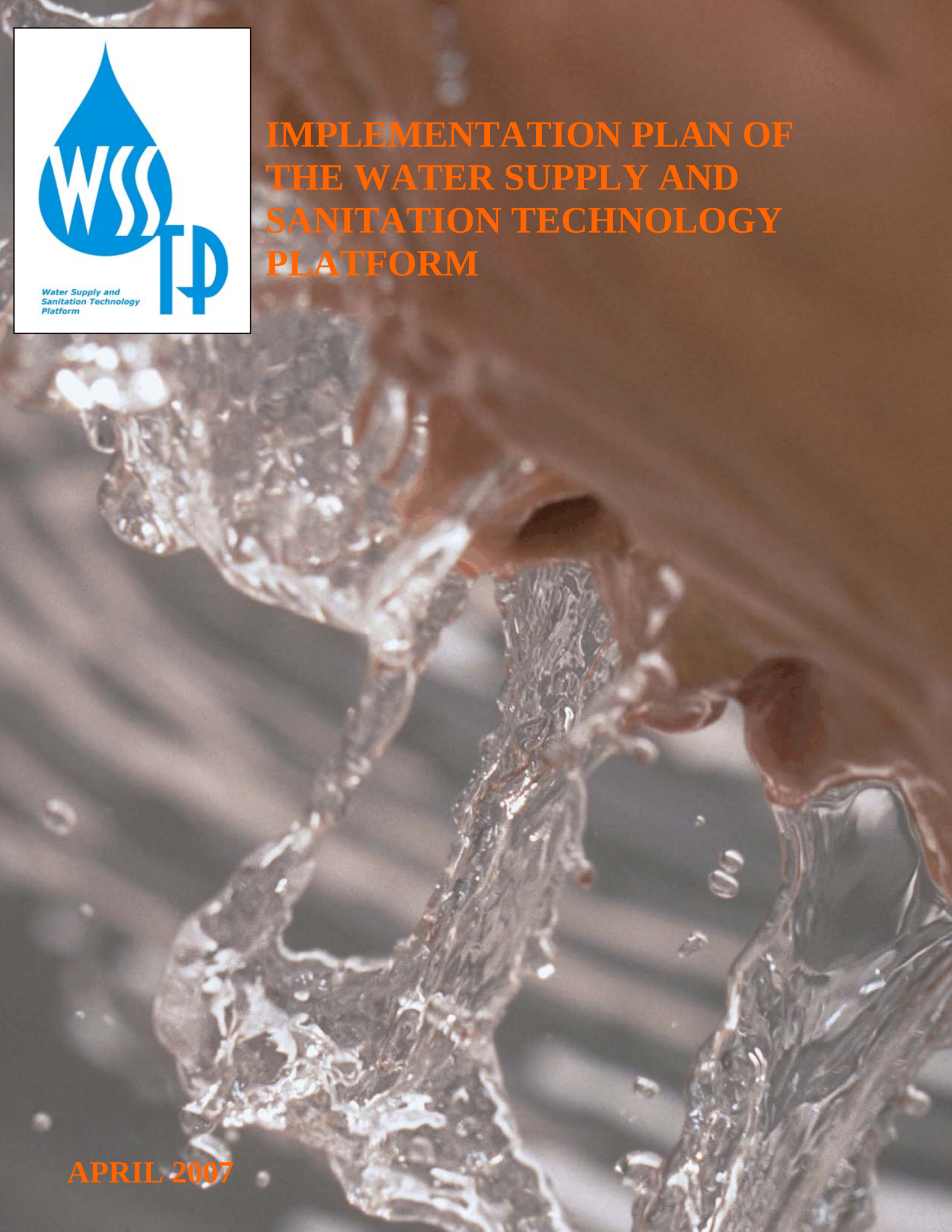


IMPLEMENTATION PLAN OF THE WATER SUPPLY AND SANITATION TECHNOLOGY PLATFORM

APRIL 2007

Foreword

The Implementation Plan will use a systems approach, which encompasses water supply, sanitation, water use in agriculture and industry and river basin management to develop solutions for the global water market. In an increasingly water stressed world, the Water Supply and Sanitation Technology Platform (WSSTP) will deliver major advances in the efficiency of water use, environmental protection and balancing the competitive demands for water resources.

The WSSTP will address the full spectrum of R&D including conceptualisation, feasability (including generic and enabling research), prototype development, piloting, demonstration and deployment. To do this the WSSTP will enable efficient knowledge transfer across the whole knowledge and supply chains. This will be done by grouping research into six Pilot Themes, each containing a number of implementation cases. Generic research and enabling technologies will be shared among pilot themes members at a pre-competitive level and where appropriate also between pilot themes. Specific demonstration and deployment will be carried out by commercial consortia organised around each implementation case.

The pilot themes are the key component in the deployment strategy, being the instrument for integration, definition, targetting and prioritisation. Following market research and consultation with stakeholders, solutions will be developed which are tailored to the specific needs of the region, its main water users and population.

The diversity of European climatic, social and economic conditions, provides the European industry with a competitive test bed to develop and demonstrate full scale solutions to solve European water issues and contribute to build an international competitive advantage.

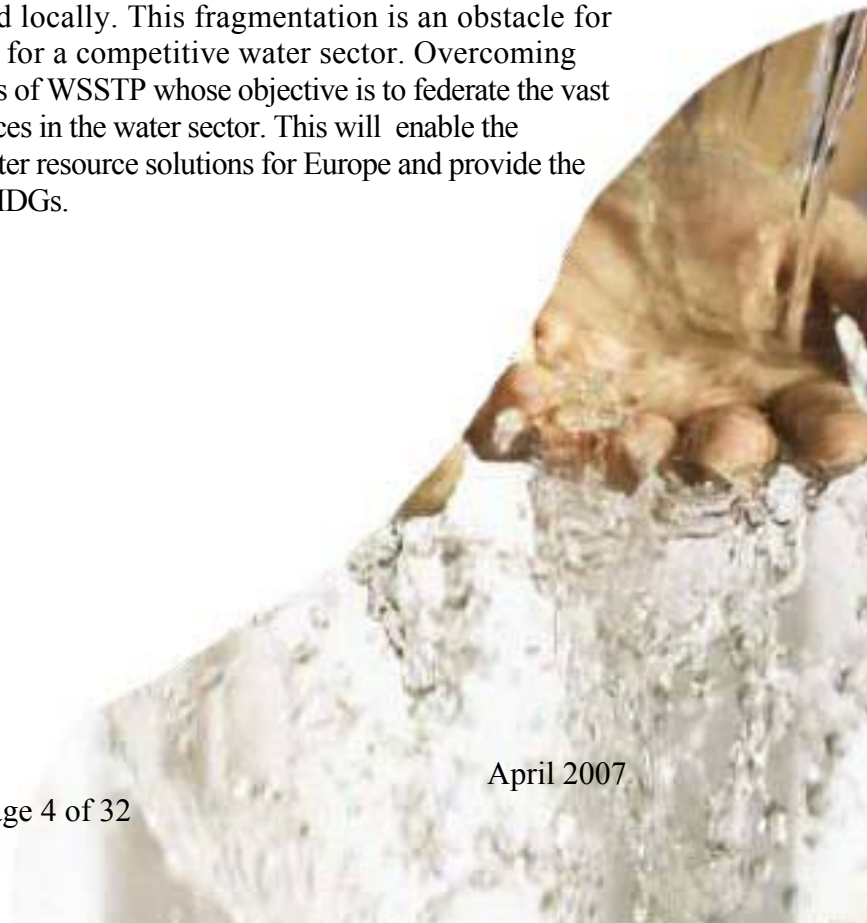
Contents

1. Introduction

Background of the Water Supply and Sanitation Technology Platform

Board WSSTP London 2006

In January 2004 the European Commission adopted the European Environmental Technology Action Plan (ETAP) whose objective is to remove obstacles and to release the full potential of environmental technologies for environmental protection, while contributing to competitiveness and economic growth.
The European water sector is highly fragmented: water resources, water supply and sanitation/wastewater are often managed locally. This fragmentation is an obstacle for developing a common research strategy for a competitive water sector. Overcoming this obstacle is one of the important aims of WSSTP whose objective is to federate the vast and diverse amount of the European resources in the water sector. This will enable the development and deployment of global water resource solutions for Europe and provide the potential to significantly contribute to the MDGs.

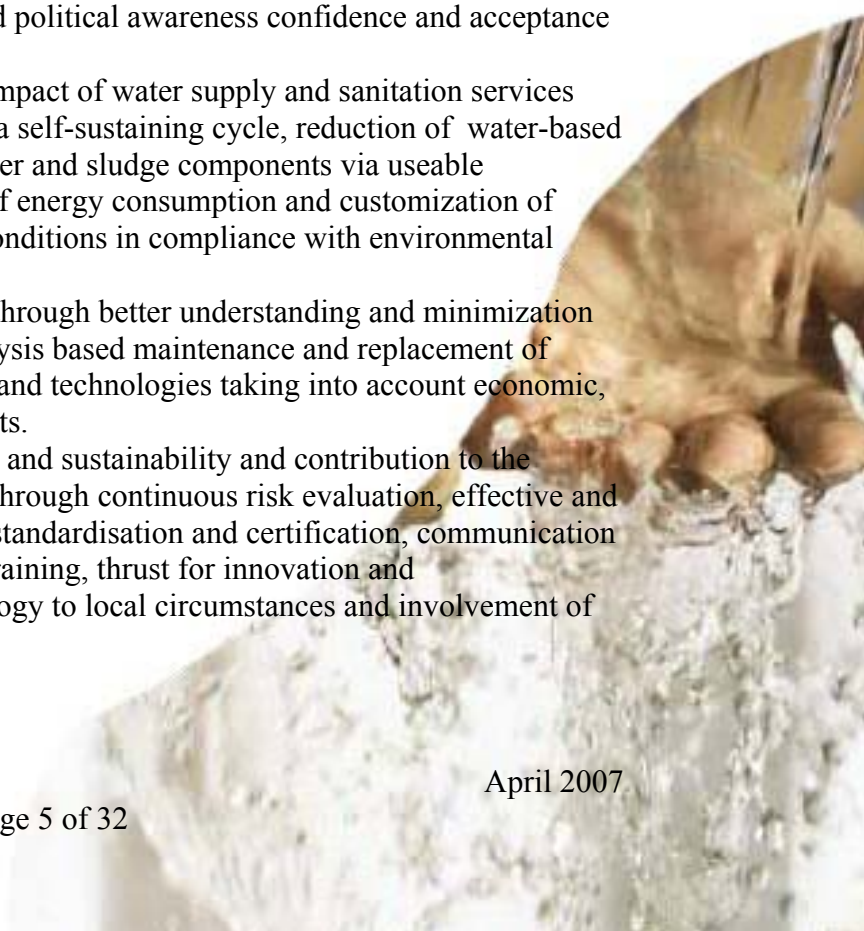


Worldwide the Water Sector is currently facing a dramatic change.Three main drivers trigger this development:

- **Climate change** is predicted to cause significant changes in precipitation patterns and their variability, affecting the availability of water for people and also for agriculture and industry.
- There is a technological and financial challenge of **maintaining and upgrading the infrastructure assets to** deliver water to all sectors, while restoring the quality of water distributed to the various communities of users.
- **Globalisation** is forcing rapid changes **(migration, urbanization, industrial activities and food production processes)** leading in some areas to a dramatic increase in water consumption. In addition, this demand for water can not always be satisfied by the locally available and conventional water resources. Moreover, increasing wastewater discharges can have adverse environmental impacts on aquatic systems as well as affecting the costs for downstream users.

The key issues and challenges identified for the European water sector to be addressed by WSSTP are:

- Integrated and participatory approach to water management that cuts across individual sectors and disciplines and founded on strong public awareness.
- Balance in demand and supply by demand management and rational exploitation of alternative resources.
- Insurance of water quality and security through management of the water cycle, including risk management, use of more efficient treatment technologies for all water resources, comprehensive water quality monitoring and use of emergency supply systems. Strong public and political awareness confidence and acceptance are mandatory.
- Reduction of the environmental impact of water supply and sanitation services through management of water as a self-sustaining cycle, reduction of water-based emissions, valuation of waste water and sludge components via useable commercial products, reduction of energy consumption and customization of global water solutions for local conditions in compliance with environmental constraints and regulations.
- Cost efficient asset management through better understanding and minimization of all costs components, risk analysis based maintenance and replacement of assets and use of better materials and technologies taking into account economic, environmental and societal impacts.
- Enhancement of competitiveness and sustainability and contribution to the Millennium Development Goals through continuous risk evaluation, effective and efficient transfer of information, standardisation and certification, communication of know-how via education and training, thrust for innovation and implementation, tailoring technology to local circumstances and involvement of women.



The core of the WSSTP vision is a sustainable, efficient, integrated management of water resources by all water consuming sectors (people, industry and agriculture) in harmony with the bearing capacity of nature.
A joint goal for all sectors is the use of alternative water resources; more efficient use through conservation and re-use of water and energy consumption reduction; production of valuable products from waste water, and provision for quality water (fit for purpose) for emergency situations.

WSSTP Strategic Research Agenda

The Strategic Research Agenda is a twenty five year research plan which must be undertaken to realize that Vision. The Strategic Research Agenda is based on four major challenges and gaps in knowledge that exist in the various different parts of the water sector:

Increasing water stress and water costs
Increasing urbanisation
Increasing occurrence of extreme events
Serving rural and underdeveloped areas in need.

Five research areas have been identified that all rely on a fundamental common strategy based on Integrated Water Resources Management (IWRM) which will facilitate the management of water resources to meet societal needs within environmental constraints.

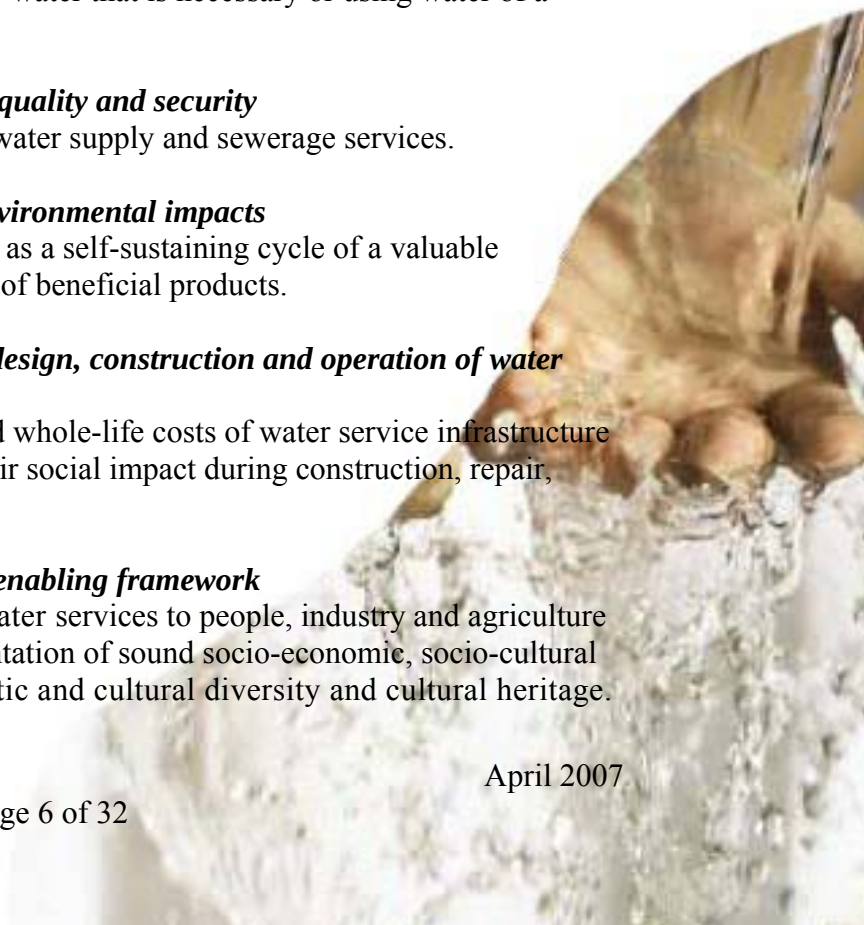
Research area 1: Balancing demand and supply
Goal: All users of water (people, agriculture, industry and nature) will make sustainable use of water resources, by not using more water that is necessary or using water of a higher quality than needed.

Research area 2: Ensuring appropriate quality and security
Goal: Ensure the quality and security of water supply and sewerage services.

Research area 3: Reducing negative environmental impacts
Goal: European water systems to be seen as a self-sustaining cycle of a valuable renewable natural resource, and a source of beneficial products.

Research area 4: Novel approaches to design, construction and operation of water infrastructure assets
Goal: To ensure that the performance and whole-life costs of water service infrastructure is optimized and takes full account of their social impact during construction, repair, rehabilitation and operation.

Research area 5: Establishment of an enabling framework
Goal: To enable the safe provision of water services to people, industry and agriculture in diverse environments by the implementation of sound socio-economic, socio-cultural and legal frameworks, respecting linguistic and cultural diversity and cultural heritage.



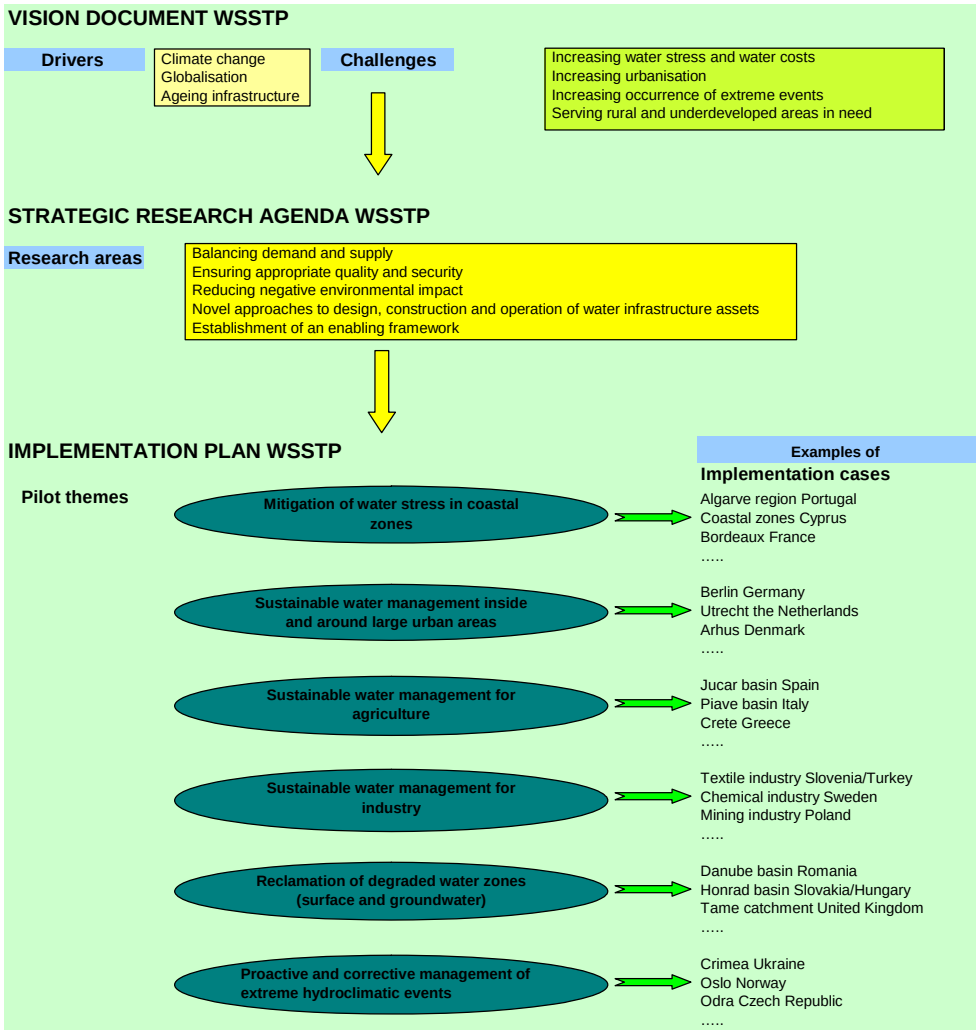
WSSTP Implementation Plan

The Implementation Plan is the third report in a series from the Water Supply and Sanitation Technology Platform. First we developed a Vision Document, followed by a Strategic Research Agenda. The Implementation Plan describes how the WSSTP proposes to organise and deliver these five research areas in an integrated way. The Implementation Plan is the outline of a comprehensive Strategic Deployment Document (SDD) that will be produced by the WSSTP in 2007.

The Implementation Plan describes the initial ideas for demonstration pilots and implementation cases and mechanisms for financial engineering of grants and debts. These will be further developed in the SDD which will seek definite commitment and dedicated support from problem owners and relevant industrial partners. Market surveys, tailoring of proposed and tested solutions to different situations and market penetration policies will also be dealt with in the SDD.

The Implementation Plan describes the strategy chosen for the execution of the Strategic Research Agenda through six pilots themes of generic research, enabling technologies development and implementation cases The financial engineering for the research phase and the implementation cases is addressed, detailing the available and most appropriate funding instrument for the various types of pre-competitive and competitive research.

Financial engineering will be adapted to each implementation case, mostly dependant on the commitment from industry and from problem owners, and will be explored in the SDD.



From vision to implementation cases

Integrated Water Approach: Source Alterra Wageningen UR

2. Approach

Europe has a long history in water and wastewater treatment. This has led to Europe having a wide spectrum of leading expertise in the various aspects of water resource management. Hundreds of institutions, SMEs, engineering and consulting companies and the largest water utilities in the world have developed and continue to develop highly technical concepts to address water problems around the globe. Many new technologies are proposed, researched and tested, resulting in many innovations, publications and patents.

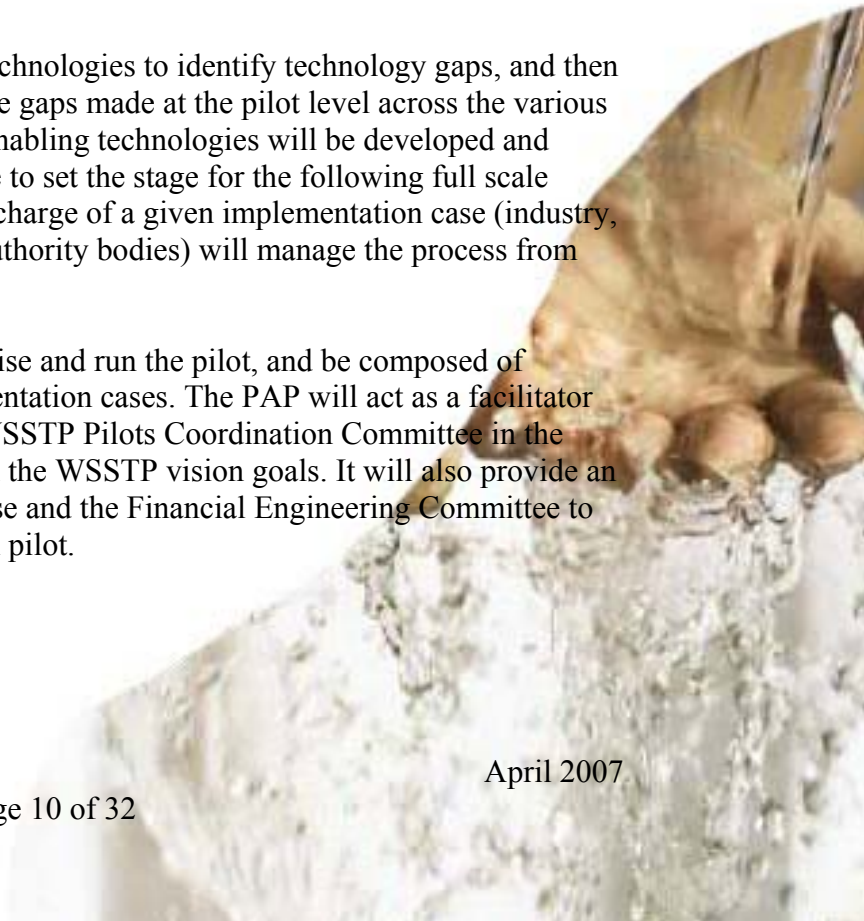
However, the wide diversity and the small size of most technology providers and the many different practices, policies and regulations in Member States and regions across Europe impede the transition of many of the new technologies to the demonstration phase.

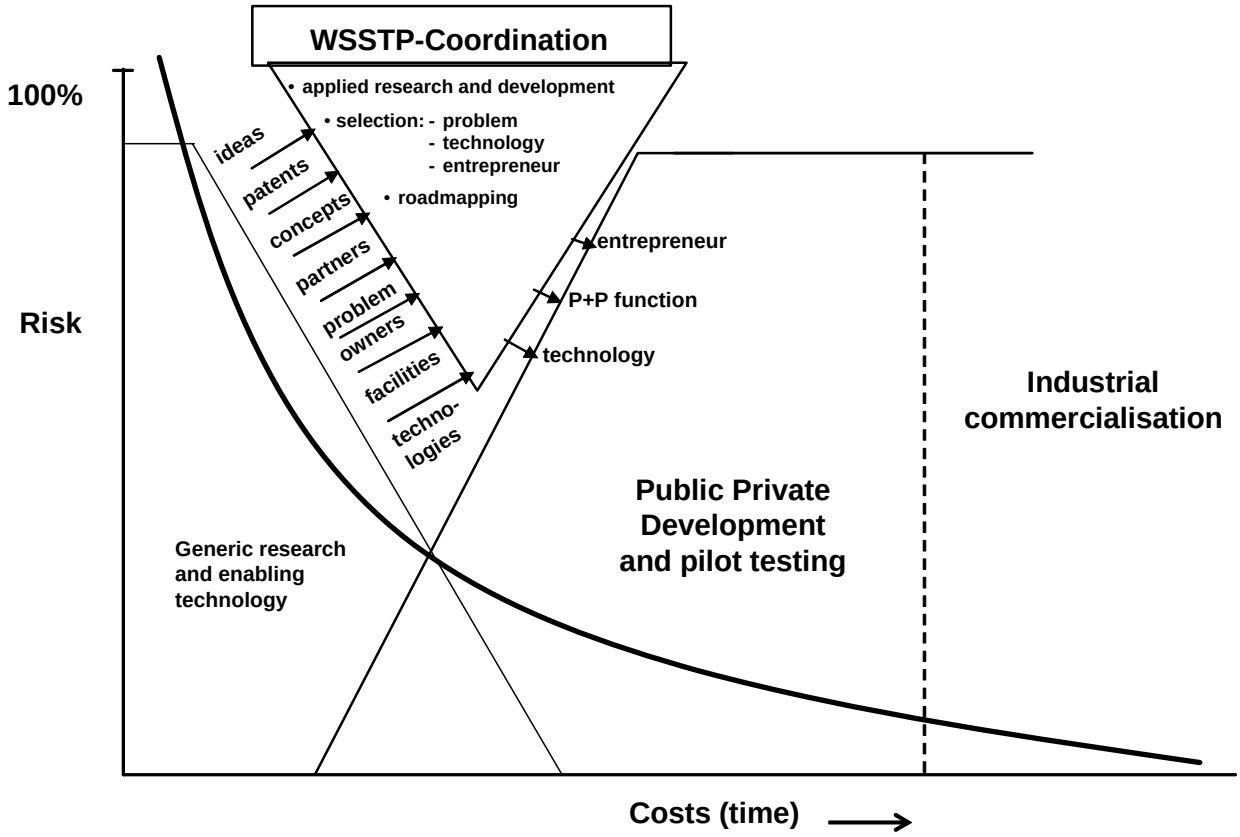
There is a mismatch of expectations between water service providers and asset owners (long term investment, minimum financial and technological risk) and technology suppliers (shorter term returns on technological innovations). This mismatch is a potential barrier to the technological development of the sector, which may impact on the sectors ability to exploit the growing global opportunities.

The approach for development of pilot themes will be based on the IWRM concept (Integrated Water Resource Management) and favour the development of comprehensive DSS (Decision Support Systems) to support implementation. Local and regional issues and constraints linked to regional policies, regulations and practices, will be analysed for each implementation case.

These will then be matched to existing technologies to identify technology gaps, and then the need for generic research to bridge the gaps made at the pilot level across the various implementation cases in the same way, enabling technologies will be developed and customized for each implementation case to set the stage for the following full scale solution deployment. The consortium in charge of a given implementation case (industry, academia, project owners and regional authority bodies) will manage the process from inception to commercial deployment.

A PAP (Pilot Advisory Panel) will organise and run the pilot, and be composed of representatives from the various implementation cases. The PAP will act as a facilitator between implementation cases and the WSSTP Pilots Coordination Committee in the research phases and for compliance with the WSSTP vision goals. It will also provide an interface between the implementation case and the Financial Engineering Committee to maximise the financial efficiency of each pilot.



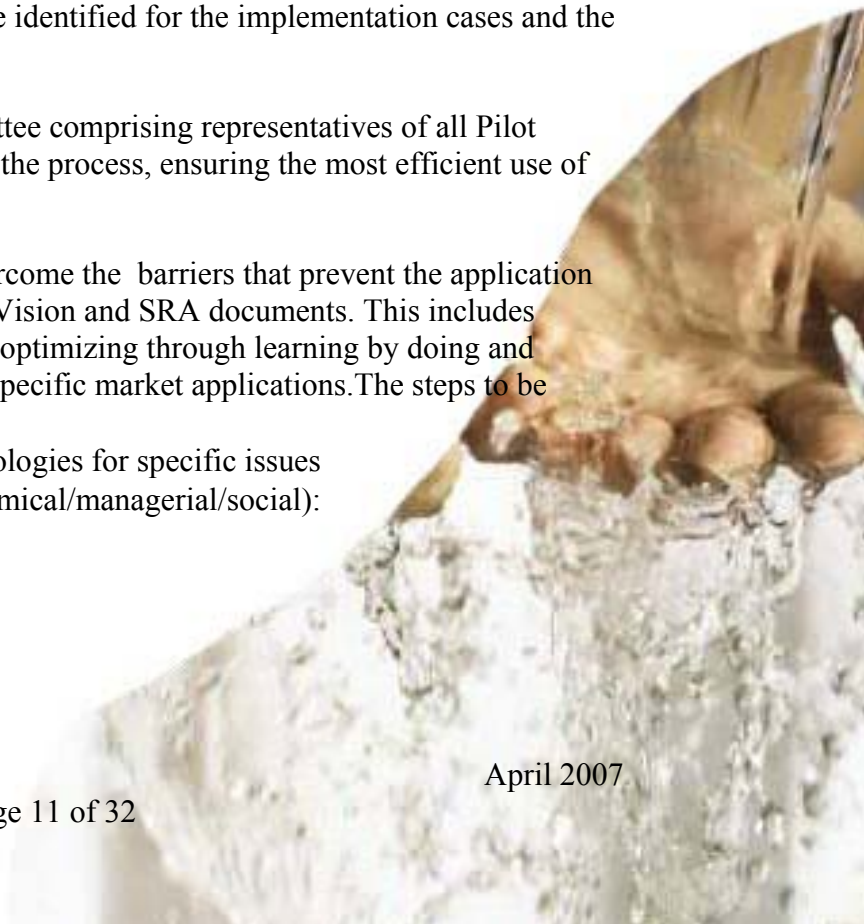


The proposed implementation plan will bridge the gap between the generic research and enabling technologies development phase identified for the implementation cases and the full scale demonstration project phase.

The WSSTP Pilots Coordination Committee comprising representatives of all Pilot Advisory Panels will be the facilitator of the process, ensuring the most efficient use of research efforts and financial support.

The implementation plan will aim to overcome the barriers that prevent the application of new technologies, as described in the Vision and SRA documents. This includes testing and evaluating new technologies, optimizing through learning by doing and preselecting promising technologies for specific market applications.The steps to be followed are:

- Select/propose new technologies for specific issues
- Evaluate (technical/economical/managerial/social):
  - new materials
  - equipment
  - process concepts
  - control issues
  - process control



- Identify breakthrough potential, evaluate environmental impact and potential contribution to overall water cycle sustainability.
- Pilot testing of sites selected to demonstrate integrated global solutions to the water issues
- Communication and dissemination of test results, training and education of user communities and regulating bodies.

These tasks will be performed by all relevant stakeholders (academia, SME's, major industrial partners, end users, consultants and civil servants).

The rationale of pilot projects will include:

- A well defined solution for specific market demands, with clear goals (like capacity, quality, cost, energy consumption and environmental impact) for development.

- New process concepts consisting of new systems, equipment and/or materials often leading to hybrid integration with other processes and systems.

- Consortia forming: under a clear leadership the consortium will draw the task to fulfill all necessary roles, bring to bear the global solution to the regional water issue and bring all stakeholders together and in synchronization (universities, research technology, contractor engineers, equipment suppliers, consultants, large companies, end users, governments).

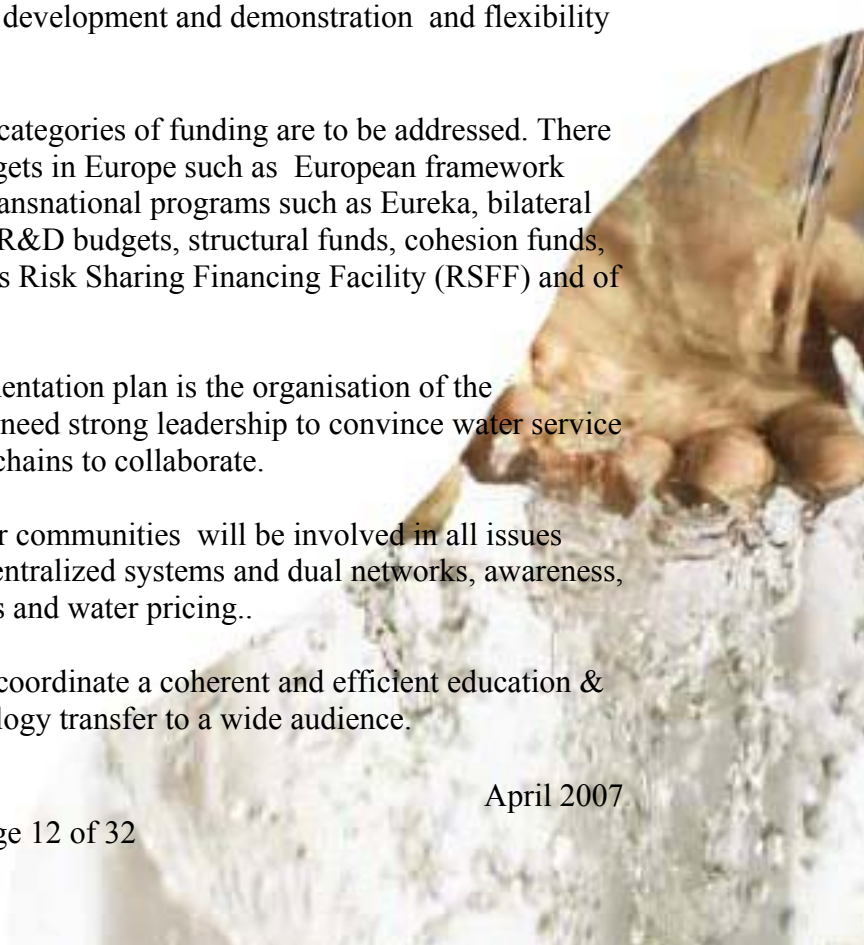
- Well defined research and development plan, with a project management suitable to optimize technology development and demonstration and flexibility for local adaptation.

- Financial engineering: Various categories of funding are to be addressed. There are many sizeable research budgets in Europe such as European framework programs, national programs, transnational programs such as Eureka, bilateral agreements, private companies R&D budgets, structural funds, cohesion funds, debt financing: EIB loans, EIB's Risk Sharing Financing Facility (RSFF) and of course industry co-financing.

The most challenging part of this implementation plan is the organisation of the implementation case consortia. This will need strong leadership to convince water service operators, asset owners and their supply chains to collaborate.

NGO's (Greenpeace, WWF etc) and user communities will be involved in all issues related to water treatment and reuse, decentralized systems and dual networks, awareness, public involvement, environmental issues and water pricing..

In addition, the WSSTP will initiate and coordinate a coherent and efficient education & training program and disseminate technology transfer to a wide audience.



3. Implementation of the SRA through pilots

WSSTP has chosen integration as a strategic goal, and will implement this strategy through six pilot programs. The pilots will be delivered using the concept of Integrated Water Resources Management (IWRM) and DSS (decision support) tool as the guiding framework. A pilot is an organisational structure that covers generic research, enabling technologies development, and a number of implementation cases. The pilots are a means to carry out precisely targeted and prioritised research that is defined by and tested in a number of real-life applications - the implementation cases. The ultimate objective of a pilot is to make new and innovative contributions to solving major European water problems and to stimulate European competitiveness. Each pilot has a specific issue in focus but which will consider all related important water issues within the implementation cases when developing its plans.

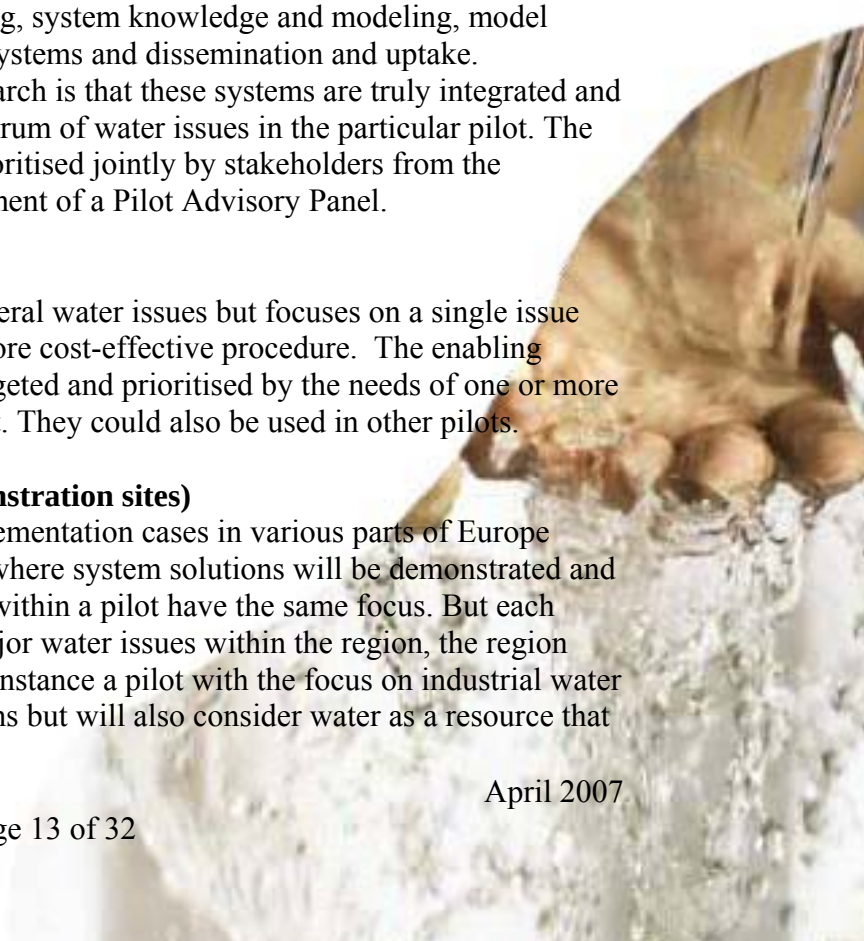
Generic Research:
Research that will cover the requirements of all implementation cases within a particular pilot. In principle this research is generic for a specific pilot, but where elements of this research can be used in other pilots it will be made available. Examples of generic research are:

- Needs to establish an enabling framework: knowledge on new methods of IWRM/DSS and data management, knowledge on risk assessment, standardisation, knowledge on barriers for solutions and new knowledge transfer and education methods,
- Issues involved in the application of IWRM: integrated approach, information for integration, process understanding, system knowledge and modeling, model application in IWRM, adaptive systems and dissemination and uptake.

The essential difference with earlier research is that these systems are truly integrated and serve multiple users over the whole spectrum of water issues in the particular pilot. The generic RTD is defined, targeted and prioritised jointly by stakeholders from the implementation cases under the management of a Pilot Advisory Panel.

Enabling Technologies Development:
Research that does not integrate over several water issues but focuses on a single issue such as a better treatment process or a more cost-effective procedure. The enabling technologies development is defined, targeted and prioritised by the needs of one or more implementation cases in a particular pilot. They could also be used in other pilots.

Implementation cases (full scale demonstration sites)
Each pilot has a number of real-life implementation cases in various parts of Europe (some with a twinning outside Europe), where system solutions will be demonstrated and implemented. All implementation cases within a pilot have the same focus. But each implementation case must address all major water issues within the region, the region often being defined as a river basin. For instance a pilot with the focus on industrial water will not only solve its own water problems but will also consider water as a resource that



could be (re-)used by other water users in the vicinity of the plant as well as the industrial (re-use) of water produced by another water user.

Pre-competitive and competitive RTD

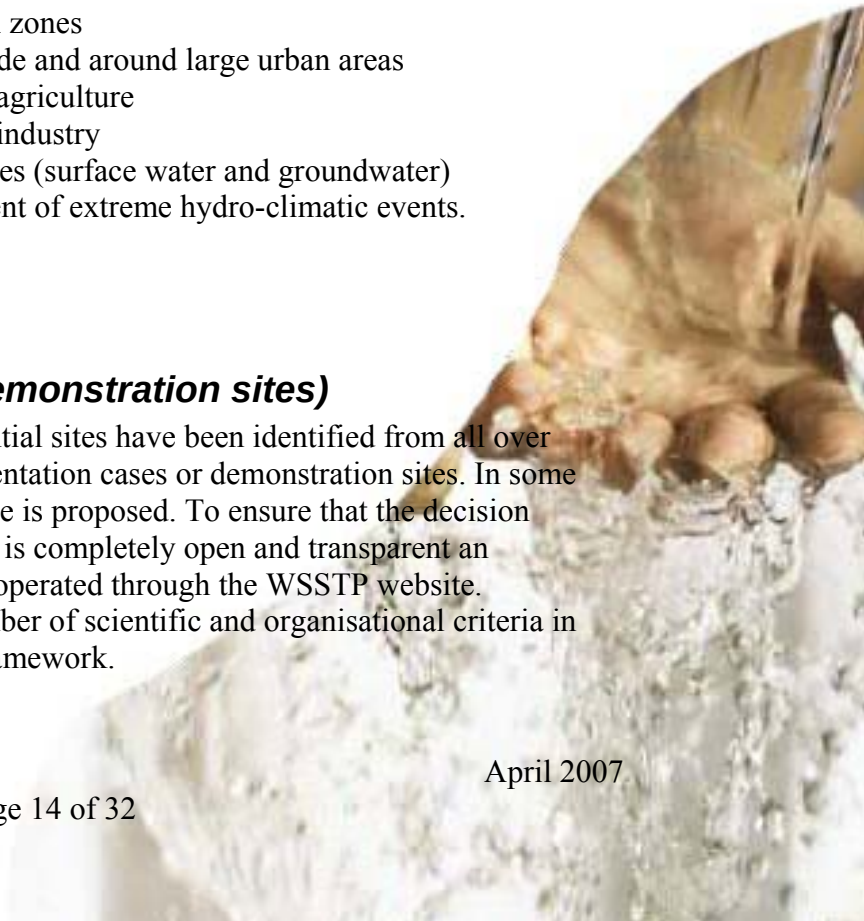
A pilot has a pre-competitive and a competitive phase. The RTD in the pre-competitive phase will be carried out by a variety of actors under various RTD programs, but results should be applicable and available for all stakeholders and consortia within a pilot (or more pilots). The research needs in the pre-competitive phase must be defined and prioritised by the requirements of the implementation cases. The WSSTP Pilot Advisory Panels will be responsible for the coordination, definition, targeting, prioritisation and dissemination of the pre-competitive research and the use and dissemination of results of this research. The implementation cases will be executed by consortia of commercial partners in the competitive phase and the IPR managed under a consortium agreement among partners.

The pilot themes

Together the six pilot themes cover a large portion of the spectrum of European water problems. Through the completion of the pilots the European water industry and the water professionals will have at their disposal a large arsenal of advanced, well-tuned instruments for solving water problems and a number of consortia in which partners of quite different backgrounds will have learned to work together in multi-disciplinary situations. The water sector will thus be well placed to compete on the world market to solve water problems in developed and developing countries.

The six pilot themes that will together tackle the four major challenges for global sustainable water management are:

1. Mitigation of water stress in coastal zones
2. Sustainable water management inside and around large urban areas
3. Sustainable water management for agriculture
4. Sustainable water management for industry
5. Reclamation of degraded water zones (surface water and groundwater)
6. Proactive and corrective management of extreme hydro-climatic events.



The implementation cases (demonstration sites)

On the basis of the six pilot themes potential sites have been identified from all over Europe that might be suitable as implementation cases or demonstration sites. In some cases a twinning with sites outside Europe is proposed. To ensure that the decision making process on implementation cases is completely open and transparent an Expression of Interest procedure will be operated through the WSSTP website. Implementation cases should meet a number of scientific and organisational criteria in order to be adopted under the WSSTP framework.

ICs will have to respect a set of scientific/quality/relevance and organisational criteria:

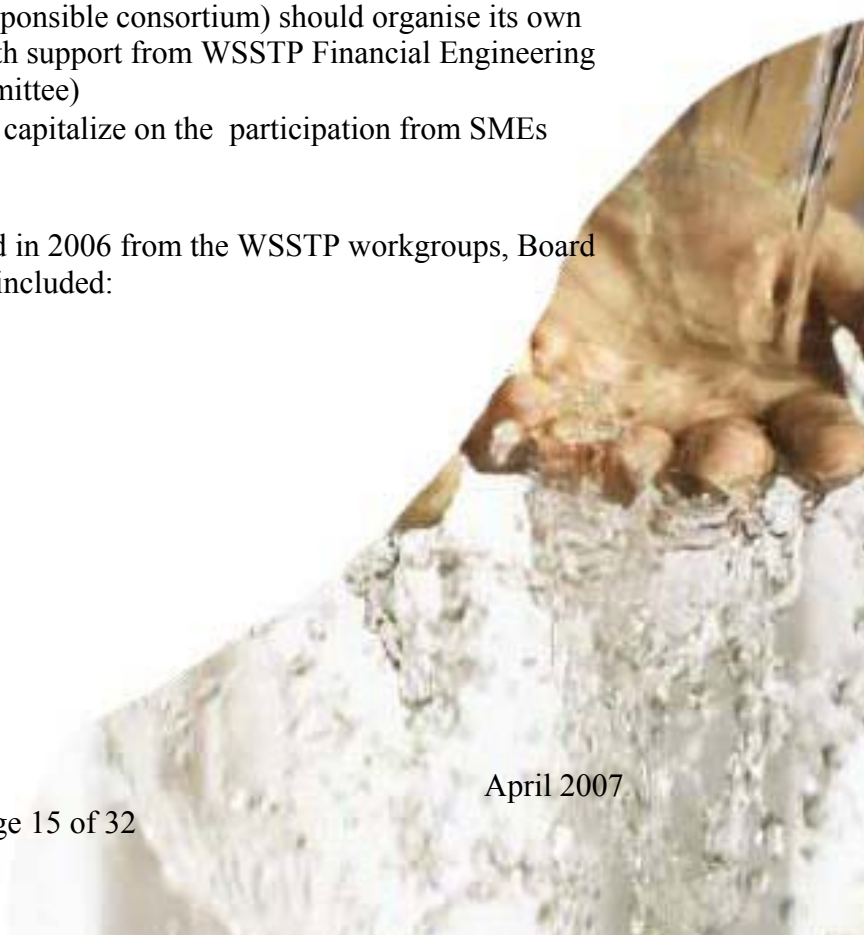
Scientific/quality/relevance criteria:

- The implementation case fits within one (or more of the pilot themes), addresses a major water issue in Europe as identified in the SRA
- The implementation case will address multiple water issues, for which system solutions will be tested within the IWRM framework
- The implementation case will address all major water issues in the selected region
- The implementation case will correspond to a real-life situation and the RTD development will be based on realistic situations and realistic data.
- The implementation case will develop solutions that can be transferred and adapted to similar situation within and outside Europe
- The implementation case will address urgent social/economic problems and solutions which will be beneficial across the whole water system for all relevant water users.

Organisational criteria:

- The implementation cases within a pilot will have geographical coverage within Europe
- The implementation case (and responsible consortium) should work in compliance with the WSSTP vision and SRA
- The implementation case (and responsible consortium) should work within the new structure of the WSSTP (PAPs, Pilots Coordination Committee, joint identification of generic research and enabling technology needs)
- The implementation case should have the proper commitment from the problem owner (national or local government) and from industrial partners.
- The implementation case (and responsible consortium) should organise its own financial engineering scheme (with support from WSSTP Financial Engineering and the Pilots Coordination Committee)
- The implementation cases should capitalize on the participation from SMEs

A list of implementation cases as selected in 2006 from the WSSTP workgroups, Board members and MSMG group members is included:



Water storage reservoir Simferopol, Crimea Ukraine

Pilot 1: Mitigation of water stress in coastal zones

Increasing tourism adds to water stress in coastal areas

Potential implementation cases	Country
Salt intrusion rivers Rhine, Meuse and Scheldt delta, twinning with Curaçoa	France, Belgium, Germany, Netherlands
Coastal zones in Cyprus	Cyprus
Algarve region	Portugal
Transboundary water management along the Southern Adriatic/Dinaric coast	Croatia, Montenegro, Albania, Greece
Bordeaux estuary	France
Levante coast	Spain
Maresme region Cataluna	Spain
Almiros basin	Greece
Dammour region	Lebanon

Generic research issues that have been identified (details in SRA):
Knowledge capture
Alternative water resources
Salt water intrusion
Global water management scenario builder
Safe and sustainable supply of quality water
IWRM/DSS system

Enabling technologies that have been identified (details in SRA)
Salt water intrusion mitigation technologies
Alternative water resources treatment processes
Water quality monitoring networks connected to DSS
New sensors for water quality monitoring
In-line water storage / aquifer storage and recovery to balance fluctuations of seasonal

demand
IWRM/DSS: algorithms for selection of optimum scenario for global water resource management
Lower cost desalination technologies using renewable resources (wave power, solar and wind energy)

Pilot 2: Sustainable water management inside and around large urban areas

Burst water main, Prague

Potential implementation cases	Country
Berlin	Germany
London and SE of UK	United Kingdom
Utrecht	Netherlands
Lyon	France
Lisbon	Portugal
Århus	Denmark
Oslo	Norway
Prague	Czech Republic
Ile de France Paris	France
Madrid	Spain

Generic research issues that have been identified (details in SRA):
Balancing demand and supply
Ensuring quality and quantity
Protecting the environment and reducing the ecological footprint of big cities
Designing and managing sustainable infrastructure assets, leakage detection and repair, new rehab methods
Sustainable urban water networks
Sustainable and advanced waste water treatment, energy neutral sewage works, methane production, material recovery and reuse including recirculation of organic waste

Enabling technologies that have been identified (details in SRA)

Monitoring, sensor and communication technology
Advanced treatment technologies
Storm water catchment
Technologies for producing energy and products from waste water; technologies for reuse of waters both at collective and individual scales (including recirculation of organic waste)
Tools to cost-effective and sustainable management of assets
Water saving and water sharing processes, appliances and practices
Risk assessment and risk management tools
Integrated design of water systems combining networks and decentralised processes
Domestic water demand including smart metering and tariff management

Pilot 3: Sustainable water management for agriculture

Water consumption in agriculture

Potential implementation cases	Country
Cyprus	Cyprus
Jucar basin	Spain
Bretagne	France
Piave basin	Italy
Lower Rhine	Germany
Skjern river basin and Ringkjoping Fjord	Denmark
Crete	Greece
Anthemountas basin	Greece
Terras project	Various (the Netherlands)

Generic research issues that have been identified (details in SRA):
Safe use and reuse of water from non-conventional sources in agriculture and its long-term impact on the environment
Improvement of water use efficiency in agriculture at different scales (local,regional,economic branche)
Reduction of diffuse pollution caused by agrochemicals, nutrients and manure (advanced waste water treatment).

Enabling technologies that have been identified (details in SRA)
Alternate water resources
Water use efficiency
Reduction of diffuse pollution
Recirculation of organic waste

Pilot 4: Sustainable water management for industry and in industrial areas

Potential implementation cases	Country
Integration of sustainable water use in industry	Various/general issue
Chemical industry	Sweden/Netherlands
Paper industry	Spain/Germany
Textile industry	Slovenia/Turkey
Food industry	Spain/Netherlands
Tanning industry	Turkey
Power plant	Germany, Italy, France
Mining industry	Poland

Generic research issues that have been identified (details in SRA):
Water fit for use
Closing the water cycle
Sludge, concentrate and deposits
Bio(fouling), scaling and corrosion

Enabling technologies that have been identified (details in SRA)
Water fit for use in specific sectors
Closing the water cycle
Sludge and concentrates, recirculation of organic waste
Emission reduction of priority substances (advanced waste water treatment)

Pilot 5: Reclamation of degraded water zones (surface water and groundwater)

Ria Formosa Portugal

Potential implementation cases	Country
Danube basin	Transboundary/Romania
Hornad basin	Slovakia and Hungary
Tame catchment, Birmingham	United Kingdom
Rhone Aval	France
Minho region	Portugal and Spain
Ria de Aveiro and Ria Formosa	Portugal
Fucini basin	Italy

Generic research issues that have been identified (details in SRA):
IWRM information for integration
Model application and demand and supply
Dissemination and uptake and enabling framework
Adaptive systems
Appropriate quality and security (advanced waste water treatment)
Environmental impacts

Enabling technologies that have been identified (details in SRA)
Sensors
Demand and Supply
Reduce negative environmental impacts

Pilot 6: Proactive and corrective management of extreme hydro-climatic events

Flooding in Prague

Potential implementation cases	Country
Odra river	Czech republic, Germany and Poland
Danube and tributaries	Germany, Austria, Czech republic, Hungary, Yugoslavia, Romania, Bulgaria and Soviet Union
City of Nice	France
Hamburg	Germany
Glomma river	Norway
Arade river basin	Portugal
Crimea	Ukraine
Oslo (NOM)	Norway
Ebro river	Spain

Generic research issues that have been identified (details in SRA):

Forecasting the hydro-meteorological aspects
Warning systems, monitoring network and crisis management
Long-term flood mitigation
Short and long-term drought management
Climate change and increasing NOM (Natural Organic Matter)
Safe and sustainable drinking water production
Flood forecasting in large urban areas

Enabling technologies that have been identified (details in SRA)

Regional scale flooding
Local scale multiple hazard management
Drought and river flow management
Treatment to cope with increasing NOM in drinking water sources

Network cleaning

4. Organisation WSSTP

Scope of work:

The current organisation of the WSSTP has been suitable for the joint preparation of the Vision Document and the Strategic Research Agenda, involving multiple stakeholders. Indeed, the thematical approach by working groups has resulted in valuable input, serving as building blocks for the generic strategic research agenda.

WSSTP is about to enter the next phase with the execution of implementation cases. The platform needs a different organisation to proceed smoothly to the operation of the pilot programs and the deployment of the implementation cases. The key challenges the new organisation has to face are:

- a bottom up approach, to allow and stimulate the formation of several individual consortia, involving multiple stakeholders from various competence areas which will involve themselves in the realization of demonstration cases,
- strong coordination capacities, to align the different initiatives, to stimulate cooperation for the formation of consortia, and to avoid overlap or duplication of activities and subjects, within pilots and between consortia,
- competent financial engineering support, to address the financing needs of the different initiatives with a clear view on European, national and local financing mechanisms in order to create and maximize financial opportunities,
- efficient and flexible governance, minimizing overhead and allowing maximal involvement of interested parties in a open and transparent manner,
- effective support and outreaching behaviour, to involve the optimum number of relevant stakeholders, to maintain dynamics, and to secure follow up actions and supply managerial assistance to all levels.

Although consortia involved in the execution of the implementation cases will be completely independent with regards to their (financial) organisation and individual responsibilities, it is crucial that these consortia are aligned at an organisational level and also for knowledge and performance management.

The broad network that will develop under the umbrella of WSSTP, will have an invaluable potential to create and demonstrate the innovative solutions necessary to help solve the international water crisis.

Legal structure:

The WSSTP is not yet a legal entity. It acts based on:

- The execution of a Specific Support Action project of the European Commission, (contractually led by a consortium involving KIWA, EUCETSA, TNO, UKWIR and NTNU)
- The considerable in-kind contributions of close to thirty different water related organisations in Europe.

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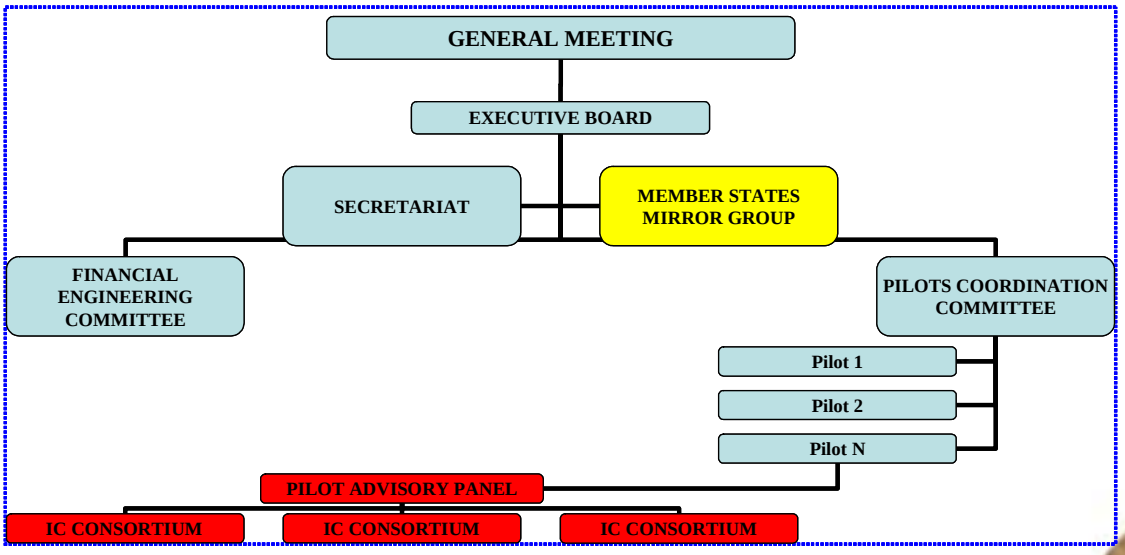
A legal entity will be applied for under the new organisation for further operations: it will be a "not for profit " association under Belgian law (a.i.s.b.l.) and based in Brussels. It will be based on Terms of Reference which are being finalized . It is envisioned to register the new organisation before the end of 2006.

Organisation:

The overall goals of the Association are to promote a sequenced realisation of the European vision for water supply and sanitation in 2030, to make innovative contributions to solving major European water problems developed within the framework of integrated water resources management (IWRM) and to accelerate the marketing of these innovations to boost European competitiveness.

ORGANISATION STRUCTURE WSSTP



The Association is composed of corporate members, associate members and honory members.

Corporate members: Legal entities whose activities are related to the water sector may become corporate members, whether they are industries, consultants, universities or research organisations, utilities, central or local authorities, national or European trade organisations. They shall be recognised as having an interest in water related research and development. Their activity must be measurable and with European impact. The members are organised in three groups:

- Industry (manufacturer, service providers and their trade associations)

- Academia (universities, research organisations, consultants, and their associations)
- Water users, other beneficiaries and their trade associations.

Corporate members agree to the association's articles and rules and to paying an annual corporate membership fee.

Associate members: Associate members shall be legal entities in the water sector which (i) fulfil the criteria of corporate membership, but do not wish to become a corporate member, (ii) are involved in some of the activities of the association, but do not meet all of the conditions/criteria to qualify as corporate member and (iii) other stakeholders in the water sector (e.g. regulating authorities, consumer organisations, NGOs, etc.). Associate members are important dialogue partners of the Association and can participate in its activities, receive its Newsletter and other PR material.

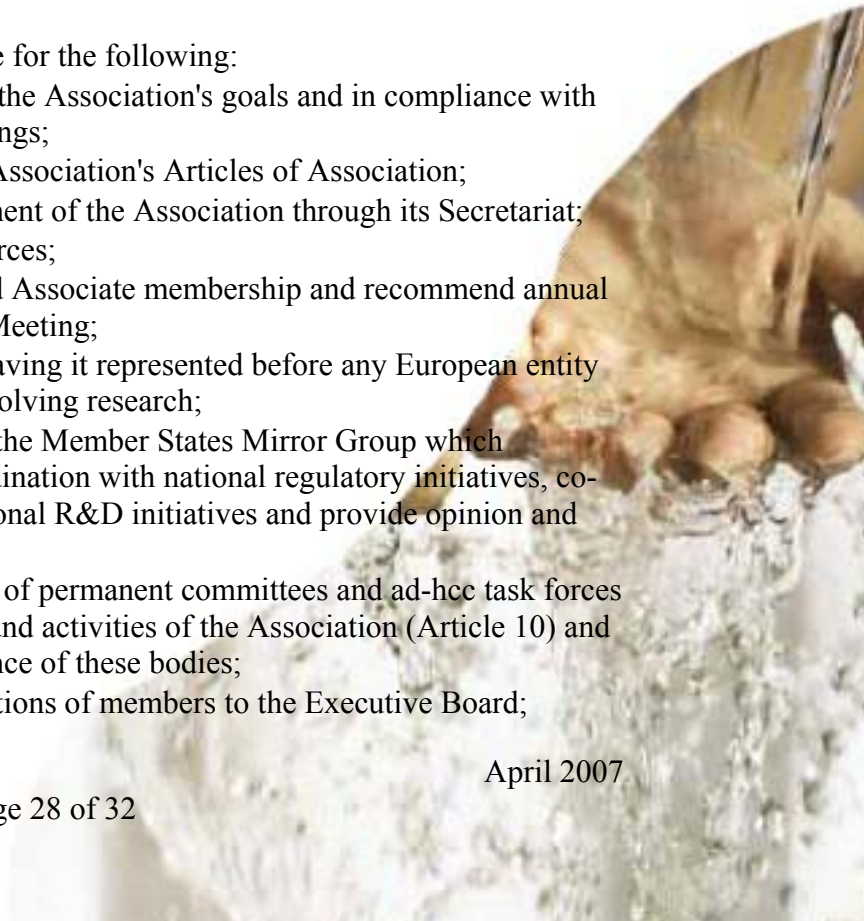
Honory members: Honory members of the association shall be appointed by the Executive Board from among individuals who have distinguished themselves in view of either their exceptional work or important services provided in relation to water and sanitation at large or the association itself.

General Meeting: General Meeting is comprised of all corporate members. The General Meeting shall have the broadest powers within the limits fixed by law. Its decisions shall be binding on all members of the Association, whether in attendance or not.

Executive Board of the WSSTP: The Executive Board represents the Association and shall have full executive power within the limits fixed by the Articles of Association and actions that are assigned to it by the General Meeting. Members of the Executive Board from each of the three corporate member groups shall be elected by a simple majority of the corporate members of each group in attendance or represented at the General Meeting.

The Executive Board shall be responsible for the following:

- taking any action consistent with the Association's goals and in compliance with decisions taken by General Meetings;
- monitoring compliance with the Association's Articles of Association;
- ensuring the day-to-day management of the Association through its Secretariat;
- managing the Association's resources;
- develop criteria for Corporate and Associate membership and recommend annual membership fees to the General Meeting;
- representing the Association or having it represented before any European entity or organisation, notably those involving research;
- liaison to and co-ordination with the Member States Mirror Group which facilitates the co-operation/co-ordination with national regulatory initiatives, co-operation/co-ordination with national R&D initiatives and provide opinion and advice to the Executive Board;
- creating and appointing members of permanent committees and ad-hcc task forces as required to promote the goals and activities of the Association (Article 10) and monitoring actions and performance of these bodies;
- preparing and organising the elections of members to the Executive Board;



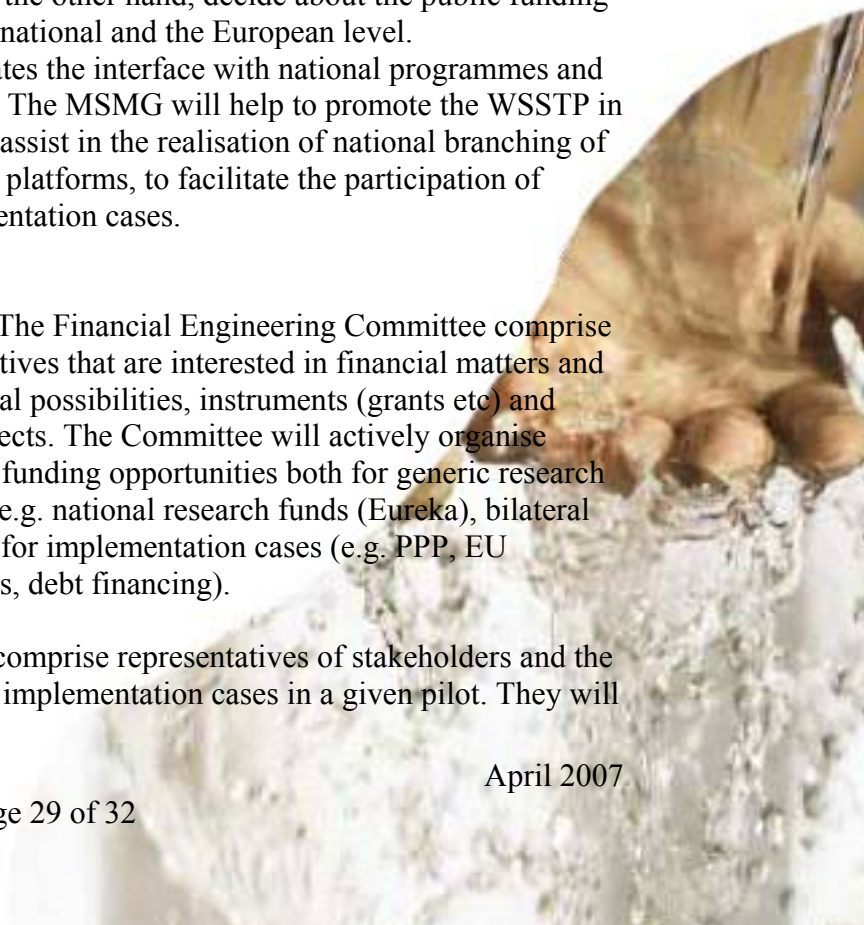
- preparing annual budget and workplan for for the General Meeting
- convening General Meetings and reporting on its activities at General Meetings
- proposing at a General Meeting that a member be revoked.

The Secretariat: The daily operation of the Association is facilitated by the Secretariat, which consists of a small group of specialists and administrative support staff. The activities of Secretariat are detailed in annual work plans and include but are not necessarily limited to:

- facilitation of the General Meeting, the Executive Board meetings, and the activities of the Pilots Coordination Committee and the Financial Engineering Committee;
- coordination of the public relations of the Association and developing and maintaining associated PR-material (newsletters, posters, brochures, website);
- entry point for any external contacts to the Association.

Pilots Coordination Committee: *The Pilots Coordination Committee* has the objective to coordinate matters between pilots and be a safeguard that all pilots are planned respectively conducted in accordance with the Strategic Research Agenda, the SDD and the principles of IWRM. The Pilots Coordination Committee consists of chairpersons of the Pilot Advisory Panels, a representative from the Financial Engineering Committee and an Executive Board Member who is chairing the Pilots Coordination Committee.

The Member States Mirror Group: The Member States Mirror Group to the Water Supply and Sanitation Technology Platform (WSSTP) has a special place in the heart of the organisation, as it is the group of policy-makers and regulators from national public authorities. On the one hand, they determine to a large extent the future sustainable development agenda for industry, and on the other hand, decide about the public funding of research and development, both at the national and the European level.
The Member States Mirror Group facilitates the interface with national programmes and reflects regional interests in the platform. The MSMG will help to promote the WSSTP in the various countries and where possible assist in the realisation of national branching of the platform through national technology platforms, to facilitate the participation of countries in the pilot themes and implementation cases.



The Financial Engineering Commitee: The Financial Engineering Committee comprise a small number of stakeholder representatives that are interested in financial matters and have knowledge and affinity with financial possibilities, instruments (grants etc) and organisation of financial budgets for projects. The Committee will actively organise funding and provide advisory support on funding opportunities both for generic research and enabling technologies development (e.g. national research funds (Eureka), bilateral EU-3rd countries funds, EU 7. FWP) and for implementation cases (e.g. PPP, EU structural and regional development funds, debt financing).

Pilot Advisory Panels: (initially panels) comprise representatives of stakeholders and the commercial consortia responsible for the implementation cases in a given pilot. They will

advise and facilitate close consultation and dialogue between all relevant stakeholders and commercial consortia of a given pilot with a view to ensuring that the pre-competitive RTD is defined, targeted and prioritised by the needs of the implementation cases, that results from the RTD is applicable and available for all stakeholders and commercial consortia within a pilot (or more pilots), and that the pilot and its implementation cases are carried out in accordance with WSSTP vision and principles of deployment.
Each Pilot Advisory Panel is chaired by a Pilot Advisory Manager who shall be elected among the pilot stakeholders and commercial consortia representatives of the implementation cases under the pilot.

Membrane filtration installation in drinking water production. PWN the Netherlands

5. Financial Engineering aspects

The financing needs of implementation cases can be met using a wide portfolio of mechanisms. The three phases (generic research, enabling technologies development, implementation cases) of the deployment agenda will have access to grants and subsidies (research and enabling technologies development) and debt financing (full scale demonstration projects).

Grants and Subsidies

As water is increasingly recognized as a key issue in Europe, appropriate thematic priorities and related budgets are likely to be allocated in the various Member States and a sizeable budget is anticipated for the water issues within the scope of FP7.
Six kinds of financial tools will be available to co-finance the research and enabling technologies development phases of the implementation cases:

- -National research grants and subsidies
- -Seventh Framework Programme
- -Bilateral research funds (Member State- third country and EU- third country)
- -Transnational programs (such as a EUREKA cluster on water)
- -EIB Risk Sharing Financing Facility (RSFF)
- -Structural, regional and cohesion funds which can co-finance part of the front end research and technology development and part of the assets deployment.

The relative use of these various mechanisms will depend on the degree of fundamental research versus technology development closer to the market application and the magnitude of the associated financial and technology risks. A sizeable percentage of the financing (50 to 70 %) will have to be born in any case by the implementation case consortium which implies a strong commitment from the industrial partners and the related public-private partnership managing the implementation case. The consortia will

also have to agree on the Intellectual Property Right (IPR) management and the related royalties associated to the commercial exploitation of the newly developed technologies.

Debt financing

The deployment of implementation cases will involve public-private partnerships with financial participation of the problem owners as well as of the participating industrial partners.

Large scale investment could benefit from low interest debt financing:

- European Investment Fund (EIF) and its venture capital funds – VCF- for highly innovative and promising technologies and SMEs partners.
- EIB loans (over 50 MEuros) for either bankable projects or bankable partners: project finance model or corporate finance model
- National banks loans guaranteed by EIB.

The proper utilization of this portfolio of financing mechanisms requires the establishment of a specialized and focused WSSTP Financial Engineering Committee. It will ideally be composed of large companies' financial experts and key representatives of the financial institutions (EIB, EIF, national financing services and financial consultants). It will be essential for providing the implementation cases consortia with the right financial approach and support to enable the deployment of their implementation cases.