	1	1360		14611
5	3	4350	7	8890	1	1360		14611
6	3	4350	7	8890	1	1360		14611
7	3	4350	7	8890	1	1360	21000	35611
8	3	4350	7	8890	1	1360	21000	35611
9	3	4350	7	8890	1	1360		14611
10	3	4350	7	8890	1	1360	21000	35611
11	3	4350	7	8890	1	1360		14611
12	3	4350	7	8890	1	1360		14611
13	3	4350	7	8890	1	1360		14611
14	3	4350	7	8890	1	1360		14611
15	3	4350	7	8890	1	1360	21000	35611
16	3	4350	7	8890	1	1360		14611
17	3	4350	7	8890	1	1360		14611
18	3	4350	7	8890	1	1360	21000	35611
19	3	4350	7	8890	1	1360		14611
20	3	4350	7	8890	1	1360		14611
21	3	4350	7	8890	1	1360		14611
22	3	4350	7	8890	1	1360		14611
23	3	4350	7	8890	1	1360		14611
24	3	4350	7	8890	1	1360		14611
25	3	4350	7	8890	1	1360		14611
26	3	4350	7	8890	1	1360		14611
27	3	4350	7	8890	1	1360		14611
28	3	4350	7	8890	1	1360		14611
29	3	4350	7	8890	1	1360		14611
30	3	4350	7	8890	1	1360		14611
31	3	4350	7	8890	1	1360		14611
32	3	4350	7	8890	1	1360		14611
33	3	4350	7	8890	1	1360		14611
34	3	4350	7	8890	1	1360	21000	35611
35	3	4350	7	8890	1	1360		14611
36	3	4350	7	8890	1	1360		14611
37	3	4350	7	8890	1	1360		14611
38	3	4350	7	8890	1	1360		14611
39	3	4350	7	8890	1	1360		14611
40	3	4350	7	8890	1	1360		14611
41	3	4350	7	8890	1	1360		14611
42	3	4350	7	8890	1	1360		14611
43	3	4350	7	8890	1	1360		14611
44	3	4350	7	8890	1	1360		14611
45	3	4350	7	8890	1	1360		14611
46	3	4350	7	8890	1	1360		14611
47	3	4350	7	8890	1	1360		14611
48	3	4350	7	8890	1	1360		14611
49	3	4350	7	8890	1	1360		14611
50	3	4350	7	8890	1	1360		14611
51	3	4350	7	8890	1	1360		14611
52	3	4350	7	8890	1	1360		14611
53	3	4350	7	8890	1	1360		14611
54	3	4350	7	8890	1	1360		14611

55	3	4350	7	8890	1	1360		14611
56	3	4350	7	8890	1	1360		14611
57	3	4350	7	8890	1	1360		14611
58	3	4350	7	8890	1	1360		14611
59	3	4350	7	8890	1	1360		14611
60	3	4350	7	8890	1	1360		14611
61	3	4350	7	8890	1	1360		14611
62	3	4350	7	8890	1	1360		14611
63			3	3810	1	1360		5174

\* Forfeit allocated to the partner hosting the seminar. The budget covers all the travel and subsistence expenses of participants

*Table 4: Detail of other costs*

	Proceedings, Dissemination material, CD-Rom (Euros)	Material for 3 videos (Euros)	Total project overheads (Euros)
P1	70.000		
P2	30.000		
P63		30.000	
Overall project ( $\sum$ P1/P63) calculated on total of personnel costs			406.622

## B.5 Project management

The MELIA Coordinated Action is a complex structure of 63 partners from different backgrounds and sectors. The main activities are related to topical discussion, knowledge building, and networking of experts from different fields and dissemination of information, knowledge and competence toward the regulators and administrators of water issues in the Mediterranean countries, users, providers and common citizens. The management should provide a solid and consistent structure based in state of the art information technologies to handle fluxes of information, knowledge management, logistic support for meetings and conferences, and efficient interfaces with the targeted users of the result of MELIA.

This Project is complex and organized in a number of interlocked and grouped Work Packages (WP). There is a group of 6 Vertical (or Thematic) WPs, and another group of 5 Horizontal WPs or structural activities crossing all along the 6 Thematic WPs.

The complexity of MELIA recommends creating a solid and efficient management structure where the overall management will be guaranteed by the Co-ordinator (P1 – CSIC), assisted by the Deputy Coordinator (P2 – CIHEAM-IAMB) and using a common Secretariat as a support. The Co-ordinator will be responsible for the overall management of MELIA, and specifically for the group of the 5 “Horizontal” WPs, while the Deputy Co-ordinator will be responsible for the management of the 6 “Vertical” WPs. Each Work Package will be **led by a Work Package Leader, assisted by a Deputy Work Package Leader (P<sub>n</sub>, P’<sub>n</sub>)**, balancing the leadership between partners from the EU and the Med countries. The WPs are subdivided in a number of tasks (see Table 1 – Part B.1), related to concrete activities and deliverables, such as organization of Workshops and other type of events, background documents elaboration, assessment documents on technical proposals, identification of best practices, dissemination material. Each task will be organized by the Task Leader and executed with the help of the group of partners attributed to the WP (see Part B.2, Work Packages description).

The Technical Annex of the Contract will contain a program and a calendar to execute the tasks, as well as the expected achievements of the activity, to be used by the Steering Committee as a mark of quality control of the project.

The WP Leader is responsible for the organization of the Tasks within the WP, the assignment of resources, the monitoring of the calendar of events of the WP and the delivery of their results to the Coordinator or Deputy Co-ordinator. He will be assisted by the Deputy WP Leader in these tasks.

The Task leader is responsible for the management of the resources assigned to the realization of the task, the respect of the calendar of activities fixed in advance in the technical Annex of the Contract and the elaboration of the deliverable associate to the Task. Each Work Package affects the work performed in the others and shares a certain number of common participants. Therefore, a good matching and co-ordination of activities is absolutely necessary. The communication and dialogue among participants, the gathering of information and the construction of knowledge, will be also performed through the Internet Forum.

The management of MELIA will be structured at three levels, dealing with different decisions making domains related to the targeted objectives and the working procedures:

- A Steering Committee
  - The Coordinator (P1 - CSIC), assisted by the Deputy Coordinator (P2 – CIHEAM-IAMB), a Secretariat and a Working team responsible of the information fluxes and knowledge management
  - A Management Board formed by the leaders of the different Work Packages and the above co-ordinators.
- **The Steering Committee (SC)**, formed by high levels personalities representing administrations, legislative bodies, national water authorities, industrialists, scientific institutions, etc. The SC will be chaired by CIHEAM-IAMB. Some institutions and organisms such as: IPTS (JRC-EC), CSIC, MEDA-MoCo and other relevant Mediterranean or water committees or Organizations should be present. The SC will be assisted by the Co-ordinator and the secretariat. The functions of the Steering Committee will be the following:
    - Advising the other managing bodies on issues related to the definition of objectives, new challenges and exploitation of MELIA activities.
    - Acting as interface with legislative and political levels as well as scientific institutions.
    - Monitoring the progress and quality of the activities of MELIA and its deliverables.
    - Acting as *Conflict Committee* of MELIA in case of problems not solved by the Co-ordinator or the Management Board. For this purpose, a group of three members, not co-national of any part in



conflict, will be appointed by consensus of the plenary. Their resolutions will be compulsory for all participants.

- It will meet 7 times in 4 years. Meetings will be linked to the 7 Workshops.
  - The internal rules of procedure will be decided in its first meeting.
- **The Co-ordinator** is in charge of the overall management of MELIA and specifically of the 6 “horizontal” WPs. The **Deputy Co-ordinator** assist the Co-ordinator in the general management of MELIA, being specifically responsible for the overall management of the 6 vertical (thematic) WPs. The Deputy Co-ordinator. The Co-ordinator and Deputy Coordinator are assisted by a Technical Secretariat to support the functioning of MELIA and the Web site activities. The Deputy Coordinator could substitute the Co-ordinator (upon appointment) to represent him in any function of the management of MELIA. The functions of the Co-ordinator are the following:
    - The Co-ordinator will be responsible for the contract/financial management of MELIA and the costs reporting to the European Commission (EC).
    - The Co-ordinator and Deputy Coordinator will be responsible for the preparation and presentation of technical reports to the SC and the European Commission (EC).
    - The Co-ordinator will report to the Steering Committee and will guarantee technical assistance for its activities.
    - The Co-ordinator will be the contact point with the European Commission and MELIA Auditors.
    - The Co-ordinator will chair the MELIA Management Board.
    - The Co-ordinator is responsible of the Web site of MELIA.
    - Together with the Deputy Co-ordinator and the Technical Secretariat, he will support the organization of activities by members of MELIA, especially some of the dissemination activities (media coverage) and the knowledge management activities. The Technical Secretariat will support the preparation of minutes, report, proceedings, etc, and their spreading.
    - The Co-ordinator and Deputy Co-ordinator will monitor the progress of WP activities, milestones and their deliverables.
    - The Co-ordinator will act as first instance in the resolution of conflicts among participants in MELIA.
    - The Co-ordinator will be responsible of the Internet Forum, with an INTRANET site for the general functioning of MELIA, guarantying its functioning and maintenance. These tasks will be performed with external assistance to the secretariat.
  - **The Management Board (MB)** is composed by the Co-ordinator, the Deputy Co-ordinator and the Work Package (WP) leaders. It will be chaired by the Co-ordinator, assisted by the Technical Secretariat. Its functions are the following:
    - The MB is responsible for the good development of the activities included in the different WP, guarantees a narrow co-ordination among the different activities and decides the composition of the Working Groups and their modifications
    - The MB facilitates the communication between the different partners and Tasks. The WP leaders will perform their tasks in strong cooperation with the Co-ordinator or the Deputy Co-ordinator and the Technical Secretariat.
    - The MB will survey the development of MELIA, analyse its results and propose new orientations or activities to the SC.
    - The MB co-ordinate the timetable of activities decides on its modifications and assist the co-ordinator in the assignment of financial resources.
    - The MB act as a debate forum to tackle possible conflicts between the Co-ordinator and other partners.
    - The MB prepares the general reports of the WP, and approve the technical reports of the different activities.
    - The MB prepares the general reports of activity and other deliverables to be submitted to the SC.

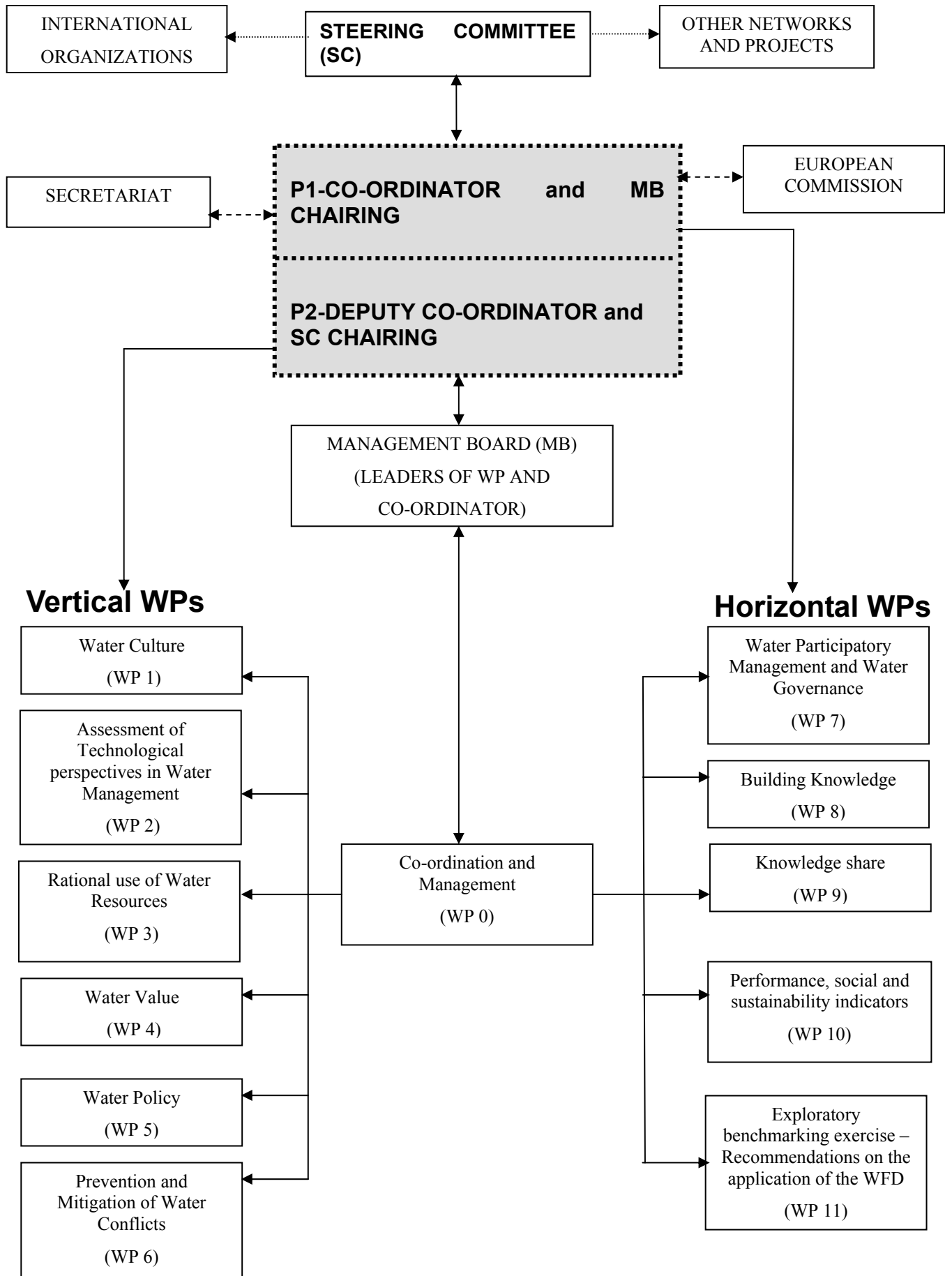
The Project communication will be managed by means of a central Internet based Forum containing the following sections:

- An Intranet accessible only to MELIA members, and an Internet site open to external parties.
- A central Library with documents related to the integrated management of water and links to all available information sources.
- Sections corresponding to the different Work Packages, with their corresponding road map, forum of debates and sharing of working tools. Each section will share common parts with all the others sections, in order to guarantee an open debate between participants. This debate is organised in different Work Packages.
- Knowledge management of the gathered library, the Intranet debates and information inputs and the documents produced within the project.

**Consensus among participants** coming from different sectors and group of interests will be **the main tool** to produce “conceptual frames” and documents. This consensus will be reached by means of analysis, discussion and meetings at different levels of experts from different countries and different fields related to water. All these discussions and consensus searching activities will give rise to reports, position documents or other products, to be included in the data and knowledge base of the Forum of the project. They will be used in the dissemination activities and distributed to legislators, administrators, scientists, business sectors, etc.

- The definition of terms, legal and financial provisions, procedures of modification of the Consortium, procedures for the technical implementation, protection of knowledge, confidentiality and access rights and liability, will be those indicated in the Contract signed with the Commission
- The work will be organized by means of the following mechanisms:
  - Definition and agreement on the objectives
  - Road map of expected achievements, meetings and deliverables
  - Communication organized through an Intranet.
  - Creation of an organized information base
  - Library of information sources
  - Building up of the consensus documents produced by participants in the progress events (Working Visits, Seminars)
  - Analysis
  - Transversal consensus meetings (Workshops) between participants in different Work Packages.
  - Production of documents, materials to raise awareness on the objectives of MELIA, reports and other types of documents
  - Dissemination of documents to different levels of stakeholders.

Figure 1: Management structure



Plan for using and disseminating knowledge

New advanced **Knoware** tools will be used to obtain and manage Knowledge. One of those, MELIA Web site, will be designed in order to handle the information gathered, foster discussion through Internet on the issues, and guarantee links with the sources and organisations playing a role in Water Management.

In this way, the data obtained by means of partners discussions and contributions, workshops drafts reports, etc. will be refined applying warehousing, analysis, mining and visualizations known-ware tools in order to provide an Euro-MED forum (network) for identifying, selecting, organizing, developing, disseminating and exchanging of ideas encompassing the major aspects involved in Water Management.

This will be addressed following a holistic approach in every Work Package:

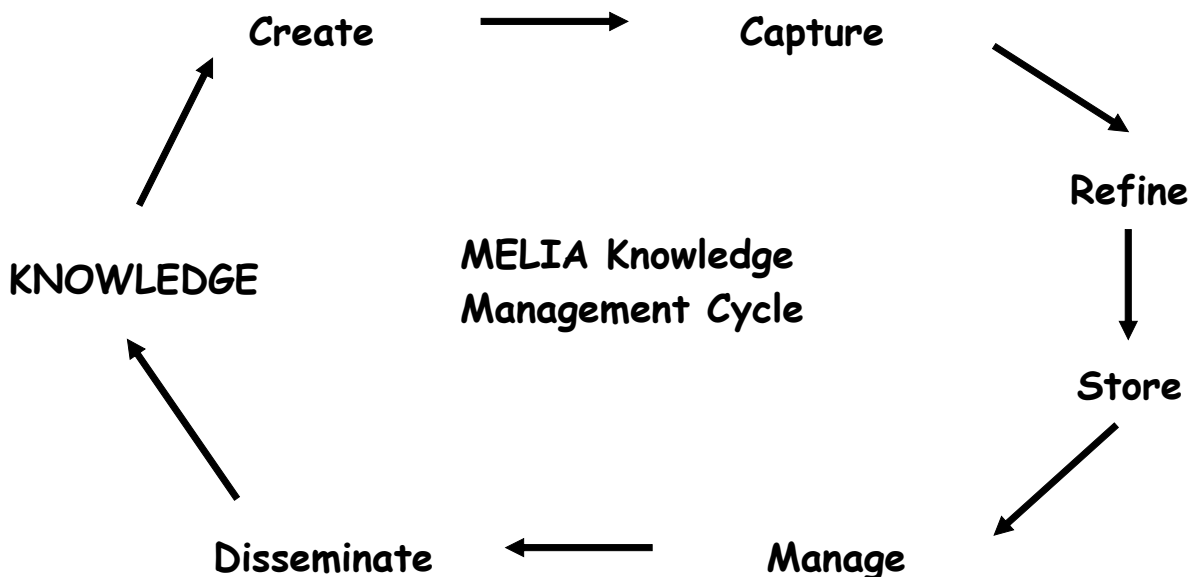
Particular attention will be paid to the interrelation and seamless integration of all this facets in order to contribute to the holistic approach

To increase synergy among national, EU, pan-European, Euro-MED and International projects with common strategic objective and to enhance co-ordination, synergies and to accelerate dissemination and, where appropriate, exploitation of results in Water Management in the Mediterranean Area

To nurture new projects in the area and provide inputs and recommendations to RTD programme planners

The exchange of points of view is thought to enable a common understanding among the different perspectives into the whole topical area referred to Water Management in the Mediterranean Area

**Figure 2: MELIA Knowledge Management Cycle**



## B.6 Workplan

### Introduction

Typical co-ordination activities and tools to facilitate networking, communication, public dialogue, dissemination at regional and country level are the basic requirement to penetrate deeper the territory and rise up awareness concerning the integrated water management and its sustainability. Debate and communication are foreseen for the different aspects of water management included respectively in Work Packages 1, 2, 3, 4, 5, 6, 7, 10, 11.

MELIA is not limited only to debate and communication activities (like Forum debate, Workshops, Conference, brochures, videos), but it will also carry out:

- Formulation of conceptual interlinking for rational integration of the different aspects of water resources management;
- Construction of shared/common conceptual frames regarding the various aspects of water management as identified in different Work Packages;
- Integration and construction of a common “integrated” knowledgebase,
- Analysis of information/input provided by the external players and citizens in the Internet based dialogue;
- Analysis of water scarcity and policy indicators, and increase awareness in regard to present “deception of numbers” linked to indicators;
- Formulation of recommendation to policy-decision makers on the regional application of the Water Framework Directive (WFD) in the Mediterranean

A sound elaboration of the above conceptualisation requires participatory approach. Therefore the integration of the different aspects of water management within a dynamic, comprehensive and shared/common conceptual frame is an important precondition to envisage impact on the territory and effects on water policies. In this view MELIA targets the developing of national and regional indications and inputs for future planning and actions to- and from- users, and promote the shared/common conceptual frame emerging from internal dialogue, which would help the establishing a possible future permanent communication among the Mediterranean partners.

The overall approach of MELIA is based on the assumption that actions or water management schemes must necessarily meet with the arising needs of water providers and users like farmers, urban population, irrigation consortium, tourist resorts, industries, water service corporations or multiple water users to keep a good rate of return. Moreover, the ample participatory approach in the project is the basic method to impact on the territory at all levels, from citizens and end-users to decision-policy makers. All the possible options and recommendations formulated by the researchers need full consensus of the decision makers, citizens and end-users, the latter being also co-responsible of water actions implementation<sup>13</sup>.

Therefore, it is of paramount importance to involve water users (particularly farmers, the agriculture being responsible for the major water withdrawal) during the process of identification and assessment of water management perspectives and option formulated by the researchers. All the relevant categories take part to the debate within MELIA.

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<sup>13</sup> *There is no impact on farmers to accept environmentally sound water management if this is not based on incentives and “income generating”.*



### General description and structure of MELIA

The project breaks down into 12 Work Packages (WP0 to WP11) (Fig. 1; Fig. 2).

Co-ordination activities and management activities are distributed through the Work Packages, even though the Work Package N.0 includes most of the significant management activities at network level, like:

- Co-ordination of the network (P1)
- Contract management and liasing with the EC (P1)
- Maintain internet based Forum (P1, P2)
- Co-ordinate ISM at network level (P1)
- Co-ordinate knowledge system management at network level (P1, P2, P29)
- Management of the Steering Committee and manage official external links with European and Mediterranean institutions on Integrated Water Management: participation of the chairman to International Conference, debate, seminars, relevant meetings at Euro-Mediterranean level (P2)
- Manage Steering Meetings (P2)
- Co-ordinate management Board Meetings (P1)

Among the Work Packages (1 to 11), it is possible to distinguish Thematic Work Packages (WP1to WP6) and Horizontal (or transversal) Work Packages (WP7 to WP11) (Fig. 1). The 6 Thematic Work Packages are dedicated respectively to selected relevant thematic aspects of water: water culture, water technology, use of water resources, water value, water policy, water conflicts.

Throughout WPs 1-6, the following transversal physical-non physical relationships are focused: water related cultural heritage, culture heritage influencing technology, performance in urban-industrial networks and perspectives of new technologies (withdrawal, distribution, treatment and reuse); use of water resources ⇔ ecosystem (soil/land degradation, health, eco-hydrology, sustainable hydrological regulation in river basin); water saving in agriculture: irrigation system performance, water use efficiency (crop, plant), recycling and re-use; re-appraisal and new appreciation of Mediterranean coastal aquifers and rain-fed resources; emerging socio-economic-political frame linked with water-poor society; the political agenda and the water governance for the Mediterranean; use vs. use, intra-basin scale conflict, international / trans-boundary conflict.

The 5 Horizontal Work Packages operate transversally through the thematic Work Packages and address water governance and participatory management, knowledgebase, knowledge share, integration and sustainability, citizen dialogue, indicators, benchmarking.

In Thematic Work Packages 1, 2, 3, 4, 5 and 6 the main co-ordination actions address: retrieval of information, research, review, debate in working group and workshop, establishment of a common conceptual frame. In Horizontal Work Packages 7, 8, 9, 10, 11 the main co-ordination actions include: analysis, seminars for transfer and share knowledge, assessment of Water Governance and IWPA models.

In particular, the Work Package 7 addresses actions like the identification of Water Governance and the Participatory Management through each Thematic Aspects (WP1-6). The Work Packages N. 8 and 9 addresses respectively actions like the build-up of the integrated-common knowledgebase (in relation to WPs 1 to 6) and the consequent share of knowledge through the implementation of seminars. Finally Work Packages 10 and 11 address respectively actions like statistical analysis, assessment and formulation of recommendation.

**Fig.4 - Main structural links among Work Packages (PERT Diagram)**

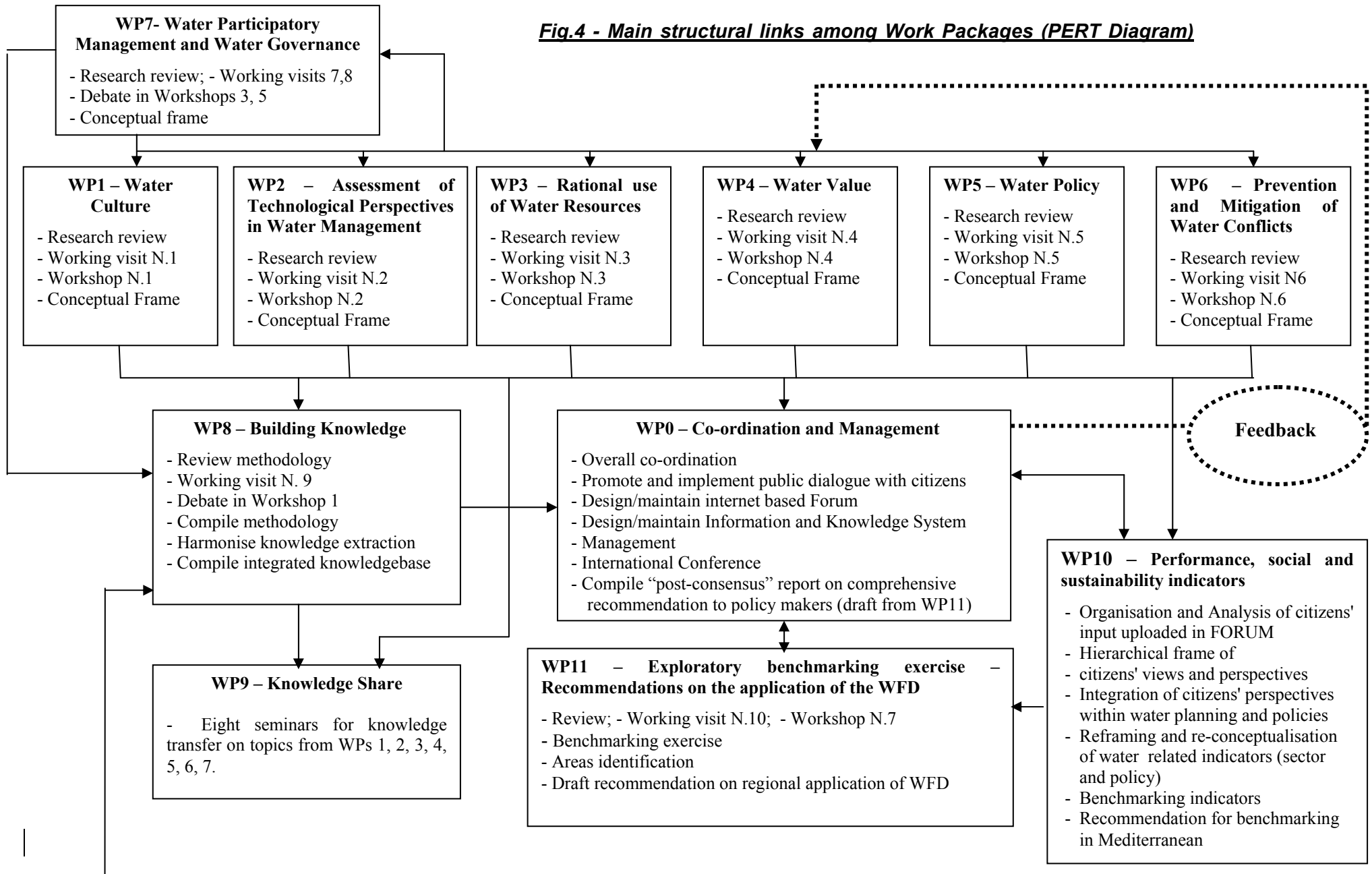




Table 5: Tasks content of the Work Packages

<p>WP0 Co-ordination and management  P1, P2</p>	<ol style="list-style-type: none"> <li>1. <b>Co-ordination at network level (P1) (P2) ⇐ management activity</b></li> <li>2. <b>Contract management and liaising with the EC (P1) ⇐ management activity</b></li> <li>3. Design internet based Forum (P1)</li> <li>4. <b>Maintain internet based Forum (P1) ⇐ management activity</b></li> <li>5. Design information and knowledge management (Information System Management-ISM) (P1)</li> <li>6. <b>Co-ordinate ISM at consortium level (P1) ⇐ management activity</b></li> <li>7. Prepare project brochures/leaflets (P1, P2)</li> <li>8. Co-ordinate the promotion of continuous public dialogue with citizens through a dedicated Form room (P1, P2)</li> <li>9. <b>Management and chairing the Steering Committee (P2) ⇐ management activity</b></li> <li>10. <b>Manage Steering Meetings (P2) ⇐ management activity</b></li> <li>11. <b>Co-ordinate management Board Meetings (P1) ⇐ management activity</b></li> <li>12. Preparation of International Conference (P1, P2)</li> <li>13. Carrying out International Conference (P2)</li> <li>14. Prepare / print Conference proceedings (P1, P2)</li> <li>15. Compile post-consensus (after International Conference) final draft guidelines-recommendation on application of the WFD in the Mediterranean (provisional draft pre-consensus prepared in WP11) (P1)</li> </ol>
<p>WP1 Water culture  P11, P24</p>	<ol style="list-style-type: none"> <li>16. <b>Work package management by Team Leader (P11) ⇐ management activity</b></li> <li>17. Information retrieval and preparation of two videos (water culture and women in water)</li> <li>18. Research review</li> <li>19. Identify priority issues-agenda for thematic debate</li> <li>20. Working visit n.1 for preparation of conceptual frame of Workshop n.1</li> <li>21. Preparation of Workshop n.1</li> <li>22. Workshop n.1</li> <li>23. Prepare Workshop proceedings and dedicated CD-rom</li> <li>24. Compile definitive conceptual (rationale) frame</li> <li>25. Dedicated leaflet</li> </ol>
<p>WP2 Assessment of Technological Perspectives in Water Management  P34, P13</p>	<ol style="list-style-type: none"> <li>26. <b>Work package management by Team Leader (P34) ⇐ management activity</b></li> <li>27. Information retrieval</li> <li>28. Research review</li> <li>29. Identify priority issues-agenda for thematic debate</li> <li>30. Working visit n.2 for preparation of conceptual frame of Workshop n.2</li> <li>31. Preparation of Workshop n.2</li> <li>32. Workshop n.2</li> <li>33. Prepare Workshop proceedings and dedicated CD-Rom</li> <li>34. Compile definitive conceptual (rationale) frame</li> <li>35. Dedicated leaflet</li> </ol>
<p>WP3 Rational use of water resources  P15, P20</p>	<ol style="list-style-type: none"> <li>36. <b>Work package management by Team Leader (P15) ⇐ management activity</b></li> <li>37. Information retrieval</li> <li>38. Research review</li> <li>39. Identify priority issues-agenda for thematic debate</li> <li>40. Working visit n.3 for preparation of conceptual frame of Workshop n.3</li> <li>41. Preparation of Workshop n.3</li> <li>42. Workshop n.3</li> <li>43. Prepare Workshop proceedings and dedicated CD-Rom</li> <li>44. Compile definitive conceptual (rationale) frame</li> <li>45. Dedicated leaflet</li> </ol>
<p>WP4 Water Value  P18, P27</p>	<ol style="list-style-type: none"> <li>46. <b>Work package management by Team Leader (P18) ⇐ management activity</b></li> <li>47. Information retrieval</li> <li>48. Research review</li> <li>49. Identify priority issues-agenda for thematic debate</li> <li>50. Working visit n.4 for preparation of conceptual frame of Workshop n.4</li> <li>51. Preparation of Workshop n.4</li> <li>52. Workshop n.4</li> <li>53. Prepare Workshop proceedings and dedicated CD-Rom</li> <li>54. Compile definitive conceptual (rationale) frame</li> <li>55. Dedicated leaflet</li> </ol>
<p>WP5 Water policy</p>	<ol style="list-style-type: none"> <li>56. <b>Work package management by Team Leader (P7) ⇐ management activity</b></li> <li>57. Information retrieval</li> <li>58. Research review</li> <li>59. Identify priority issues-agenda for thematic debate</li> </ol>

P7, P32	60. Working visit n.5 for preparation of conceptual frame of Workshop n.5 61. Preparation of Workshop n.5 62. Workshop n.5 63. Prepare Workshop proceedings and dedicated CD-Rom 64. Compile definitive conceptual (rationale) frame 65. Dedicated leaflet
WP6 Prevention and Mitigation of Water Conflicts  P8, P6	66. <b>Work package management by Team Leader (P8) ← management activity</b> 67. Information retrieval and preparation of one Video 68. Research review 69. Identify priority issues-agenda for thematic debate 70. Working visit n.6 for preparation of conceptual frame of Workshop n.6 71. Preparation of Workshop n.6 72. Workshop n.6 73. Prepare Workshop proceedings and dedicated CD-Rom 74. Compile definitive conceptual frame 75. Dedicated leaflet
WP7 Water Participatory Management and Water Governance  P10, P51	76. <b>Work package management by Team Leader (P10) ← management activity</b> 77. Research review on integrated participatory management in water (IPMW) in the Mediterranean 78. Working visit n.7 preparatory to Workshop n.3, to insert debate on IPWM in Workshop n.2 79. Compile conceptual frame of IPMW and use of IPWM in water management 80. Research review on water Governance in the Mediterranean 81. Working visit n.8 preparatory to Workshop n.5, to insert debate on Governance in Workshop n.5 82. Compile conceptual frame of water Governance and use of water Governance in water management 83. Prepare dedicated leaflets and CD-Rom on water Governance and IPWM
WP8 Building Knowledge  P29, P42	84. <b>Work package management by Team Leader (P29) ← management activity</b> 85. Short-term Seminar link to Kick-Off Meeting, on Knowledgebase and Project Information System Management 86. Review on knowledge extraction and knowledge indicators 87. Working visit n.9 preparatory to Workshop n.1, to insert debate on knowledge extraction methodology in Workshop n.1 88. Compile methodology for knowledge extraction to be transfer in Seminar n.1 89. Organise and harmonise extraction of knowledge for WPs' 1-6 90. Compile integrated knowledgebase (WPs' 1÷7)
WP9 Knowledge share  P2, P33	91. <b>Work package management by Team Leader (P2) ← management activity</b> 92. Create methodological-conceptual frame of knowledge transfer within project 93. Organisation and implementation of Seminar n.1 for knowledge transfer of output WSH1 94. Organisation and implementation of Seminar n.2 for knowledge transfer of output WSH 2 95. Organisation and implementation of Seminar n.3 for knowledge transfer of output WSH3 96. Organisation and implementation of Seminar n.4 for knowledge transfer of output WSH4 97. Organisation and implementation of Seminar n.5 for knowledge transfer of output WSH5 98. Organisation and implementation of Seminar n.6 for knowledge transfer of output WSH6 99. Organisation and implementation of Seminar n.7 for knowledge transfer of output WSH7 100. Organisation and implementation of Seminar n.8 final seminar integrating outputs of seminars 1÷7
WP10 Performance, social and sustainability indicators  P2, P10	101. <b>Work package management by Team Leader (P2) ← management activity</b> 102. Start dialogue with citizens and retrieve responses (using FORUM in WP1) 103. Analysis of citizens' responses and prepare results to feed Forum 104. Define hierarchical frame of public priorities outline by citizens within dialogue and to be presented in WSH N.7 105. Re-framing and re-conceptualisation of water scarcity and policy indicators 106. Presentation for debate in WHS 7 of new perspectives for indicators development
WP11 Exploratory benchmarking exercise – Recommendations on the application of the WFD  P1, P44	107. <b>Work package management by Team Leader (P1) ← management activity</b> 108. Information retrieval and review for knowledgebase 109. Review monitoring experience in Mediterranean countries and issues related to the implementation of the WFD 110. Working visit n.10 for preparation of conceptual frame of Workshop n.7 111. Preparation of Workshop n.7 112. Workshop n.7 113. Prepare post-consensus (after WSH7 N.7) list of indicators for benchmarking 114. Prepare Workshop proceedings and dedicated CD-Rom 115. Compile recommendation for benchmarking in the Mediterranean and areas identification 116. Prepare draft of guidelines-recommendation to seek consensus in the Int. Conference (WP1), on the application of the WFD in the Med.

Scientific quality control and scientific tutoring is carried out by partners holding a significant and recognised experience in water issues:

- P2: water in agriculture
- P48: water in other uses
- P25 and P27: law, policy, market
- P10: sustainability
- P7 and P34: water technologies (particularly recycling)
- P29 and P43: water resources hydrology, water basin hydrology
- P24: water culture
- P8: water negotiation / water conflict

#### Adequacy of overall approach

Sustainability, effective dialogue and integration of water management in the different physical and non-physical factors lie at the core of MELIA discussion:

- The bottom up and ample participatory approach of the MELIA partnership involved in the integrated water management, based on the full involvement of water users jointly with scientists and decision makers (for a total number of 63 institutions) in the formulation of the common conceptual frames and assessment of “what to do?” will produce more impact on the territory. Through the water users and NGOs’ involved as member of MELIA, it will be easier to ensure and maintain links with the reality of the territory, and take into account of their needs in the dialogue with decision-policy makers and scientists of the project.
- In this view, it is also foreseen the promotion of a continuous open public dialogue through the Internet based FORUM (WP0) for all the duration of the project (4 years). Each partner will do its best to stimulate, within its own country, the dialogue with citizens and facilitate their access to the FORUM rooms of WP1. Within these rooms, citizens formulate questions or bring their own interests, thoughts and needs to the attention of the FORUM. All this is planned in order to include the citizen perceptions, and not only project partners views, within the dialogue. The citizens' inputs are analysed (through WP 10) with the aim of building a frame of common public priorities to be taken into account within the Workshops and the International Conference.
- The dialogue, knowledgebase and the recommendation on the implementation of the Water Framework Directive will be seen by accounting the integration with the three “capitals” of the sustainable development (social-cultural, economic and natural). In addition, some partners of MELIA (P2, P27, P30) will support the dialogue and knowledgebase on water management with socio-economic<sup>14</sup> and environmental indicators (among which the climatic<sup>15</sup> indicators). This will enable the development of common conceptual frame and recommendations to policy makers – for the good application of the Water Framework Directive in the Mediterranean - by taking into account the long-term perspective.
- It is also drawn the attention to the natural “co-ordination” of MELIA with other existing projects, due to the fact that most of the MELIA partners are involved in other projects as members or co-ordinators. These projects normally address focused research in the different aspects of water and are often mono-discipline. In these project the participation is often limited to scientists and professionals of the relevant field focused. It also happens that results of targeted projects are poorly exploited or poorly integrated each with another. Partners of MELIA will bring reviews of these other projects into the regional dialogue and will integrate them in the knowledgebase.
- The promotion of integrated water management, which is environment and socio-economic sustainable, that responds to end-users as well as large scale water management issues and need of knowledge of effective released of pressure on freshwaters and ecosystems, and adequate allocation of water among the different users to prevent conflicts.

<sup>14</sup> Partners 18, 25, 27 are specialising in socio-economics, policies and environmental indicators, and will be responsible for the correct formulation of the base-line for long-term scenarios.

<sup>15</sup> MELIA will establish link for data exchange with the past and existing network on climate change like CLIVAR, EUROCLIVAR, GCOS (Global Climate Observing System) and others. The partner P2 is co-ordinator of a EC-INCO project on Water Saving in the Mediterranean, through which climatic indicators are also used for the long-term assessment.

- The debate and analysis to enhance a new and more sustainable perspective to develop and use water scarcity and water policy indicators that should avoid the present "deception of numbers", but should take into account the complex interlinking between physical and non-physical factors and the full integration with sustainability.

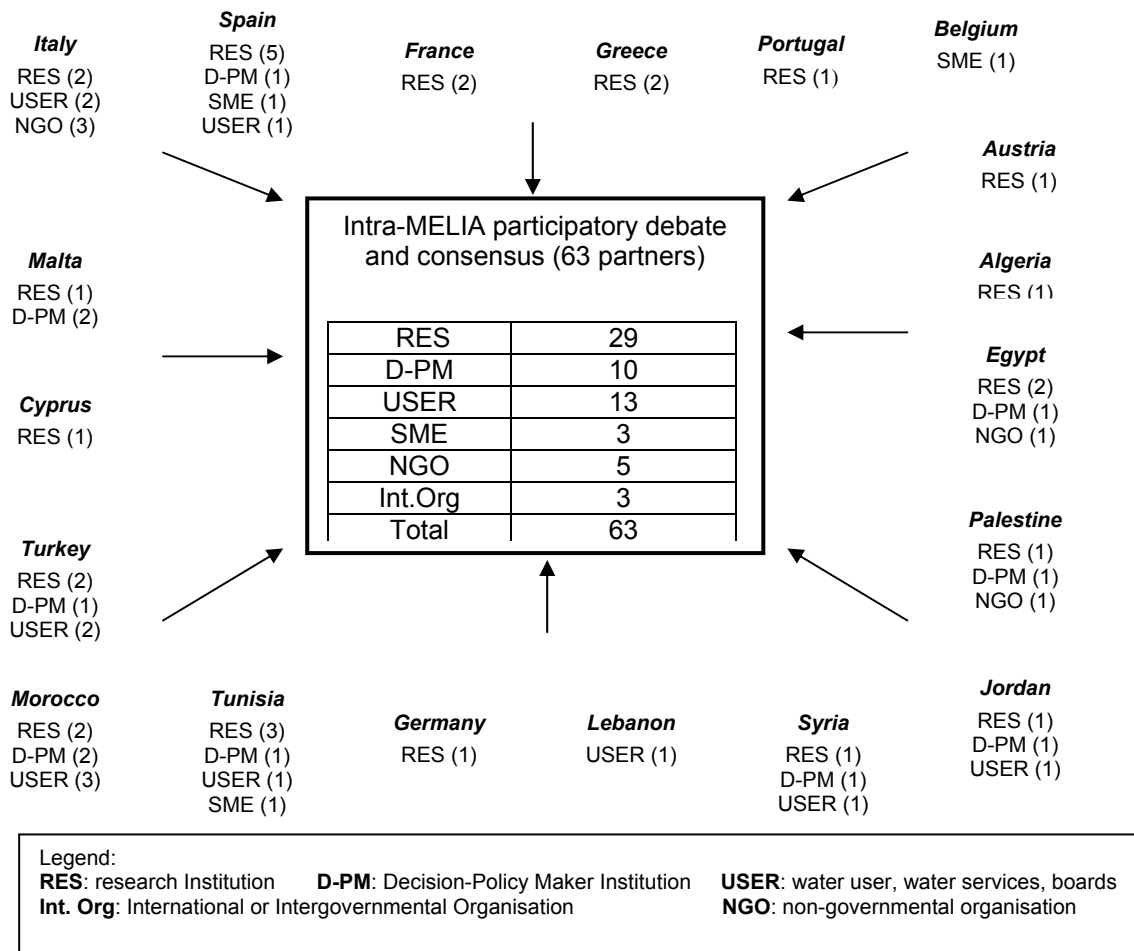
From the consortium structure point of view the regional approach of MELIA is effective and adequate, each Mediterranean country participating widely through Researcher, Decision-Policy Makers and water users. The participation structure is shown in Figure 3. The Chairman (P2) of the Steering Committee has an inter-governmental status and is already co-ordinating and co-funding Mediterranean networks of institutions and scientists from all the South-Mediterranean countries and can give a great impulse to the communication and dialogue within MELIA. Partner 44 represents an International Network of Basin Management Authorities in the Mediterranean Area, and will incorporate contributions from their own members and guarantee the dissemination of the results of MELIA among key stakeholders

### *Management*

The Management structure is described in detail in Section 2, as required by the Guide for Proposers. The MELIA Coordinated Action is a complex structure with more than 60 participants from all the different Mediterranean countries, different academic backgrounds and different societal and economic sectors. This Project is organized in a number of interlocked Work Packages. Each Work Package will be lead by a Work Package Leader, and subdivided in a number of tasks, related to concrete deliverables, such as conceptual frame document, knowledgebase, proceedings of Workshops and other type of meetings, background documents, assessment documents, recommendation documents, videos, CD-roms, dissemination material, etc.. Each task will be organized by a task leader and executed with the help of the other assigned partners. The WP Leader is responsible for the organization of the different tasks within the WP, the assignment of resources, the respect of the WP time-schedule and the delivery of their results to the Coordinator in due time. Each Work Package affects the work performed in the others and shares a certain number of common participants. Therefore, a good matching and coordination of activities is absolutely necessary.

The management of MELIA will be structured at three levels, dealing with different decisions making domains related to the targeted objectives and the working procedures.

**Fig. 5: Structure of participation by different countries and categories**



Events: working visits, workshops, seminars, conference

A number of interlinked events (International Conference, 10 Working Visits, 7 Workshops, 8 Seminars) are foreseen (Table 2). These events, together with the permanent Internet based Forum, are the main tools to promote dialogue and communication among the 63 Institutional partners of Melia and improve communication link with citizens or with external institutions. Working Visits, Workshops and Seminars constitute a frame of events, which are interlinked according to the following scheme:

**Working visits**, as a mean of working groups seeking consensus for the definition of thematic priorities, issues and agenda to be discussed within **Workshops**



**Workshops**, as a mean for consensus on common conceptual frame-knowledge to be built in WP8, which will be shared and transferred through **Seminars** and disseminated through the FORUM and partners



**Seminars** for transfer and sharing of conceptual frame derived from Workshops and final results of all WPs' and knowledgebase from WP8

The definition of priorities will be drawn by the working groups during the Working Visits by accounting also the inputs uploaded in the FORUM by the citizens through the continuous Internet based public dialogue. WP10, through the analysis of the inputs uploaded by the external groups and citizens in the FORUM, will provide the Working Groups and Workshops with a comprehensive frame of citizens' positions and perceptions related to the selected thematic aspects of WPs 1 to 6.

The Working Visits are events preparatory to the Workshops. More specifically, the 10 Working visits are carried out by some 8 to 10 partners (selected on a rotation base – see relevant task in Table 1) in order to identify – on the base of the output of public dialogue with citizens, information retrieval, preliminary review – the relevant issues and thematic agenda, and conceptual frame, to which the linked Workshop should address. Links between Working Visits and Workshops are shown in Table 2 and Fig. 3 (Gantt). Location of Working Visits is shown in Table 2.

The Workshops put together the various categories involved in MELIA to establish direct communication, debate, shared/common conceptual frame to support water management. The Workshops will also take into account the establishment of procedures for self-sustaining future activities within a possible permanent structure for a continuous dialogue. It is expected that long-term interest groups will be formed at the Workshops. From the second Workshop on, each Workshop (2, 3, 4, 5, 6, 7) will build its on common conceptual frame by capitalising from the dialogue occurred in the previous workshop/s.

The 7 Workshops are important milestones of the MELIA, each of these milestones contributing to the achievement of the overall objective. Each workshop will last three days. The definitive agenda of each Workshop will be provided by the Working Visits. Within each Workshop, a special session “virtual visit to pilot area” will be dedicated to selected relevant experiences, trials, projects, and demonstrations.

The deliverable of the Workshops will be the seven proceedings. The proceeding will be printed in copies of ca. 750 per Workshop. Additionally the Workshops’ results will be made available and disseminated in the form of dedicated booklets-leaflets. A representative of the European Commission will be invited to the Workshops. Location of Workshops is shown in Table 2.

Seminars are participated by internal partners or external Institutions indicated by the partners as good receptor for knowledge share. Seminars come downstream of Workshops and last 10 days, for a maximum number of 17 participants (one participant x each Mediterranean country involved in MELIA). Location of Seminars is shown in Table 2.

The International Conference is the final project event and constitutes the maximum effort done by MELIA for dialogue and for the most ample dissemination of the results achieved. The Conference is the event that completes and integrates the 7 Workshops and the overall activities of MELIA. The Conference is open to all partners + external institutions up to around 150 participants. Conference location and date are shown in Table 2. Details on the Conference are given in WP N.0.

Table 6: Main project events

Event	Host country	Date	Duration and total N. of participants	Work Package and event responsible partner	Focus
<b>PROJECT START-UP</b>					
Kick-off Meeting + S.M. (Steering Meeting) + Short start-up seminar 1 (all events in the same date and place)	Spain	1 <sup>st</sup> month	4days All partners (10 for SM1)	P1, P2 WP 0	Kick-off meeting to launch project, agree detailed attribution of tasks, agree detail schedule. SUS on knowledgebase methodology and ISM
<b>WORKING VISITS</b>					
Working visit 1	Tunisia	4 <sup>th</sup> month	5 days 8-10 project partners	WP1 P11, (P24)	Preparatory work to WSH 1 and consensus on agenda-priorities for debate of WSH 1
Working visit 2	Cyprus	10 <sup>th</sup> month	5 days 8-10 project partners	WP2 P34 (P13)	Preparatory work to WSH 2 and consensus on agenda-priorities for debate of WSH 2
Working visit 3	Jordan	16 <sup>th</sup> month	5 days 8-10 project partners	WP3 P15 (P20)	Preparatory work to WSH 3 and consensus on agenda-priorities for debate of WSH 3
Working visit 4	Malta	22 <sup>nd</sup> month	5 days 8-10 project partners	WP4 P18 (P27)	Preparatory work to WSH 4 and consensus on agenda-priorities for debate of WSH 4
Working visit 5	Egypt	28 <sup>th</sup> month	5 days 8-10 project partners	WP5 P7 (P32)	Preparatory work to WSH 5 and consensus on agenda-priorities for debate of WSH 5
Working visit 6	Turkey	34 <sup>th</sup> month	5 days 8-10 project partners	WP6 P8 (P6)	Preparatory work to WSH 6 and consensus on agenda-priorities for debate of WSH 6
Working visit 7	Italy	16 <sup>th</sup> month	5 days 8-10 project partners	WP7 P10 (51)	Preparatory work and consensus for insert in debate in WSH 3
Working visit 8	Morocco	28 <sup>th</sup> month	5 days 8-10 project partners	WP7 P10 (51)	Preparatory work and consensus for insert in debate in WSH 5
Working visit 9	France	4 <sup>th</sup> month	5 days 8-10 project partners	WP8 P29 (P42)	Preparatory work and consensus for insert in debate in WSH 1
Working visit 10	Spain	40 <sup>th</sup> month	5 days 8-10 project partners	WP11 P1 (P44)	Preparatory work to WSH 7 and consensus on agenda-priorities for

Event	Host country	Date	Duration and total N. of participants	Work Package and event responsible partner	debate of WSH 7 Focus
<b>WORKSHOPS</b>					
Workshop N.1+ SM 2	Tunisia	6 <sup>th</sup> month	3 days + 0,5 day SM2 All partners (10 for SM2)	WP1 P11, (P24)	Water culture
Workshop N. 2 + SM 3	Cyprus	12 <sup>th</sup> month	3 days + 0.5 day SM3 All partners (10 for SM3)	WP2 P34 (P13)	Assessment of Technological Perspectives in Water Management
Workshop N. 3 + SM 4	Morocco	18 <sup>th</sup> month	3 days + 0.5 day SM4 All partners (10 for SM4)	WP3 P15 (P20)	Rational use of water resources
Workshop N. 4 + SM 5	Malta	24 <sup>th</sup> month	3 days + 0.5 day SM5 All partners (10 for SM5)	WP4 P18 (P27)	Water Value
Workshop N. 5 + SM 6	Egypt	30 <sup>th</sup> month	3 days + 0.5 day SM6 All partners (10 for SM6)	WP5 P7 (P32)	Water policy
Workshop N. 6 + SM 7	Turkey	36 <sup>th</sup> month	3 days + 0.5 day SM7 All partners (10 for SM7)	WP6 P8 (P6)	Prevention and Mitigation of Water Conflicts
Workshop N. 7	Spain	42 <sup>nd</sup> month	3 days All partners	WP11 P1 (P44)	Exploratory benchmarking exercise – Recommendations on the application of the WFD
<b>SEMINARS (MOBILITY)</b>					
Seminar N.1	Italy	8 <sup>th</sup> month	10 days 17 participants	WP8 P2 (Italy)	Transfer knowledge on WP1
Seminar N.2	Cyprus	14 <sup>th</sup> month	10 days 17 participants	WP8 P34 (Cyprus)	Transfer knowledge on WP2
Seminar N.3	Italy	20 <sup>th</sup> month	10 days 17 participants	WP8 P15 (Italy)	Transfer knowledge on WP3
Seminar N.4	Malta	26 <sup>th</sup> month	10 days 17 participants	WP8 P18 (Malta)	Transfer knowledge on WP4
Seminar N.5	Egypt	32 <sup>nd</sup> month	10 days 17 participants	WP8 P7 (Egypt)	Transfer knowledge on WP5
Seminar N.6	Turkey	38 <sup>th</sup> month	10 days 17 participants	WP8 P8 (Turkey)	Transfer knowledge on WP6
Seminar N.7	Syria	44 <sup>th</sup> month	10 days 17 participants	WP8 P10 (Syria)	Transfer knowledge on WP7
Seminar N.8	Italy	45 <sup>th</sup> month	10 days 17 participants	WP8 P2 (Italy)	Transfer knowledge on integration WPs
<b>CONCLUSIVE EVENT</b>					
<b>International Conference</b>	Italy	47 <sup>th</sup> month	4 days All partners + 50 external	WP0 P2 (Italy)	MELIA and recommendation to policy makers



<b>Work package list (full duration of project)</b>
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Work-package No.	Work Package title	Lead contractor No	Person-months	Start month	End month	Deliverable No.
WP0	Co-ordination and management	P1, P2	75	1	48	D1,D2,D3,D4, D5,D6,D7,D8, D9,D10,D11, D12,D13,D14, D15.
WP1	Water culture	P11, P24	31	2	12	D16,D17,D18, D19,D20,D21.
WP2	Assessment of Technological Perspectives in Water Management	P34, P13	71	7	20	D22,D23,D24, D25,D26,D27.
WP3	Rational use of water resources	P15, P20	77	14	29	D28,D29,D30, D31,D32,D33.
WP4	Water Value	P18, P27	60	19	35	D34,D35,D36, D37,D38,D39.
WP5	Water policy	P7, P32	43	23	39	D40,D41,D42, D43,D44,D45.
WP6	Prevention and Mitigation of water conflicts	P8, P6	53	26	41	D46,D47,D48, D49,D50,D51.
WP7	Water participatory Management and Water Governance	P10, P51	43	10	35	D52,D53,D54, D55,D56,D57, D58,D59.
WP8	Building Knowledge	P29, 42	53	1	42	D60,D61,D62.
WP9	Knowledge share	P2, P33	31	1	43	D63,D64,D65, D66,D67,D68, D69,D70,D71, D72.
WP10	Performance, social and sustainability indicators	P2, P10	31	5	42	D73,D74,D75
WP11	Exploratory benchmarking exercise – Recommendations on the application of the WFD	P1, P44	37	21	46	D76,D77,D78, D79,D80,D81, D82.
	<b>TOTAL</b>		<b>605</b>			

### Deliverables list (full duration of CA)

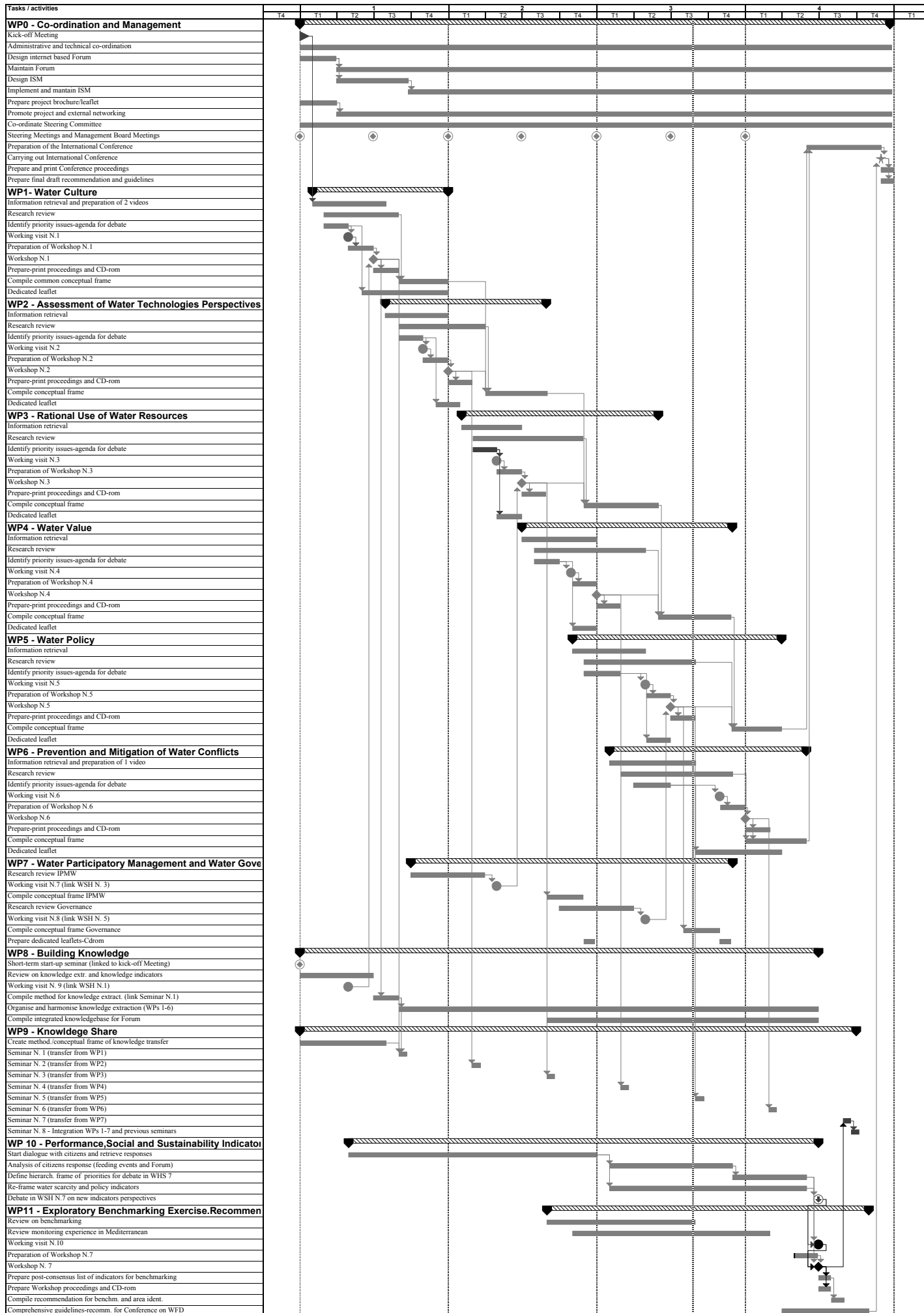
Deliverable N°	Deliverable title	Delivery date	Nature	Dissemination level
WP0				
D1	Kick-off Meeting Report	1*	R	CO
D2	Internet Forum completed and accessible	6	P	PU
D3	Accessible Forum facilities for download-uploads	6	P	PU
D4	Information and Knowledge Management System	18	P	PU
D5	Electronic newsletters	6**	O	PU
D6	Project brochure	3	O	PU
D7	Project CD-Rooms (x2)	24, 48	D	PU
D8	Steering Meeting Minutes and Management Board Minutes	1,6,12,18,24,30,36	O	PU
D9	Proceedings of International Conference	48	O	PU
D10	1 <sup>st</sup> year project annual report	12	R	PU
D11	2 <sup>nd</sup> year project annual report	24	R	PU
D12	3 <sup>rd</sup> year project annual report	36	R	PU
D13	4 <sup>th</sup> year project annual report	47	R	PU
D14	Post-consensus on comprehensive recommendation on IWM in Med.	48	R	PU
D15	Project final report	48	R	PU
WP1				
D16	Minutes of Working Visit N.1	4	O	CO
D17	Proceedings of Workshop N.1	7	O	PU
D18	Abstracts of research review for building knowledgebase on WCULT	9	R	PU
D19	Consensus report for recommendation on WCULT	9	R	CO
D20	Short monograph: Conceptual Frame of WCULT in the Mediterranean	12	O	PU
D21	Dedicated leaflet on WCULT for dissemination and diffusion + 2 videos on water culture and gender	12	O	PU
WP2				
D22	Minutes of Working Visit N.2	10	O	CO
D23	Proceedings of Workshop N.2	15	O	PU
D24	Abstracts of research review for building knowledgebase on WTECH	16	R	PU
D25	Consensus report for recommendation on WTECH	16	R	CO
D26	Short monograph: Conceptual Frame of WTECH perspectives in the Mediterranean	21	O	PU
D27	Dedicated leaflet on WTECH for dissemination and diffusion	13	O	PU
WP3				
D28	Minutes of Working Visit N.3	16	O	CO
D29	Proceedings of Workshop N.3	20	O	PU
D30	Abstracts of research review for building knowledgebase on RWU	23	R	PU
D31	Consensus report for recommendation on RWU	23	R	CO
D32	Short monograph: Conceptual Frame of RWU in the Mediterranean	29	O	PU
D33	Dedicated leaflet on RWU for dissemination and diffusion	18	O	PU
WP4				
D34	Minutes of Working Visit N.4	22	O	CO
D35	Proceedings of Workshop N.4	24	O	PU
D36	Abstracts of research review for building knowledgebase on WPRICE	28	R	PU
D37	Consensus report for recommendation on WPRICE	28	R	CO
D38	Short monograph: Conceptual Frame of WPRICE in the Mediterranean	35	O	PU
D39	Dedicated leaflet on WPRICE for dissemination and diffusion	24	O	PU
WP5				
D40	Minutes of Working Visit N.5	28	O	CO
D41	Proceedings of Workshop N.5	30	O	PU
D42	Abstracts of research review for building knowledgebase on WLAW	32	R	PU
D43	Consensus report for recommendation on WLAW	32	R	CO
D44	Short monograph: Conceptual Frame of WLAW in the Mediterranean	39	O	PU
D45	Dedicated leaflet on WLAW for dissemination and diffusion	30	O	PU
WP6				
D46	Minutes of Working Visit N.6	34	O	CO
D47	Proceedings of Workshop N.6	39	O	PU
D48	Abstracts of research review for building knowledgebase on WCONFLICT	35	R	PU
D49	Consensus report for recommendation t on WCONFLICT	35	R	CO

D50	Short monograph: Conceptual Frame of WCONFLICT in the Mediterranean	41	O	PU
D51	Dedicated leaflet and 1video on WCONFLICT	39	O	PU
WP7				
D52	Research review report on IPWM	15	R	PU
D53	Minutes of Working Visit N.7	16	O	CO
D54	Conceptual frame of IPWM	35	O	PU
D55	Research review report on Water Governance (WGOV)	27	R	PU
D56	Minutes of Working Visit N.8	28	O	CO
D57	Conceptual frame of WGOV and use of WGOV in water management	34	O	PU
D58	Dedicated leaflet on IPWM and WGOV	24	O	PU
D59	Dedicated CD-Rom on IPMW and WGOV	35	D	PU
WP8				
D60	Minutes of Working Visit N.9	4	O	CO
D61	Methodological handbook on knowledge extraction / building	10	R	RE
D62	Compiled integrated knowledgebase WP1-2-3-4-5-6-7 for Forum	42	O	PU
WP9				
D63	Methodological handbook of knowledge transfer within project	7	R	RE
D64	Notes and handbook Seminar N.1	9	O	RE
D65	Notes and handbook Seminar N.2	15	O	RE
D66	Notes and handbook Seminar N.3	21	O	RE
D67	Notes and handbook Seminar N.4	27	O	RE
D68	Notes and handbook Seminar N.5	33	O	RE
D69	Notes and handbook Seminar N.6	39	O	RE
D70	Notes and handbook Seminar N.7	45	O	RE
D71	Notes and handbook Seminar N.8	46	O	RE
D72	Results of knowledge transfer	48	R	PU
WP10				
D73	Analysis results of dialogue with citizens	35	R	PU
D74	Hierarchical list of public concerns	41	O	PU
D75	New frame of water scarcity and water policy indicators	41	R	CO
WP11				
D76	Review report on benchmarking in water management	32	R	PU
D77	Review monitoring experience in the Med. Countries	39	R	PU
D78	Minutes of Working Visit N. 10	42	O	CO
D79	Proceedings of Workshop N.7	43	O	PU
D80	Post-consensus report on benchmarking indicators	43	R	CO
D81	Recommendation report on benchmarking and identified areas in Mediter.	44	R	PU
D82	Draft report on comprehensive recommendations on the application of the Water Framework Directive to seek consensus in International Conference	46	R	CO

\* Month in which the deliverable is available

\*\* From the 6<sup>th</sup> month every 6 months.

***MELIA GANTT***



### Work Packages description

<b>Work Package number</b>	0	<b>Start date or starting event:</b>					1 month
	<b>P1</b>	<b>P2</b>					
<b>Person-months per participant:</b>	<b>49</b>	<b>26</b>					

#### **Objectives**

The specific objectives of this Work Package lie on: -) the overall co-ordination and management at network level, -) the provision of a final recommendation report to policy-decision makers on the possibilities and perspectives of the regional application of the Water Framework Directive in the Mediterranean, -) the implementation and maintenance of a permanent Mediterranean-wide FORUM based on knowledge, open communication, interactive dialogue.

#### **Description of work**

##### Brief methodology

The WP 0 is aimed at developing a comprehensive Internet based communication, knowledge management and networking through the implementation of a web site with a Forum. The Forum will be designed as a "virtual campus" through which the online visitors can access a number of facilities: a) the network Information Base designed and maintained by an Information System Management-ISM (including both information downloading and uploading routines for partners); b) open rooms dedicated respectively to WPs 1, 2, 3, 4, 5, 6, 7, 10, 11; c) public room dedicated to establish continuous dialogue with external participants including citizens and providing information of the outputs of MELIA. Citizens will be stimulated and facilitated by MELIA partners, acting as country focal point, to upload their own views, ideas, questions in regard to the themes selected in the thematic Work Packages 1 to 6; d) one room dedicated to WPs 8 and 10 on integration and integrated "knowledge" built-up with input of Thematic Work Packages. This room will be maintained with the help of a knowledge system management; d) one room dedicated to project events, their schedule and progresses. The event room will also incorporate online downloadable: -) six-monthly newsletters, -) proceedings of workshops and Conference, project reports, report of working visits, handbooks of seminars.

As described above the Forum will create the basis of continuous communication within MELIA and between MELIA, citizens and private-public Institutions. It will give a complete overview of integration of the different aspects of the management of limited water resources, with a dynamic perspective and in an interactive way.

##### Work to be done

The Work Package contains a well-balanced blend of co-ordination activities and management activities.

##### Management activities at network level

The management activities are: -) co-ordination of the network; -) contract management and liaising with the EC (P1); -) maintain internet based Forum; -) co-ordinate Information System Management (ISM) at network level; -) co-ordinate knowledge system management at network level; -) management of the Steering Committee and manage official external links with European and Mediterranean institutions on Integrated Water Management: participation of the chairman to International Conference, debate, seminars, relevant meetings at Euro-Mediterranean level; -) Manage the Steering Meetings; -) Co-ordinate the Management Board Meetings.

##### Co-ordination activities

The co-ordination activities are: - design internet based Forum; -) design information and knowledge system management; -) prepare project brochures/leaflets; and coordinate the videos production -) promote and establish continuous interactive dialogue with citizens and private-public Institutions; -) preparation of the International Conference (identifying relevant issue and conceptual frame for thematic agenda of the Conference; -) carrying out the International Conference; prepare / print Conference proceedings; -) Compile post-consensus (after International Conference) final draft guidelines-recommendation on the application of the Water Framework Directive in the Mediterranean (provisional draft pre-consensus prepared in WP11).

#### **Deliverables**

D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15. See table of deliverables for titles, nature and date of each deliverable.

**Milestones and expected result**Milestones:

- Activated and maintained Internet based Forum
- Full access to MELIA Information and Knowledge System Management (IKSM)
- International Conference and post-consensus recommendation on Integrated Water Management

Expected results:

- ) Ample access, contribution, use by MELIA partners and external parties to/of established Forum and IKSM
- ) Improved national and regional dialogue at different levels
- ) Increased awareness of Mediterranean citizens, decision and policy makers to develop sustainable Integrated Water Management

Work Package number	1		Start date or starting event:				2 <sup>nd</sup> month	
	P1	P2	P10	<b>P11</b>	P22	<b>P24</b>	P26	
<b>Person-months per participant:</b>	1	2	0.5	<b>7</b>	4	<b>6</b>	1	
	P39	P45	P46	P49	P52	P53	P56	
<b>Person-months per participant:</b>	1	0.5	0.5	1	1	1	2	
	P63							
	2							

### Objectives

The achievement on an increased public and private awareness and common comprehensive conceptual frame of water traditional practices and different societal attitudes toward water use in the Mediterranean under scarcity conditions.

### Description of work

#### Brief background and methodology

A correct management of limited water resources must be seen not only in terms environment and economics but also in terms of culture and related. Therefore, there is a need of developing a culturally-socially sound water management by incorporating newly valorised and re-appreciated water traditions and societal water values within local and regional water policies and actions in the Mediterranean. And recuperate them both as "Mediterranean Heritage" and as an efficient way of water use guaranteeing a well balanced ecosystem. The Work Package will also open a permanent link with the newly funded project FOGGARA (EC-INCO,5<sup>th</sup> FP), to incorporate knowledge on the Foggaras (Mediterranean drainage tunnels). Water traditions will be brought into the MELIA dialogue and compared each with the other, and also assessed for their adaptation to a rapidly changing Mediterranean society and their combination and integration within the "modern" water engineering to enhance developing of a socially-culturally sound water technology vision (link with WP2). In this view, dialogue and communication activities within MELIA will be an important tool to build a conceptual frame and vision that goes across the different and relevant water players (with special emphasis on knowledge transfer from rural water users towards researchers and policy makers) and extend to the Mediterranean region. Consensus among the project water players will be built and based on the formulation of a conceptual frame that aims at: a) fostering the knowledge of traditional practices of water production, harvesting and distribution; b) fostering the knowledge of traditional practices for integrated cycle production organization, harvesting and distribution; fostering traditional practices for integrated cycle production organization; c) encouraging programs of autopoiesis and sustainability of the urban system; d) involving the population by highlighting the roles of elderly local people, women, children and marginal strata of society establishing territorial networks between municipalities, communities and parks. In building the conceptual frame and consensus on the re-appreciation of the water cultural heritage, the following principles will be taken into account: -) the enhancement of local resources; -) the ability in local management; -) low costs that can be spent at local level; -) depending on social and economic conditions, fostering the preference for a high quantity of labor force rather than capitals; -) the close relationship with the environment; -) the production cycles and consumption mutually integrated; -) the tendency towards zero emissions; -) the accurate resource management; -) place and energy saving; -) ecosystem management.

#### Work to be done

- Work package management by WP Leader (**P11 and Deputy Leader P24**) ⇐ management activity
- Information retrieval and preparation of two videos respectively on water culture and women in water management
- Research review
- Identify priority issues-agenda for thematic debate
- Working visit n.1 for preparation of conceptual frame of Workshop n.1 on Water Culture
- Preparation of Workshop n.1 on Water Culture;
- Carrying out Workshop n.1 on Water Culture
- Prepare Workshop proceedings and dedicated CD-rom
- Compile definitive common conceptual frame;
- Dedicated leaflet



**Deliverables:**

D16, D17, D18, D19, D20, D21. See Table of Deliverables for titles, nature and dates of each deliverable

**Milestones and expected result**Milestones:

- Workshop N.1 and consensus realised
- Common conceptual frame ready for building common knowledgebase in WP8

Expected results:

- Improved understanding of cultural heritage and societal impact on water management
- Increased awareness in regard of the need of a culturally-socially sound water management and planning

Work Package number	2		Start date or starting event:				7 <sup>th</sup> month	
	P1	P4	P5	P6	P7	P8	P9	
Person-months per participant:	2	2	2	3	2	2	2	
	P12	<b>P13</b>	P15	P16	P17	P18	P19	
Person-months per participant:	4	<b>4</b>	2	3	2	2	1	
	P20	P23	P26	P28	P29	P33	<b>P34</b>	
Person-months per participant:	3	3	1	2	2	1	<b>7</b>	
	P35	P36	P37	P40	P41	P43	P44	
Person-months per participant:	3	1	1	1	2	1	2	
	P45	P48	P50	P55	P62			
Person-months per participant:	0.5	1	2	1	3			

### Objectives

The specific objective of this Work Package is the formulation of a conceptual frame based on the promotion of new-sustainable water technology perspectives and the integration of the use of water technology options in the sustainable management of limited water resources and policies

### Description of work

#### *Brief background and methodology*

A clarification of the concept of water technology applied to the development of limited water resources and the future need of it in the Mediterranean are important issues to be debated and clarified within MELIA. Have water technology options been developed in a sustainable way throughout the Mediterranean (particularly in the developing countries of the Med. Region) during the last 40 years? Do we have today innovative and alternative "sustainable" perspectives of water technology development and share (and not only transfer) in the developing countries of the Mediterranean? Water technology is an example of integration where engineering and science come together in water management, but does this integration take into account "equally" social, economic and environmental dimensions? This is the ground-base of the debate within MELIA. Consequently to the formulation of a consensus on the social-economic-environment future perspectives that Water Technology must envisage in the Mediterranean, shared conceptual frame will also include the assessment of relevant Mediterranean-wide options and experiences brought directly into MELIA by all the different categories of project partners or provided indirectly by the different external stakeholders linked to partners or provided by the literature.

Technology plays an important role in water management. Over the last decade of the 20<sup>th</sup> century, new strategies for the management of water resources have been promoted. These strategies are recommended in several chapters of Agenda 21 and they are also confirmed in the First Paragraph of the UN Program on Integrated Water Resources Development and Management, which states that the development of appropriate water management requires the application of new sustainable technologies both in terms of analysis and engineering. Debate will address: a) engineering solutions for energy consumption, quality and ecosystem (treatment and re-cycling), system performance and efficiency; b) engineering solutions for the development of analysis tools for water quality-quantity modelling, GIS, global positioning systems, remote sensing. A particular attention will be finally given to the promotion of a culturally-socially sound water technology (link with WP1 – Water culture) and to the development of an equitable system of sharing, accessing and using technologies between the EU countries and the developing countries of the Mediterranean.

#### *Work to be done*

- Work package management by WP Leader and Deputy Leader (**P34 and P13**) ← management activity
- Information retrieval
- Research review; - Identify priority issues-agenda for thematic debate
- Working visit n.2 for preparation of conceptual frame of Workshop n.2 on Water Technologies
- Preparation of Workshop n.2 on Water Technologies
- Carrying out Workshop n.2 on Water Technologies.
- Prepare Workshop proceedings and dedicated CD-Room
- Compile definitive common conceptual frame; - Dedicated leaflet.

**Deliverables**

D22, D23, D24, D25, D26, D27. See Table of Deliverables for title, nature and dates of each deliverable

**Milestones and expected result**Milestones:

- Workshop N.2 and consensus realised
- Consensus on basic concepts and perspectives of Water Technologies in the Mediterranean
- Common conceptual frame ready for building common knowledgebase in WP8

Expected results:

- Improved understanding and perspectives of Water Technology development and transfer in the Mediterranean
- Increased awareness in regard of the need of a culturally-socially sound water technology in the Mediterranean.

Work Package number	3		Start date or starting event:				14 <sup>th</sup> month	
	P2	P3	P4	P6	P7	P8	P12	
Person-months per participant:	2	2	2	2	2	2	3	
	P13	P14	<b>P15</b>	P16	P17	P19	<b>P20</b>	
Person-months per participant:	1	2	<b>7</b>	2	2	2	<b>4</b>	
	P21	P23	P26	P28	P29	P32	P33	
Person-months per participant:	4	2	2	2	1	2	2	
	P34	P35	P36	P37	P39	P42	P43	
Person-months per participant:	2	4	1	1	1	1	1	
	P45	P47	P49	P50	P51	P52	P53	
Person-months per participant:	1	1	1	0.5	1	1	1	
	P54	P55	P57	P58	P59	P60	P62	
Person-months per participant:	1	1	1	1	1	1	3	

### Objectives

Improve dialogue, consensus and formulation of a common “technical” conceptual frame and knowledge on the rational use of limited water resources to support strategies of water savings, water conservation and release of pressure to scarce natural water yields.

### Description of work

#### *Brief background and methodology*

The issue of the correct use of limited water resources in the Mediterranean considers here the debate and formulation of frames around “physical” options or strategies. In broad sense, the “physical” aspects related to the use of water resources are: the quality and yields of surface and groundwater, the ecosystem (land, soil, water, biocenosis), health, the physical condition of water infrastructures, optimisation of water uses by different users (agricultural, urban, industrial). In particular, when addressing areas under water scarcity, the technical priority goes to strategies of water saving: improve performance-efficiency by use and users, increasing water yields, reducing pressure on natural water bodies and consequently on ecosystem. Strategies of water conservation (quality of water) are also a priority, since the decrease of water quality is progressively leading to the impossibility of using the already low volumes of water available for urban and agricultural uses. Of course, relationships to institutional-pricing-social-economic-technological-governance-participatory components are to be considered when assessing the feasibility of physical options in water saving and water conservation. Therefore, continuous link with WPs’ 1, 2, 4, 5, 6, 7 will be established to assess feasibility of technical options. Within the WP3, the debate and dialogue on the rational use of water resources will be carried out to assess and promote sector options and schemes of water saving – optimal water use (urban, agricultural and industrial sectors) and water conservation, considering the fact that the important saved water yield will be provided by agriculture, since in the developing countries of the Mediterranean about 75% of the total freshwaters withdrawal is due to agriculture. Thus, the following specific aspects will be addressed: strategies of basins resources management, WUE-WP (Water Use Efficiency and Water Productivity) in agriculture<sup>16</sup>, supply-distribution system performance-hydrological efficiency (irrigation, urban, industrial), use of marginal waters (re-used waste waters, sea water contaminated coastal aquifers) in agriculture and industry, optimisation of coastal rain-fed resources. Options of water savings and water conservation need to be assessed dynamically<sup>17</sup> from the socio-economic and ecosystem point of view (by using sustainable indicators), considering also the problem of physical up-scaling from trial scale (local scale) to catchment or basin scale (linking local saved water yields with catchment-basin water balance and hydrology). The integration and combination of the various

<sup>16</sup> A clarification of terminology is needed. In fact, the term efficiency related to water in agriculture and more recently “water use efficiency – WUE” are often used to express performance of water supply systems and water use activities. In the WP3 the “biological” (physiological) and the “hydrological” (of water supply) efficiencies in agriculture are addressed. Furthermore, since each crop has its own ability to yield a certain product amount per unit amount of water demand, the water productivity (WP) of crops represents an additional set of opportunities for water savings and will be addressed. An continuous and deep link will be maintained with the newly EC-INCO (5<sup>th</sup> FP) funded Thematic Network WASAMED (Water Saving in Mediterranean Agriculture) will be maintained to capitalise its experience. This will be rather easy, since some partners of WASAMED are also partners of MELIA.

<sup>17</sup> Considering short-term and long-term socio-economic and climatic scenarios

opportunities of water savings and water conservation in the different uses will be also addressed when reviewing the existing literature and formulating the conceptual frame<sup>18</sup> and provide protocols of rational use of water resources.

*Work to be done*

- Work package management by the WP Leader and Deputy Leader (**P15 and P20**) ⇐ management activity
- Information retrieval
- Research review
- Identify priority issues-agenda for thematic debate
- Working visit n.3 for preparation of conceptual frame of Workshop n.3 on rational use of water resources
- Preparation of Workshop n.3 on rational use of water resources and basins management
- Workshop n.3 on rational use of water resources
- Prepare Workshop proceedings and dedicated CD-room
- Compile definitive conceptual frame
- Prepare dedicated leaflet

**Deliverables**

D28, D29, D30, D31, D32, D33. See Table of Deliverables for title, nature and dates of each deliverable

**Milestones and expected result**

Milestones:

- Workshop N.3 and consensus realised
- Common conceptual frame ready for building common integrated knowledgebase in WP8

Expected results:

- Improved assessment of strategies needed to optimise use of water resources through combined-integrated saving and conservation practices in urban, agricultural and industrial sector.
- Improved tools for estimation of water saved yields at catchment's scale.
- Increased awareness on best practices for ecosystem and socio-economic sound rational use of water resources.

<sup>18</sup> It is important to address combined water optimisation techniques in different uses to improve information and understand different responses in function of environmental-climatic and socio-economic diversities. Interaction with WPs 1, 2, 3, 6, 7, 10 are fundamental.

Work Package number	4		Start date or starting event:				19 <sup>th</sup> month	
	P1	P2	P3	P8	P10	P16	<b>P18</b>	
<b>Person-months per participant:</b>	1	2	2	3	1	2	<b>7</b>	
	P19	P25	<b>P27</b>	P28	P29	P30	P32	
<b>Person-months per participant:</b>	2	4	<b>2</b>	3	1	1	2	
	P33	P36	P37	P38	P39	P40	P41	
<b>Person-months per participant:</b>	2	1	2	1	1	1	2	
	P42	P43	P46	P47	P48	P49	P50	
<b>Person-months per participant:</b>	1	2	0.5	1	2	1	1	
	P51	P52	P53	P54	P55	P57	P58	
<b>Person-months per participant:</b>	1	1	1	1	1	1	1	
	P59							
<b>Person-months per participant:</b>	1							

### Objectives

To increase awareness on water as economic good and create a common conceptual frame including a scheme of developing sustainable water pricing in the Mediterranean.

### Description of work

#### Brief background and methodology

The literature is plenty of models for the implementation and application of adequate water pricing and tariff schemes-strategies. These models have been formulated and re-formulated in many years for their application in developed and developing countries. In spite of that, many problems still exist particularly in many developing countries of the Southern Mediterranean and many southern-most parts of the Northern Mediterranean. In fact, many of the Mediterranean developing countries suffer from the lack of funds necessary to establish water development projects and plans, which if not seriously considered would lead to aggravation of the economic problems. Upgrading the efficiency of existing municipal and irrigation water supply systems requires new investments that are not easily available. Financing of the systems and tariff collecting for system maintenance is an important constrain to the water management. The formulation of a common conceptual frame must give emphasis to developing new sources of funds to supplement the traditional dependence on national budgetary allocations. Chief among these approaches are measures that seek to mobilise local funds, in particular under the "user pays" and "polluter pays" principle. However, the absence in most countries of modern utilities that meter and charges for their services, coupled with the ineffectiveness of most regulatory controls, limit the source of income and the possibility to fully implement tariff scheme. Needless to mention the strong social and cultural perception in some countries of water as a gift from god or nature. Consensus on shared frame must address the re-assessment and appraisal of economic, cultural and environmental values of water. The introduction of irrigation charges is very important for good. Misuse of water in agriculture is widespread in current irrigation management practices. This is due mainly to the failure in the past to recognize water's economic value and the real cost of water. It is therefore important to formulate a new-common conceptual frame and strategy based on the fact that managing water as an economic good is an important tool to achieving efficient and equitable water use as well as encouraging the conservation and protection of scarce water resources. Dialogue and debate within MELIA will necessarily address the reconciliation of the concept of water as a renewable natural product but also, and mostly, an economic good with the traditional idea of water as a basic necessity and human right. The participatory approach to water pricing is also an important component. In this regard, action debate should be directed to the use of non-price measures to encourage consumers to use water efficiently, including: -) transferring management responsibilities for operations and maintenance to user groups; -) promoting water rights and markets; -) promoting full participatory approach to water pricing.

#### Work to be done

- Work package management by WP Leader and Deputy Leader (**P18 and P27**) ← management activity
- Information retrieval
- Research review
- Identify priority issues-agenda for thematic debate in Workshop 4 on Water Pricing
- Working visit n.4 for preparation of conceptual frame of Workshop n.4 on Water Pricing
- Preparation of Workshop n.4 on Water Pricing
- Workshop n.4 on Water Pricing

- Prepare Workshop proceedings and dedicated CD-rom
- Compile definitive common conceptual frame; - Prepare dedicated leaflet

**Deliverables**

D34, D35, D36, D37, D38, D39. See Table of Deliverables for title, nature and dates of each deliverable.

**Milestones and expected result**Milestones:

- Workshop N.4 and consensus realised
- Common conceptual frame ready for building common integrated knowledgebase in WP8

Expected results:

- Increased awareness on water as a good by the MELIA water users
- "Participated" consensus on formulation of possible water pricing strategies

Work Package number	5		Start date or starting event:				23 <sup>rd</sup> month	
	P1	P4	P5	P6	<b>P7</b>	P10	P18	
<b>Person-months per participant:</b>	1	1	2	1	<b>7</b>	1	2	
	P25	P27	P30	P31	<b>P32</b>	P38	P39	
<b>Person-months per participant:</b>	1	1	2	2	<b>4</b>	2	1	
	P40	P41	P42	P44	P46	P47	P51	
<b>Person-months per participant:</b>	2	2	1	1	1	1	1	
	P54	P55	P58	P59	P60	P61		
<b>Person-months per participant:</b>	1	1	1	1	1	1		

### Objectives

Improve dialogue, consensus and formulation of a common conceptual frame for the harmonisation of national and regional policies to support the sustainable development of water resources under scarcity condition.

### Description of work

#### *Brief background and methodology*

The conceptual frame to be built for future water policy development in the Mediterranean should include as a top priority that both social (people) and ecosystem dimensions get at least the minimum amount of good quality of water in order they can function in a sustainable way. Governments have an important responsibility to ensure that water's most fundamental life-support is fulfilled. Debate and consensus within MELIA should promote towards the governments the adoption of effective and as much as possible common or similar<sup>19</sup> water policies and laws to guide sector activities that sustain social and economic development and protect the environment of the whole Mediterranean region in the future. These common policies will facilitate the development of trade, tourism and investments, by allowing the use of water technologies to match the legal aspects regulating water capture and use. Previous experiences have shown the need to apply the "principle of subsidiarity" to water management, i.e. to enable decision to the lower appropriate, but capable level, closer to the citizens. This implies the accounting for: -) national and regional water resources development should be undertaken in a holistic, determined and sustained way to meet with the promotion of the Euro-Mediterranean area; -) planning and management need decentralisation to an appropriate level within national and trans-national basin boundaries; -) delivery of water services need to be delegated to autonomous and accountable bodies providing measured services in a defined geographical area to their customers for an appropriate fee; -) need to introduce incentives, regulatory controls, public awareness and education promoting economic efficiency, conservation of water resources and protection of the environment; -) need of sharing water resources within and between nations; -) need of regulating the participatory and consultative approach at different levels; -) commitment to sustained capacity building, monitoring, evaluation, research and learning at all levels. Within MELIA, the debate for consensus will produce relevant and important common vision, due to the wide participation foreseen in the dialogue. The common frame will be built on a bottom-up approach, in which the driving force is determined by the water-users and their needs. Link with WP 10 will be established for the definition of indicators that allow the assessment of the integration of existing and future water related policies and strategies with the main components of the sustainable development. In particular, sector policy headline concerns and components will be provided to WP10 by the frame built in WP5.

#### *Work to be done*

- Work package management by WP Leader and Deputy Leader (**P7 and P32**) ← management activity
- Information retrieval
- Research review
- Identify priority issues-agenda for thematic debate
- Working visit n.5 for preparation of conceptual frame of Workshop n.5 on Water Policies
- Preparation of Workshop n.5 on Water Policies
- Workshop n.5 on Water Policies
- Prepare Workshop proceedings and dedicated CD-Rom

<sup>19</sup> Water policies in the Mediterranean developing countries are not harmonised, each country developing its own political agenda. Sustainable regional and not only national water policy agenda is needed to enhance the sustainable development of the Euro-Mediterranean society.



- Compile definitive common conceptual frame
- Dedicated leaflet

**Deliverables**

D40, D41, D42, D43, D44, D45. See Table of Deliverables for title, nature and dates of each deliverable

**Milestones and expected result**Milestones:

- Workshop N.5 and consensus realised
- Policy headline indicators and main component ready for WP10
- Common conceptual frame ready for building common integrated knowledgebase in WP8

Expected results:

- Increased awareness for the bottom-up participatory policy development

Work Package number	6		Start date or starting event:				26 <sup>th</sup> month	
	P1	P2	<b>P6</b>	<b>P8</b>	P13	P14	P25	
<b>Person-months per participant:</b>	1	2	<b>4</b>	<b>7</b>	2	2	2	
	P29	P31	P32	P33	P36	P37	P38	
<b>Person-months per participant:</b>	1	2	1	1	1	1	2	
	P39	P42	P43	P44	P45	P46	P47	
<b>Person-months per participant:</b>	1	1	2	1	1	1	1	
	P49	P50	P51	P52	P53	P54	P56	
<b>Person-months per participant:</b>	1	1	1	1	1	1	2	
	P57	P58	P59	P60	P61	P63		
<b>Person-months per participant:</b>	1	1	1	1	2	2		

### Objectives

Debate and formulation of a shared conceptual frame and knowledge to support action and policies that could prevent and mitigate water conflict at different scales.

### Description of work

#### Short background and methodology

This Work Package holds links with all the other work packages. This is due to the fact that water conflict today – both at trans-boundary level between nations or between users of the same catchment - can be prevented or mitigated through an approach based on evaluation of a scientific and technical point of view, participation, public dialogue and integration. Thus, by understanding and considering all the interlinks among technical, environmental, economic and social interests. And by considering the appropriate level of blend and integration among thematic issues and stakeholders. Depending by the conflict level (nation vs. nation or user vs. user) the following factors must be considered in building a shared conceptual frame:

- trans-boundary level: international policy<sup>20</sup>, correct allocation of water among nations<sup>21</sup>, information<sup>22</sup>
- user vs. user: water policy, participatory management of conflict resolution, allocation among users that takes into account technical, social, economic and ecosystem public interests.

However, for the WP debate, a number of issues are indicated. They are the ones that deserve attention regardless the scale and level of conflict. The parties in the conflict and any independent third party should try to get a good picture of the real sources of the conflict and the interrelations between sources. This requires that they give attention to: -) the physical aspects of water hydrology and management; -) the type of parties involved and their interests and value; -) the relationship between the parties, including the relations with constituencies and possible coalitions; -) the scientific, technical, political, socio-cultural, economic and institutional context. Moreover, despite the increasing amount of literature on water conflict prevention or resolution, much is still unknown. For example, it is not known whether the discussion and negotiation techniques known as Alternative Dispute Resolution (ADR) which seem to work well in developed countries (particularly in USA) could also work in totally different context and if not what kinds of techniques should then be used in the Mediterranean. It is agreed in the international literature that knowledge and awareness must be built today for the formulation of a common Conflict Prevention Frame rather than a Conflict Resolution Frame. Mitigation frame must obviously be addressed within the water conflict frame. Experiences from partners (users, decision makers, researchers) and models of conflict prevention will be brought in the discussion to help MELIA in the formulation of the relevant conceptual frame.

#### Work to be done

- Work package management by the WP Leader and Deputy Leader (**P8 and P6**) ⇐ management activity

<sup>20</sup> At present international law offers little concrete help in resolving or mitigate water conflicts between nations, since no legal framework governs the allocation and use of trans-boundary waters nor recognise the beneficial use of water for ecosystems.

<sup>21</sup> Which can be correctly done if all the riparian nations hold the same knowledge and if their interests are recognised through a comprehensive water management.

<sup>22</sup> The ILA (International Law Association) and ILC (United Nations International Law Commission) have put forward a number of principles: -) exchange hydrological data regularly, -) to inform and consult with water sharing neighbours before taking action that may affect them.

- Information retrieval and preparation of one Video
- Research review
- Identify priority issues-agenda for thematic debate
- Working visit n.6 for preparation of conceptual frame of Workshop n.6 on Water Conflicts
- Preparation of Workshop n.6 on Water Conflicts
- Workshop n.6 on Water Conflicts; -) Prepare Workshop proceedings and dedicated CD-rom
- Compile definitive common conceptual frame on Water Conflict "Water Conflict Prevention-Mitigation Framework"
- Prepare Dedicated leaflet

#### **Deliverables**

D46, D47, D48, D49, D50, D51. See Table of Deliverables for title, nature and dates of each deliverable

#### **Milestones and expected result**

##### Milestones:

- Workshop N.6 and consensus realised
- Common conceptual frame ready for building common integrated knowledgebase in WP8

##### Expected results:

- Agreed "Water conflict prevention and mitigation framework"

Work Package number	7		Start date or starting event:				10 <sup>th</sup> month	
	P1	P2	P9	<b>P10</b>	P11	P24	P25	
<b>Person-months per participant:</b>	1	2	3	<b>7</b>	2	2	2	
	P26	P27	P29	P30	P32	P33	P37	
<b>Person-months per participant:</b>	1	1	1	1	2	1	1	
	P42	P43	P45	P46	P47	P49	P50	
<b>Person-months per participant:</b>	1	2	1	1	0.5	1	0.5	
	<b>P51</b>	P52	P53	P57	P61			
<b>Person-months per participant:</b>	<b>5</b>	1	1	1	1			

### Objectives

- Create a consensus based conceptual frame and determine type of Integrated Participatory Water Management (IPWM) suitable to the different Mediterranean contexts
- Improve public and private awareness on the need of restructuring water management accounting for the implementation of adequate Governance.

### Description of work

#### Brief background and methodology

The degree of effectiveness of any water related plan, which can be derived from the debate and conceptual frames born in the thematic WPs' 1÷6, is highly depending on whether the concepts of Governance and Participatory Approach are adequately taken into account. These two concepts are also at the base of the sustainability regardless the sector action which needs to be undertaken.

Participatory Approach - A fundamental approach developed in the last 10 years, to adopt and implement integrated water management is represented by the "Integrated<sup>23</sup>" Participatory Water Management (IPWM). The IPWM is based on a bottom-up participation by users, providing the associative structure for fair integrated water management. In addition, the gender factor is also an important element to be integrated in the IPWM to ensure the interests and need of women as well as men. In the Mediterranean countries, particularly in the developing ones, we are still in need of a hard work and great efforts to bridge the gap between women and men in order to bring women into the mainstreaming of the decision making processes. The growing momentum of women entrepreneurs and their contribution to the GDP have proved in most countries on the Mediterranean to be a driving force in supporting the emerging of the region economy<sup>24</sup>. The work pertaining WP7 will refer to the analysis of the factors, the organisational structures and the legal frameworks that can confer to IPWM and Gender dimension implementation the most correct and likely successful characters. In the Mediterranean there are various examples of participatory implementation, which will be brought by partners for the debate. Each example has its technical, economic and legal boundary conditions leading to a different organisational structure with different degree of financial and decisional independence, share of responsibility and accountability. A critical debate will be carried on the different participatory profiles.

Governance - Application of good Governance in the water sector is still new for both northern and southern countries of the Mediterranean. In EU Mediterranean countries the Governance is widely and strongly debated at different level. This discussion need to be brought-up at the scale of developing countries of the Mediterranean, considering that Governance is anyway context dependent, and models of Water Governance that works in some socio-economic-physical settings could not be adequate in other settings. The main aim of the Work Package is the creation of an open and permanent debate on Water Governance aspects among decision-policy makers, water users and researchers of MELIA, considering also input from citizens (collected in WP0 and analysed in WP10), and reach a base of consensus on the main indicators and elements on which a good water governance should be conceptualised throughout the Mediterranean countries, accounting for the incorporation of the thematic issues addressed by WPs' 1, 2, 3, 4, 6..

#### Work to be done

- Work package management by WP Leader and Deputy Leader (**P10 and P51**) ⇐ management

<sup>23</sup> "Integrated" enhances here the Participatory Approach that combines the concept or model of adequate participation envisaged for each thematic aspects: water culture, water technology, rational use, water pricing, water policies, water conflict.

<sup>24</sup> From "The First Regional Conference on Perspectives of Arab Co-operation: challenges, constrains and opportunities – Workshop on Gender and Water Resources Management in the Mediterranean – 2002 – EC/CIHEAM/NWRC, Cairo.

## activity

- Research review on integrated participatory management in water (IPWM) in the Mediterranean
- Working visit n.7 preparatory to Workshop n.3, to insert debate on IPMW in Workshop n.2
- Compile conceptual frame of IPMW and use of IPMW in water management
- Research review on water Governance in the Mediterranean
- Working visit n.8 preparatory to Workshop n.5, to insert debate on Governance in Workshop n.5
- Compile conceptual frame of water Governance and use of water Governance in water management
- Prepare dedicated leaflets and CD-rom on water Governance and IPWM

**Deliverables**

D52, D53, D54, D55, D56, D57, D58, D59. See Table of Deliverables for title, nature and dates of each deliverable.

**Milestones and expected result**Milestones:

- Consensus on IPWM model / s applicable Mediterranean-wide
- Consensus on Water Governance indicators and model useful to the Mediterranean context

Expected results:

- Improved awareness on IPWM
- Improved awareness of different categories of MELIA partners on need of good Water Governance

Work Package number	8		Start date or starting event:				1 <sup>st</sup> month	
	P1	P2	P3	P4	P5	P7	P10	
Person-months per participant:	1	2	3	2	1	1	0.5	
	P11	P13	P14	P15	P17	P19	P22	
Person-months per participant:	2	1	1	2	3	1	1	
	P23	P24	P26	P27	<b>P29</b>	P30	P31	
Person-months per participant:	2	2	1	1	<b>7</b>	1	2	
	P33	P36	P37	P39	<b>P42</b>	P44	P45	
Person-months per participant:	1	1	1	9	<b>4</b>	1	1	
	P46	P47	P56	P60	P61	P62		
Person-months per participant:	1	0.5	1	1	1	1		

### Objectives

The creation of a common integrated and dynamic knowledgebase to facilitate negotiation and confrontation among the different stakeholders on integrated management of limited water resources, and facilitate policy-makers to develop sustainable strategies.

### Description of work

#### *Brief background and methodology*

Results of analysis, debate results and compiled conceptual frames produced within Work Packages 1, 2, 3, 4, 5, 6, 7, 10, 11 flow to this Work Package to build the integrated knowledgebase on integrated water management. The knowledgebase is the room of MELIA in which all the results of literature review, conceptual output derived from the events, the permanent debate in Forum and the analysis are harmonised and amalgamated according to a rational and participative conceptual format. The knowledgebase should provide the extraction of the “common denominators” of knowledge (socio, economic, physical related water aspects) needed as a common base to support sustainable planning and negotiation in debate-meetings by the different stakeholders. It is proved today that negotiation among water stakeholders (for conflict prevention, water allocation, planning) is successful and effective only if all the different stakeholders initiate the negotiation with the same level of knowledge. Moreover, this knowledge – which is also based on experiences (projects, studies, trials) – has to take into account all the potential socio-economic-environmental interests of the parties, including citizens. Within MELIA, two important tasks have to be first carried out, before the WP Lead Partner can compile the required knowledgebase: -) define with all partners the main structure of the knowledgebase, that takes into account for the needs of different stakeholders and public opinion; -) seek full partners (and possibly external parties) consensus on the knowledge indicators<sup>25</sup>. Attention will also be paid to building a dynamic knowledgebase, which will provide the water stakeholders and policy-makers with the adequate perspective of the medium- and long-term global and local change and awareness of the future scenarios (socio-economic and environmental-climate change), in which water resources need to be developed. Thus, the knowledgebase will also include post-consensus socio-economic and climatic indicators to build water story lines and scenarios. Sector knowledge (on WPs 1, 2, 3, 4, 5, 6, 7) and integrated knowledge (combined WPs 1÷7) will be transferred through the 8 seminars foreseen in WP9. The compiled knowledgebase will flow to WP0 for Internet based public sharing. Knowledge share through Internet FORUM will be done with the use of KSM (Knowledge System Management) designed within WP0.

#### *Work to be done*

- Work package management by WP Leader and Deputy Leader (**P29 and P42**) ← management activity
- Short-term Seminar link to Kick-Off Meeting, on Knowledgebase and Project Information System Management
- Review on knowledge extraction and knowledge indicators
- Working visit n.9 preparatory to Workshop n.1, to insert debate on knowledge extraction methodology in Workshop n.1
- Compile methodology for knowledge extraction to be transfer in Seminar n.1 (see WP9)
- Organise and harmonise extraction of knowledge; Compile integrated knowledgebase (WPs' 1÷7)

<sup>25</sup> Indicators of two types: -) indicators to assess if the compiled knowledgebase fully meet with the interests of each stakeholder; -) indicators to assess if the compiled knowledgebase fully considers the aspects of integrated water management in function of socio-cultural, economic and environmental dimensions.

**Deliverables**

D60, D61, D62. See Table of Deliverables for title, nature and dates of each deliverable.

**Milestones and expected result**Milestones:

- Post-consensus knowledge indicators compiled
- Extracted Integrated knowledgebase ready for knowledge transfer

Expected results:

- Improved relevant knowledge by the MELIA partners
- Increased awareness stakeholders of need of integrated and dynamic knowledge for negotiation and confrontation of water management
- Increased awareness of policy makers on adaptation of water policy to changing scenarios.
- Networking for knowledge share with other stable structures and networks dealing with water issues in the Mediterranean area

Work Package number	9		Start date or starting event:				1 <sup>st</sup> month	
	P1	P2	P11	P15	P19	P20	P21	
Person-months per participant:	1	7	2	2	1	3	3	
	P22	P32	P33	P43	P48			
Person-months per participant:	2	2	4	2	2			

### Objectives

Promote transfer and share of integrated knowledge, on relevant water issues, among MELIA partners and external parties and facilitate share of MELIA built knowledgebase with Mediterranean water stakeholders.

### Description of work

#### Brief background and methodology

As described in WP8, all the different categories of water players (water users in urban, industry, agriculture; decision-policy makers; different sector researchers, NGOs') need to be provide equal adequate knowledge to engage themselves in confrontation, debate or negotiation on water planning. Moreover, policy makers need to be provided of the same relevant dynamic knowledge to develop sustainable water policies.

The transfer of knowledge is ensured by the actions of Work Package 9. In fact, 8 seminars are foreseen in WP9 for the duration of MELIA and are organised for the share and transfer among the MELIA partners and external parties. Seminars are attended by internal partners or external Institutions indicated by the partners as good receptor for knowledge share, who in turn are good mean of dissemination and share of knowledge at national level and intra-players. Seminars come downstream of Workshops and last 10 days, for a maximum number of 17 participants (one participant x each Mediterranean country involved in MELIA). Location of Seminars is shown in Table 2. The ample participatory based partnership of MELIA is really representative of almost all the different stakeholders involved in the water sector within the Mediterranean. This means that the MELIA partners, each of them representative of the various categories, will help MELIA in sharing the knowledgebase widely at national level and through the various levels of the society.

Eight knowledge transfer-share seminars are foreseen, respectively in the following thematic issues: water culture (WP1), assessment of water technology (WP2), rational use water resources (WP3), water pricing (WP4), water policies (WP5), water conflicts (WP6), IPWM and Governance (WP7), combined-integrated thematic issues.

#### Work to be done

- Work package management by the WP Leader and Deputy Leader (**P2 and P33**) ⇐ management activity
- Create methodological-conceptual frame of knowledge transfer within project
- Organisation and implementation of Seminar n.1 for knowledge transfer of output WSH1, WP 1
- Organisation and implementation of Seminar n.2 for knowledge transfer of output WSH 2, WP 2
- Organisation and implementation of Seminar n.3 for knowledge transfer of output WSH3 , WP 3
- Organisation and implementation of Seminar n.4 for knowledge transfer of output WSH4, WP 4
- Organisation and implementation of Seminar n.5 for knowledge transfer of output WSH5, WP 5
- Organisation and implementation of Seminar n.6 for knowledge transfer of output WSH6, WP 6
- Organisation and implementation of Seminar n.7 for knowledge transfer of output WSH7, WP 7
- Organisation and implementation of Seminar n.8 final seminar integrating outputs of seminars 1÷7

### Deliverables

D63, D64, D65, D66, D67, D68, D69, D70, D71, D72 . See Table of Deliverables for title, nature and dates of each deliverable.

### Milestones and expected result

#### Milestones:

- Realised seminar N.1, N.2, N.3, N.4, N.5, N.6, N.7, N.8.

#### Expected results:

- Integrated Knowledge transferred and shared within project partners
- Mediterranean-wide Integrated Knowledge sharing (vertically and horizontally)



Work Package number	10		Start date or starting event:				5 <sup>th</sup> month	
	<b>P2</b>	P5	<b>P10</b>	P13	P14	P15	P18	
<b>Person-months per participant:</b>	<b>7</b>	2	<b>4</b>	2	2	1	3	
	P25	P26	P27	P30	P33	P36	P38	
<b>Person-months per participant:</b>	1	0.5	1	2	1	1	1	
	P40	P41	P54	P55	P61			
<b>Person-months per participant:</b>	1	1	1	1	1			

### Objectives

- Provision of a comprehensive and organised list of priority issues derived from citizens' concern, and ready to be included in the MELIA dialogue and knowledgebase.
- New conceptual frame for building water scarcity and water policy indicators supporting integrated water management Mediterranean-wide.
- Definition of the common indicators to be used for the benchmarking exercise on Integrated Water Management in the Mediterranean area

### Description of work

#### *Brief background and methodology*

#### a. Analysis of dialogue with citizens

The interests and perceptions of citizens are fundamental when implementing the open dialogue on water. Inputs from citizens should stimulate researchers and decision-policy makers to better address research and planning-strategies, and calibrate them on the interests and concerns of the public opinion. There is more and more the need of listing the "voice" of the citizens and analyse it within a rational frame. There are examples today of how policy making had to re-address or re-tune strategies as a result of an increasing and pressing public opinion. Nevertheless, to adequately account for the integration of previously existing and external contributors, together with the "voice" of the public opinion in the knowledgebase construction and planning, we need rational and objective analysis of external and public inputs. Therefore, the WP10 will progressively analyse (along all the project duration) the continuous flow of citizens' input uploaded in the FORUM of WP0. The analysis will be carried out using simple methodology like "pair analysis" and simple statistics in order to formulate a rational hierarchical frame of priority issues to be brought in the Working Visits and Workshops for constructive debate. The conceptual frame and the knowledgebase built within MELIA will take into account of the various levels of citizens' concerns. In this view, sector and policy indicators, and recommendation to decision-policy makers will be also formulated accordingly. It is worth to remind that other structures external to MELIA and citizens will be stimulated to the Internet dialogue in the FORUM through the MELIA partners in each Mediterranean country, and they are required to address their concerns in relation to the themes of WPs' 1 to 6.

#### b. Water scarcity and water policy indicators

The water scarcity indicators that are presently used to indicate the level of water shortage in the different part of the Mediterranean suffer today from serious flaws. First of all they are limited to "blue" water only, neglecting the important contribution that "green" water makes to global food production. Secondly they are based on averages and hence hide the very important temporal and spatial variations of the water resources which are often the determining factors for water scarcity. They do not consider climatic differences, differences between primary and secondary uses or the effect of life-styles and citizens' perception. Much has to be said also to include the needs of essential ecosystems in the primary needs, as has been done implicitly in the new South African Water Act, where basic human needs and the needs of the environment are given priority above the other issues. Also water policies need to be formulated and assessed in relation to their level of adequate "integration" with sustainability as well headline indicators (sector physical and non-physical indicators). This assessment is possible on the base of selected common indicators used to assess the process of integration of policies ("integration" indicators). Therefore, the WP10 aims also at seeking consensus on the development of a new approach to develop relevant indicators and build the knowledgebase accordingly. On top of everything, the new frame should be envisage a methodology based on simple indicators, easy to understand, easy to measure, representative, well linked to socio, economic and physical dimensions to be used for a future benchmarking exercise.

**Work to be done**

- Work package management carried out by WP Leader and Deputy Leader (**P2 and P10**) ← management activity
- Collect and organise external (projects, networks, etc) and citizens' inputs from FORUM in WP1
- Analysis of external and citizens' input and feeding Working Visits and Workshops with list of relevant public concerns (derived from analysis) to consider in the debate
- Formulate hierarchical order and frame of public concerns to be presented in WSH N.7
- Re-framing and re-conceptualisation of water scarcity and water policy indicators
- Presentation for debate in WSH 7 of new perspectives for indicators development and benchmarking

**Deliverables**

D73, D74, D75. See Table of Deliverables for title, nature and dates of each deliverable.

**Milestones and expected result****Milestones:**

- Completed uploading of input by external groups and citizens
- Organised hierarchical frame of citizens' concerns ready for debate and supporting analysis on indicators
- Consensus on new view and frame to develop water scarcity and policy indicators

**Expected results:**

- Full awareness of MELIA partners on citizens' perception of water problem
- Adequate involvement of citizens in MELIA dialogue
- Enlarged awareness of adequate use of relevant indicators
- Work plan for a benchmarking exercise on Integrated Water Management in the Mediterranean area

Work Package number	11		Start date or starting event:				21 <sup>st</sup> month	
	P1	P2	P7	P9	P11	P26	P27	
Person-months per participant:	7	1	2	2	1	0.5	1	
	P29	P31	P32	P33	P34	P36	P38	
Person-months per participant:	1	1	1	1	1	1	1	
	P39	P40	P42	P44	P51	P57	P58	
Person-months per participant:	1	2	1	5	1	1	1	
	P59	P60	P61					
Person-months per participant:	1	1	1					

### Objectives

Two objectives:

- definition of a common frame to define common standards and carry out harmonised benchmarking
- formulation of recommendation to for the implementation of the Water Framework Directive in the Mediterranean

### Description of work

*Brief background and methodology*

#### Benchmarking

There is today an increasing awareness of the need of benchmarking in the different sectors, including the water sector. Benchmarking exercise is encouraged in the new EC Framework Programme R&D to assess sector policies effectiveness and impact, physical and non physical state, to enhance spatial replication of good sector policy practices to pursue regionalisation, standardisation and integration. In MELIA, benchmarking is seen as an important tool to assess both the quality-quantity state of water resources and the effectiveness of water related policies and plans within a priory selected area (study or pilot area), through the measurement of reference performance indicators (physical and non-physical). In benchmarking literature, the assessment of the degree of performance indicators (in terms of water state and policy-planning actions) within a selected area is made by comparison with the measurements of the same performance indicators from known reference area/s (showing similar socio-economic-physical context) in which an high degree of performance has already been recognised, in function of the identified targets and thresholds.

Water benchmarking exercise in the Mediterranean is possible at the following conditions: -) the availability of similar areas of reference in which benchmarking has already been carried and has shown good state; -) the availability of well defined pilot areas for benchmarking;- the existence of a common definition of targeted objectives under the point of view of a sustainable and integrated water management in the Mediterranean area; -) the availability of a well defined list of performance indicators – relevant at regional scale in the Mediterranean - on which the different water players of different countries have found a consensus. Up to now, the above conditions have been only partially achieved in the Mediterranean. In spite of a certain level of availability of water related indicators in the Mediterranean literature, there is still a lack of common share and consensus on benchmarking indicators. In addition, there is still work to do in the selection of reference and pilot areas. In this view, the WP11 will build through the partners dialogue a common conceptual frame, which includes suitable benchmarking methodologies and guidelines derived from the identification of the relevant interactions among physical and non-physical factors. During the foreseen working visit and workshop the MELIA partners will improve the common definition of benchmarking indicators and define for each Mediterranean country: -) 1 area suitable for benchmarking exercise; -) list benchmarking indicators relevant to each area; -) a common and harmonised benchmarking plan and schedule. The WP debate will also bring to the attention of the partners the need of defining a common regional methodology of measuring the physical and non-physical indicators.

#### Recommendations

The last Workshop (WSH N.7) of MELIA is foreseen in WP11. After WSH N.7 the very last event of MELIA is the International Conference (see GANTT). It is worth to arrive in the International Conference with recommendation to policy makers on the implementation of the Water Framework Directive<sup>26</sup>, based on the

<sup>26</sup> *The recent approval of the global EU Water Initiative at the Johannesburg summit, directly linked to the experience gained with the WFD, gives a signal that such an approach could be exported outside Europe and that water quality management could be, on the long term, envisaged at the global scale, following the model set out by the WFD. This issue is, therefore, of world-wide concern and has a clear strategic importance with regard to*

results achieved within the MELIA dialogue. In paragraph B.1.1 (state of the art) and paragraph B.1.3.1 it has already been outlined the need of seeking consensus and determine the right approach for the implementation of the Water Framework Directive in the Mediterranean. Thus, within the WP11 a Draft of Recommendation will be worked out and brought into the International Conference for discussion.

*Work to be done*

- Work package management carried out by WP Leader and Deputy Leader (**P1 and P44**) ⇐ management activity
- Information retrieval and review for knowledgebase
- Review monitoring experience in Mediterranean countries
- Working visit n.10 for preparation of conceptual frame of Workshop n.7
- Preparation of Workshop n.7
- Workshop n.7
- Prepare post-consensus (after WSH7 N.7) list of indicators for benchmarking
- Prepare Workshop proceedings and dedicated CD-Rom
- Compile recommendation for benchmarking in the Mediterranean and areas identification
- Prepare draft of recommendation to seek consensus in the Int. Conference (WP1), on the application of the Water Framework Directive in the Mediterranean.

**Deliverables**

D76, D77, D78, D79, D80, D81, D82. See Table of Deliverables for title, nature and dates of each deliverable

**Milestones and expected result**

Milestones:

- Agreement on targeted objectives for a sustainable and integrated water management in the Mediterranean Region
- Benchmarking indicators agreed by partners
- Consensus on areas selected
- Consensus reached on recommendation on application of Water Framework Directive

Expected results:

- Transferred awareness and knowledge to Institutions to start benchmarking operations
- Acquired deeper knowledge of problems and perspectives linked to the application of the Water Framework Directive in the Mediterranean.

## B.7 Other issues

Water is the source of life and the most important food. Water quality is strongly related to health issues to mention another important aspect.

The public concern about water is deeply rooted in the cultural basis of the Mediterranean societies, but the progressive urbanisation and industrialisation of the agricultural production, has distanced the common people on the practical issues related to water management, reducing the debate on the water related problems to technical levels or conflicts of interests between competing users of an scarce resource. The public do not participate in these debates and this situation provokes lacks of concerns or, worse, loses of opportunities to reach a sustainable management of water with the complicity and participation of ALL users, including the common citizens. Raising awareness of the competing demands of water, and the conflicts related to this issue is one of the target of MELIA. A video on Water Conflicts in the Mediterranean Area will be produced.

The rapid increase of water concerns through the various societal and professional levels has brought in the last two decades some confusion on terminology. Several terms, which are also often used by different players with different meanings, are not correctly used. For example, typical terms related to the management and saving of limited water resources, like “efficiency” “performance” or “water productivity” are often used incorrectly or with different meanings or as synonymous. Also general terms like “freshwaters”, “water yields”, “up-scaling and down-scaling”, “integration”, “knowledgebase” (and not “information-base”) and many others are used with different meaning and perceptions. The same term is often used with different meanings or is differently interpreted by the different categories of water players. Therefore, beside the construction of a common frame and knowledge, also the use of common terminology and semantic will be tackled in the dialogue of MELIA, to facilitate the development of a common language and help water negotiations.

### Integrating the gender dimension

The role of woman is fundamental in water management. In many societies, women are responsible of collecting water and handling its use and often implementing in irrigation practices. The awareness of women on issues related to hygiene, health and effective use of water is a key point to obtain reliable results in these strategic long term objectives for the well being of humanity.

The identification of roles, skills, ingenuity and initiatives of women in front of the domestic and economic management of water is a not well known capital that deserves a close look.

MELIA recognizes the important role of women in the Mediterranean society and the impulse that women can give to water management and to a more sustainable development of research in the water sector.

MELIA offers an ample insert of woman in the various co-ordination activities:

- the partner CIHEAM-IAMB (P2) is the coordinator of the INCO funded project INGEDI (Integration of Gender Dimension in Mediterranean Water Management) and will bring relevant project outcomes into MELIA
- the Work Packages N.3, 9 (Rational Use of Water Resources) are respectively leaded by women (see also Part B.2)
- the number women (scientists and professionals) involved in the project is relevant
- the interpretation and modelling of the role of the woman in the water management will be deeply debated and discussed in the frame of Work Packages N.1 and 7, which are respectively dedicated to “Water Culture” and “Integrated Participatory Water Management” (see also Work Packages’ description)
- the Workshop N.1 linked to WP N.1 “Water Culture” will dedicate a specific session to woman culture in water management in the Mediterranean region
- 1 video on “Women culture and water management” will be produced

The partner P2 is already co-ordinating a Mediterranean network participated by women involved in water management. MELIA will open a dialogue and exchange opinions with the above network in

order to produce the necessary critical mass and build a consistent Conceptual Frame for the integration of women in the water management.

Thus, MELIA is fully in line with the European Commission when recognises a threefold relationship between women and research, articulated in the following way:

- women's participation in research must be encouraged both as scientists/technologists and within the evaluation, consultation and implementation processes,
- research must address women's needs, as much as men's needs,
- research must be carried out to contribute to an enhanced understanding of gender issues.

### **Ethical rules for FP6 projects**

MELIA fully respects the ethical rules and requirements stated by the European Commission in Annex 4 of the Guide for Proposers (Coordination Action).

In addition, as requested in Annex 3 of the Guide for Proposers, the applicant has filled into the following table:

*Table 7:*

Does the proposed research raise sensitive ethical questions related to:	YES	NO
• Human beings		x
• Human biological samples		x
• Personal data (whether identified by name or not)		x
• Genetic information		x
• Animals		x

Moreover, the applicant confirms that the proposal MELIA does not involve:

- Research activity aimed at human cloning for reproductive purposes,
- Research activity intended to modify the genetic heritage of human beings, which could make such changes heritable.
- Research activity intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer;
- Research involving the use of human embryos or embryonic stem cells with the exception of banked or isolated human embryonic stem cells in culture.

**ANNEX 1 – Participants' description**