European Vision for Water Supply and Sanitation in 2030

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Characteristics of water sector

• Water supply and sanitation is needed everywhere → knowledge is scattered
• Fragmented and duplicated R&D efforts
• Major economic player with a turnover of about 80 billion euros (1% of GDP)
• Average growth rate of 5 % per year (before economic crisis)
Water supply and sanitation Technology Platform (WssTP)

- Originating to EC’s European Technology Action Plan (ETAP), where the need was identified
- Initiative to simulate research and technology development in European water sector
- Represents different stakeholders of the water sector: industry, research, policy makers and water users
Goals of the WssTP

- Foster collaborative, innovative and integrated R&D
- Improve the competitiveness of the European water sector
- Provide global answers to global problems
- Address the challenges of water resources management

➢ By 2030 Europe will be the leading centre of expertise in water sector
History of the WssTP

• Launched in 2004
• Vision Document in 2005
• Strategic Research Agenda (SRA) in 2006
• Implementation plan in 2007
• Transformation from a consortium into a non-profit association in 2007
• Today ca. 50 members
Vision Document

• Written by five separate working groups:
  – Water for nature
  – Water for people
  – Water for industry
  – Water for agriculture
  – Horizontal (enablers)

• Reviewed by over 300 experts

• Merged into a Common Vision Document

• Available at www.wsstp.eu

Water Supply and Sanitation Technology Platform
Some challenges
Ageing infrastructures

• In many parts of the Europe pipes are over 100 years old
  – The UK has over 700 000 km of mains and sewers with over 35 000 works per month on these pipes
  – A 5% saving in costs would save over £20 million for the UK alone

• Huge market potential
  – $ 1 trillion needed for critical drinking water and waste water investments in US over the next two decades (500 billion a year)
Legislation

• Implementation costs of existing and future European environmental legislation e.g.
  – Urban Waste Water Directive in new member states: 35 billion €
  – Water Framework Directive
  – Bathing Water Directive
  – Drinking Water Directive
  – Flooding Directive etc.

• To develop cost-effective risk-based drinking water legislation based on RA/RM approach
Millennium Development Goals

• 1.1 billion people do not have access to clean water
• 2.6 billion can not dispose their excrement in safety and with dignity
• Halving these figures in the next 10 years means that
  – EVERY DAY water treatment and distribution systems have to be built to serve 400,000 people
  – EVERY DAY sanitation has to be provided for 900,000 people
Climate change

• Droughts and floodings
  – An average of 1% reduction in precipitation is forecast for every 10 years across Europe

• Erosion
  – Annual cost of erosion in agriculture 85.5 € per hectare
  – Introducing organic matter from sewage sludge to agricultural land could save over € 13 billion every year
Emerging threats

• The water sector would face a fundamental change if the customers lose their trust in their drinking water
• Turning to bottled water would mean an increase of social expenditure of at least € 20 billion per year
Vision for 2030
Water cycle is managed in an integrated way by:

- Better understanding of the impacts and interactions of all water-related activities
- Decision support systems
- On-line monitoring
- Early warning systems
- Emergency response plans
- Better communication and community involvement
Demand and supply are balanced by:

- Saving water in agriculture, industry and households
- Using new water sources
- Closing water cycles and re-using water
- Detecting, controlling and repairing leakages
- Effective incentives
Quality and security are ensured by:

- Assessing and managing risks at all levels of the water cycle
- Removing the targeted compounds and micro-organisms from all types of water
- Monitoring water quality comprehensively
Environmental impact is reduced by:

- Reducing the water-based emissions
- Introducing usable products from biosolids to the market
- Reducing energy consumption
- Producing less waste
Assets are managed cost-efficiently by:

- Maintaining and replacing them at the right moment and at the right place with minimum disturbances to third parties
- Knowing all possible effects of failures
- Better construction materials and replacement technologies
- Low maintenance and long-lived pipes, pumps and robust processes
Europe has contributed to the MDGs by:

- Providing low cost and sustainable technologies and tailor-made system solutions
- Education and training programmes
- Increasing political will to invest
To enable this happen we also need...

- To understand the value of water
- Better investment climate to water infrastructure
- More training, communication and knowledge dissemination
- European standardisation
- Better understanding of public perception
- Innovative policy and legislation
- and much more...
How the dreams come true…

• Strategic research agenda (SRA) identified the gaps in our knowledge to achieve the Vision

• Execution of the SRA through six programmes:
  1. Coastal zones
  2. Large urban areas
  3. Water & Agriculture
  4. Water & Industry
  5. Reclamation of degraded water zones
  6. Hydro-climatic events
Next steps of the WssTP

• Development of Strategic Deployment Document
• Work plan for the new Eureka Cluster "ACQEAU"
• Revision of the SRA
• Increasing the visibility and the number of members
• Change of name and logo
Summary

• WssTP is an open and transparent platform for all the relevant stakeholders
• WssTP’s vision is a basis for the SRA and its implementation
• More information: www.wsstp.eu