



Demonstration Sites
for Innovation in Water

WssTP,
a common vision
for water innovation



Publication 2010

WssTP

**A vision for coordinated, integrated and innovative
Water European Research Area**

Mission and role of WssTP as ETP



- Promote research and technology in the water sector
- Shape the future priorities for research and innovation
- Deliver a **common vision for water innovation**
- Promote water in the political agenda
- Address grand societal challenges of today and tomorrow

Key facts on WssTP



- **Growing organization:** From 17 to 62 members from 2008 to 2011, 315 contributing organization, a network of more than 750 persons.
- **Strategic recommendations and working groups:** **3 key documents** (SRA, Vision document, Implementation document), **11 reports** sent to DG Research
- **Events in Europe:** 4 stakeholders events with more than 320 participants since 2007, 21 official presentations in 2009, many workshops organized by pilots programs
- **Originated ACQUEAU, the EUREKA Cluster for water.**

WssTP organisation



Implementation Cases Consortium

PP 1
Coastal Zones

PP 2
Urban Areas

PP 3
Agriculture

PP 4
Industry

PP 5
Degraded Zones

PP 6
Hydro Climatic

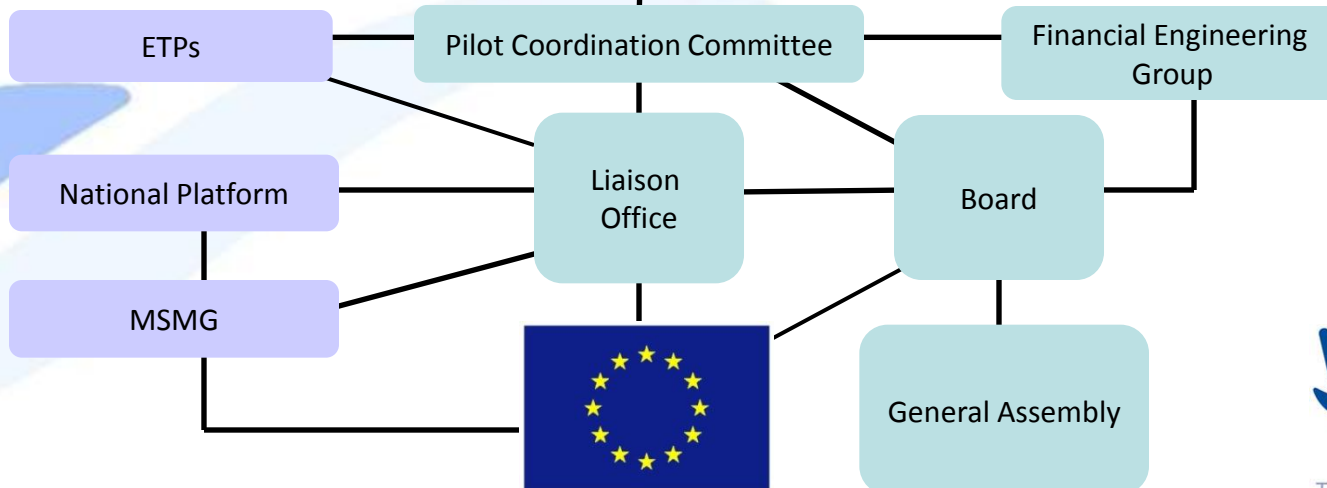
TF Climate Change

TF MAR

TF Monitoring & Sensor

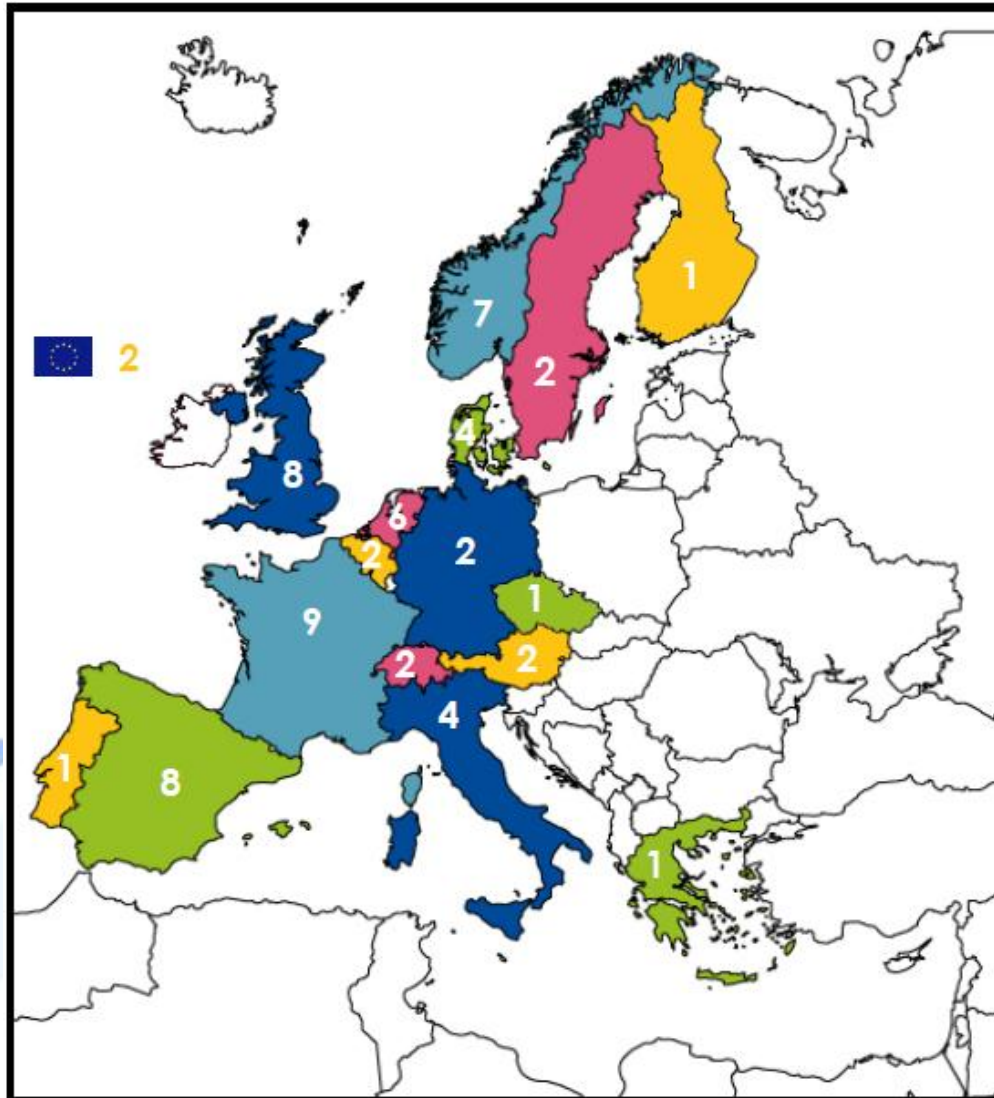
TF Water & Energy

TF Membrane Technologies





Map of our members



Pilot programme 1: Mitigation of water stress in coastal zones



Coastal zones occupy **less than 15%** of the earth's land surface.

They accommodate **more than 60%** of the world's population.



It might be a **conflict** between the needs of:

- Local industry.
- Agriculture.
- Tourism.
- The environment.

Stephen Midgley, OIEAU, France

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



Increasing urbanisation:

More than 50% of the population will live in urban areas.

Some issues:

- Rainfall management.
- Balancing water demand with environment.
- Asset management.
- Sludge.
- Alternative water resources.
- Water treatment.
- Leakages

Nicola Bazzuro, IRIDE Group, Italy

Pilot programme 3: Sustainable management and agriculture



Agriculture is an essential challenge:
9 billion people will have to be fed.

The demand of water is growing,

Increased agriculture productivity:
development of new water management tools,
improvement of sustainable production
methods...

- Irrigated agriculture
- Nitrate pollution
- Water reuse

Tania Runge, COPA-COGECA, Belgium



The European Water Platform

Pilot programme 4: Sustainable water management for industry



All industries need to be more efficient in the use of water.

Implementation cases:

- Water fit for use.
- Closing water cycles.
- Reducing pollution (carbon impact) and water costs.
- Brines
- Complex waste water treatment
- SUSCHEM, ETP-SMR, ESTEP

Albert Jansen, TNO, Netherlands

Pilot programme 5: Reclamation of degraded water zones



Natural resources must be protected: ecological quality in Europe is a concern
(The Water Framework Directive).

Research needs:

- Development of techniques.
- Development of **optimal strategies.**
- “Best practises” guideline.
- CIS-SPI

H. Duel, Deltares, Netherland and
E.Feliu, Labein Technalia, Spain

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



Alan Jenkins, CEH, UK

Co-leader:

Cees van de Guchte, Deltares, Netherlands

6 Task-Forces



What is a Task-Force?

Task Forces are working groups handling cross-cutting issues of several Pilot Programmes. Task-Forces are called by the Board of Directors on a specific topic for a limited duration in time.

Six topics:

- Climate Change
- Manage Aquifer Recharge
- Sensors and Monitoring
- Membrane applications
- Water & Energy
- MDGs

List of Publications – Strategic Documents



- **2005 – Vision Document***
- "Water safe, strong and sustainable European vision for water supply and sanitation in 2030"
- **2006 – Strategic Research Agenda***
- "Water Research - A necessary investment in our common future"
- **2007 - Implementation Plan***
- **2010 – Update of the SRA***

List of Publications - Reports



- **Coastal zones**
- Scientific Publication: Research and Technology Development Needs –
- **Urban areas**
- UTP1: Managing rain-related events and flooding in urban areas -
- UTP2: Asset management for sustainable urban water -
- UTP3: Supply Demand Balance & Public Participation –
- UTP4: Sustainable Sludge Management in Urban Areas -
- UTP5: Alternative Water Resources
- UTP6: Sensor – Creation of a Task Force,
- UTP7: Water Treatment - Report to be released
- UTP8: Pollution Control - Report to be released
- **Agriculture**
- UTP1: Irrigation Techniques – Report 12-10-1009
- UTP2: Water reuse – Report to be released
- UTP3: Nutrient Management – Report to be released
- **Manage Aquifer Recharge**
- State of the Arts and Research Needs – Report 18-09-2010
- **Climate Change**
- Incorporating Climate Challenge – Report 01-12-2010

Sensors and Monitoring, Water and Energy, Membrane Technologies for Water Applications, Millennium Development Goals, Brines, Leakages = Report to be released



List of Publications – Position Paper



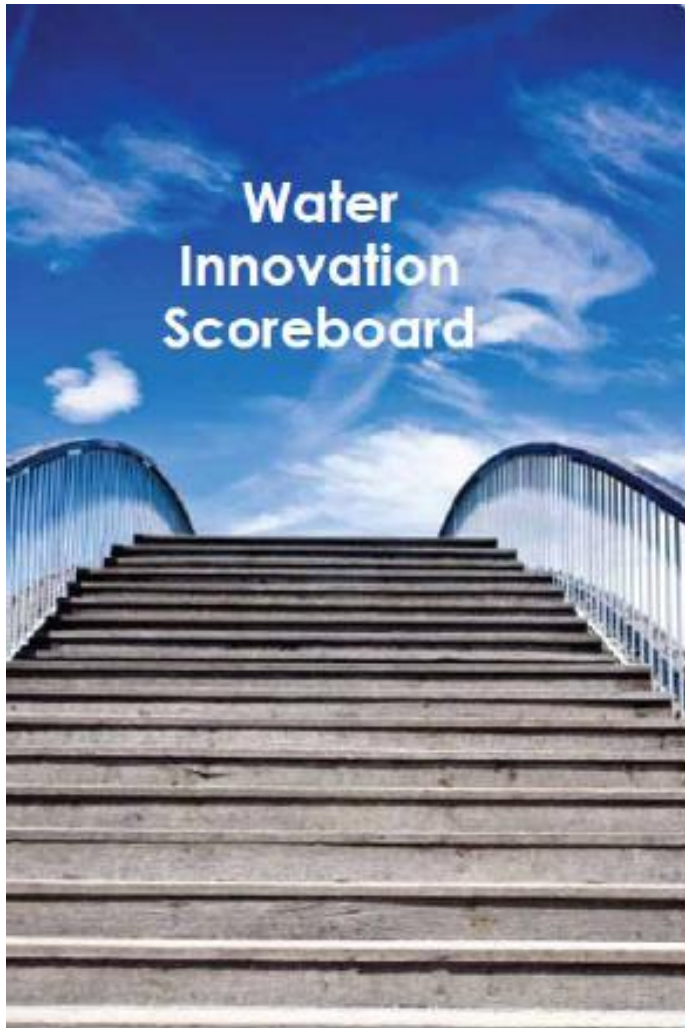
- Position Paper on Energy-efficient Buildings (EEB) “Research Priorities for the Definition of a Multi-Annual Roadmap and Longer Term Strategy”, 5-10-2009
- Position of WssTP on “Public consultation on Community innovation policy”, 16 November 2009
- Position Paper on “Simplifying the Implementation of the Research Framework Programmes”, 04-07-2010
- Position Paper on Vision Document: “Building Up Infrastructure Networks of a Sustainable Europe”, 01 September 2010
- Position paper on Draft Vision Document, Joint Programming Initiative, “Water Challenges for a Changing World”, 22-09-2010
- Position Fiche of WssTP: “Europe 2020 Flagship Initiative - Innovation Union”, 11-11-2010
- Consultation on “a possible successor to the Competitiveness and Innovation Framework Programme (CIP), 04-02-2011
- Consultation on “a future EU financial instrument for the environment (continuation LIFE+), 15-02-2011
- Advice Paper Advice Paper on “Boosting Research and Innovation Fundings for Water, Position on FP8”, 01-04-2011
- Position paper on “The European Commission is preparing a Roadmap for a resource-efficient Europe as part of the resource-efficient Europe Flagship Initiative of the Europe 2020 Strategy”, 20-04-2011
- Position Paper “From Challenges to Opportunities: Towards a Common Strategic Framework for EU research and innovation funding”, 20-05-2011

Initiatives and relationships with EC



- Position Innovation Union (December 2010)
- Position on CIP Position (February 2011)
- Position on Life + consultation (February 2011)
- JPI Vision Document (February 2011)
- FP8 WssTP (8 April 2011)
- EU Financial Perspectives 2014-2012 (15/20 April)
- Roadmap for a resource-efficient Europe (20 April 2011)
- GREEN PAPER (Mid May 2011)
- LIFE+ PROPOSAL (End of June 2011)

Be ready for **Water** innovation!



The market of Water

Considerable asset

Global market	250,000 Water & wastewater treatment plants worldwide 70,000 waste water treatment plants in Europe
Huge market	250 to 450 Billion € (Municipal and industrial water and wastewater capital expenditure)
expected growth	2% to 10% (Lead market: China, India, and Middle east)
Water networks	> 2.5 Million km water distribution pipes
Wastewater networks	> 2.5 Million km waste water sewers

A major employer

600.000 direct jobs

if one include consultancy, related services, etc., it could bring up to 1.200.000 direct and indirect jobs. If one consider that in UK, the employment in waterco is 37,000 employees and employment in supply chain is 117,000 employees which could bring the number of water employees in Europe up to 800.000 direct jobs.

Huge investments

250 to 425 Billion € (Depending on sources)

Current investment in water and wastewater equipment for industrial markets is estimated at 30,5 Bn€ in 2010 and is projected to reach 17 Bn€ in 2016, representing a Compound Annual Growth Rate of 7,9%.

Capital expenditure for water reuse is projected to rise from 17 Bn€ in 2010 to 6,3 Bn€ in 2018.

Some urban areas in the EU-15 still lack wastewater treatment facilities. In addition, the 12 new Member states, starting from a lower compliance base, all have large investment needs to enable them to comply with the Urban Waste Water Treatment Directive. It is estimated that another 200 Bn€ will be needed to achieve the full treatment of Europe's urban water pollution in the EUE.

To reach the Millennium Development Goals (MDGs), investments are ranging from 5 Bn€ to 56,5 Bn€ per year.

Thank you for your attention