



European initiative on water reuse - State-of-play

**Workshop on circular economy and water re-use
EUROPE-INBO 2016**

Lourdes, 19 October 2016

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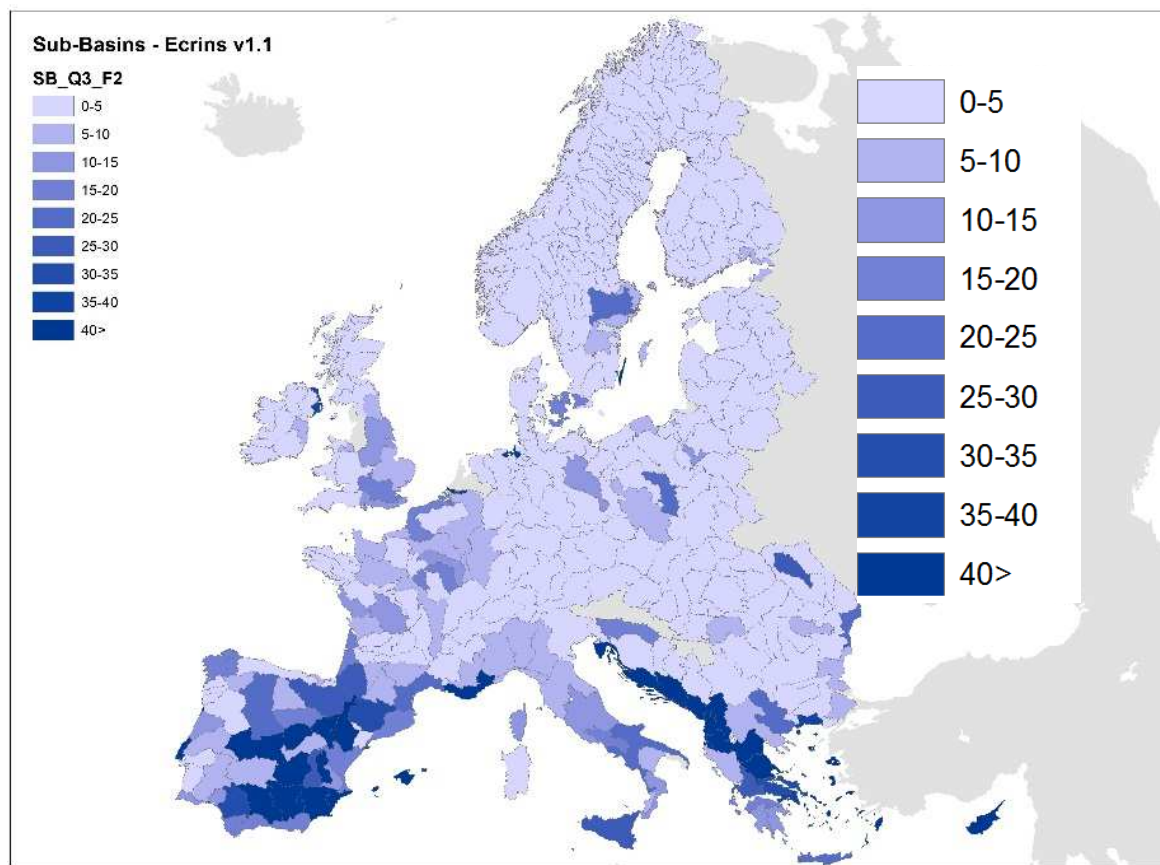


EU initiative on Water Reuse

POLICY BACKGROUND



Water scarcity and droughts continue to affect:



Source: Preliminary work Water Exploitation Index plus – Water stress prone areas across Europe (2002-2012), EEA.

- 14% total population of Europe under water stress conditions during summer.
- Many river basin districts face structural water stress issues, mainly in the Mediterranean.
- Agriculture in the Mediterranean region alone accounts for almost 75% of total water used for agriculture in Europe.

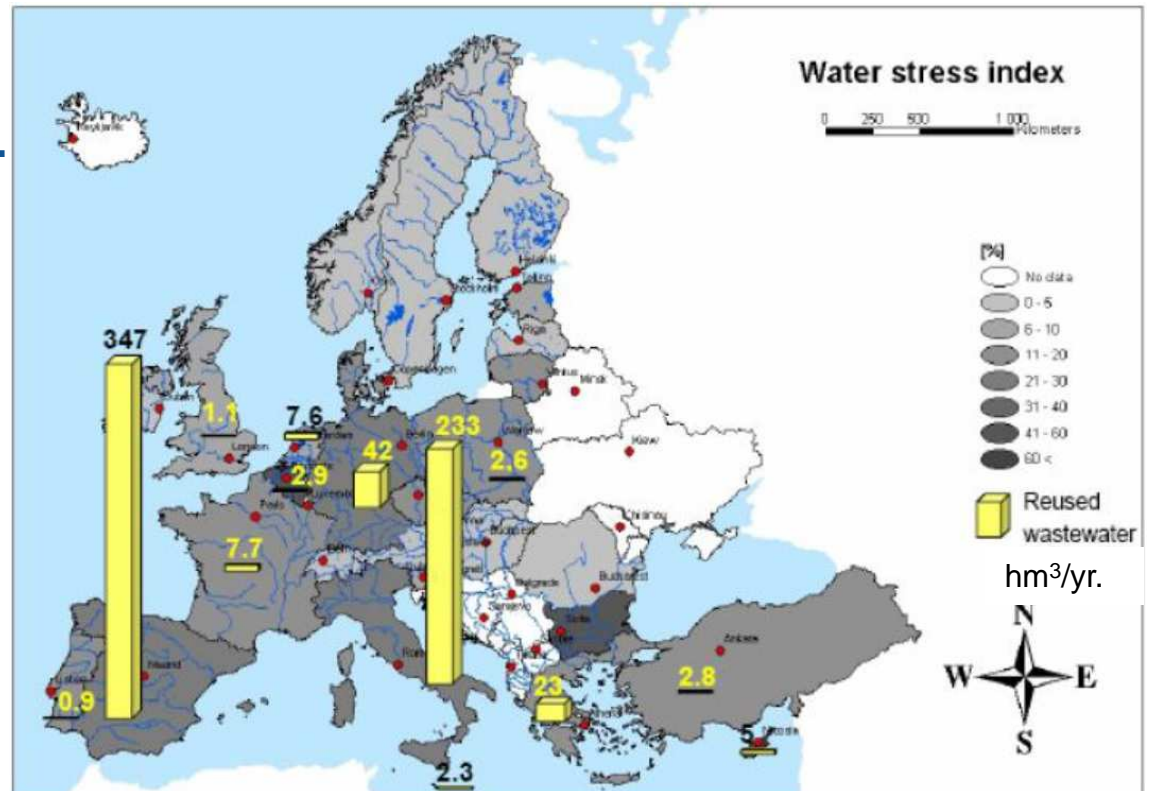
An untapped potential in the EU

- ❑ Reused wastewater in Europe: 1 billion m³/year in 2006 =
 - 2.4% of the total volume of treated effluents (5-12% in Greece, Italy and Spain).
 - ~ 0.4% of annual EU freshwater withdrawals.

- ❑ Achievable potential.
→ 6 billion m³/year by 2025.

- ❑ A strategic option beneficial to both the environment and economy.

→ Towards a more Circular Economy.



Source: Hochstrat et al., 2006



Identified barriers

- ✓ Insufficient integration in the broader management of water resources.
- ✓ Reuse more complicated, more costly, and perceived as more risky than use of conventional water resources.
- ✓ Potential trade barriers for agricultural products in the EU internal market.

To be addressed at EU level:

- Insufficient implementation of EU water policies.
- Lack of a common approach to risks and of an harmonised legal framework.





Water reuse in Sustainable Development Goals



- **UN 2030 Agenda for Sustainable Development**
- **17 SDGs** adopted in September 2015

SDG 6: Ensure access to water and sanitation for all

- *By 2030, **improve water quality** by reducing pollution, eliminating dumping [...] and substantially increasing recycling and safe reuse globally.*
- *By 2030, expand international cooperation and capacity-building **support to developing countries in water-** [...] wastewater treatment, recycling and reuse technologies.*





Water reuse in Circular Economy

- **EC Communication: "Closing the loop – An EU action plan for the Circular Economy"** (December 2015):
 - **Section 4. From waste to resources:** boosting the market for secondary raw materials and **water reuse**.
 - List of follow-up initiatives (Annex):
 1. **Reuse in integrated water planning and management** → CIS Guidelines.
 2. **Minimum quality requirements for water reuse for irrigation & GW recharge** → legislative proposal.
 3. **Water reuse in industrial activities** → BREFs (Best Available Techniques Reference Document).
 4. **Support to research and innovation**
 5. **EU funds for investments in water reuse**





EU initiative on Water Reuse

PROGRESS & NEXT STEPS





1. Reuse in integrated water planning and management

Development of the **CIS Guidelines on Integrating Water Reuse into Water Planning and Management in the context of the Water Framework Directive.**

- Promote a common understanding of reuse in EU water legislation (e.g. WFD, UWWTD, ND) and good practice.
- Based on experience in MS and third countries.
- Endorsed by MS water directors in June 2016.





Structure of the CIS guidelines

- Explains policy background – how reuse can help **contribute to WFD objectives**, but in the context of the **water hierarchy**
- Sources/uses; **benefits and potential problems**
- Explains the importance of **meeting other EU env/water law** especially UWWTD, ND
- Importance of **quality standards** is stressed, including following legal requirements (e.g. MS law). The stress is on ensuring the right quality for the specific use, use of risk assessments, monitoring of quality, etc.
- The **steps in planning** are explored, including **interactions with RBMPs** (and other planning processes)
- **Public and other stakeholder interaction** is explored
- The final chapter considers **funding** of reuse schemes

Steps in planning for water reuse -1

1. Determine overall pressure from water scarcity / over abstraction and needs of users

Review of the environmental impact of human activity (WFD Art.5)

Estimation and identification of significant water abstraction

Estimation and identification of the impact of significant flow regulation on overall low characteristics and water balances

Monitoring on water status (WFD Art.8)

Surface waters: the volume and the rate of flow to the extent relevant for ecological and chemical status / potential

Groundwaters: monitoring of quantitative status

Failure of good status/potential of surface waters due to over-abstraction?

Failure of good quantitative status of groundwaters?

Risk of failure in future?

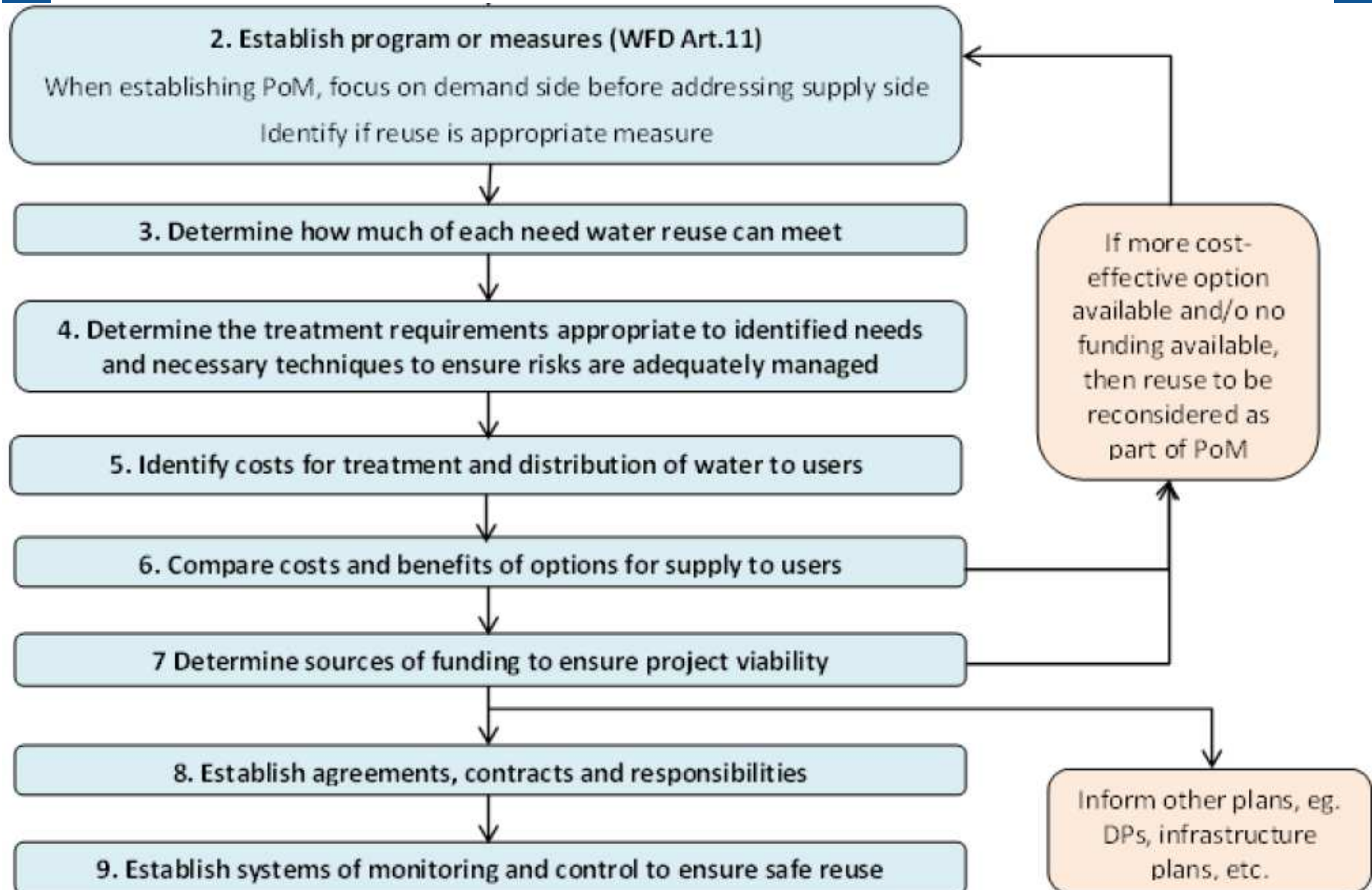
No

No action required to achieve WFD objectives

Yes

2. Establish program or measures (WFD Art.11)

Steps in planning for water reuse -2





2. Minimum quality requirements for water reuse in irrigation and aquifer recharge

- Addressing the lack of a coherent and comprehensive legislative framework within the EU.
 - ✓ Ensure a high level of health and environmental protection.
 - ✓ Provide public confidence in reuse practices.
- Focus on 2 uses of most relevance at EU level: agriculture irrigation and on groundwater recharge.





2. Minimum quality requirements for water reuse in irrigation and aquifer recharge

Timeline:

- **Inception Impact Assessment** published → April 2016.
- **Open public consultation:** → November 2016 - January 2017.
- **Technical proposal by JRC**, consulted with the independent **Scientific Committee on Health, Environmental and Emerging Risks (SCHEER)** and the **European Food Safety Authority (EFSA)** → end 2016.
- **Consultation** of MS and organizations via the CIS → 2016-2017.
- **Proposal for an EU legislation** → mid 2017.





3. Water reuse in industrial activities

- BAT reference documents (BREFs) are developed for industrial sectors under the scope of the Industrial Emissions Directive (2010/75/EU)
- Most of them (29/31) already address water reuse.
- Look into further integration of water reuse for relevant sectors; recent examples:
 - **Common Waste Water and Waste Gas Treatment / Management Systems in the Chemical Sector (published June 2016)**
 - **Rearing of Poultry and Pigs (pending adoption)**
 - **Food, Drink and Milk (review kicked-off in Sept. 2015)**



4. Support to research an innovation

- Active field for research and innovation that could enhance competition in world market.
- European Innovation Partnership (**EIP**) **Water** → Water reuse top priority area:
 - Numerous Action Groups on water reuse.
 - Conference in Leeuwarden in February 2016.
- Increasing visibility of funding opportunities in:
 - **Horizon 2020** → calls to include water reuse in the Circular Economy topics.
 - **The European Regional Development Fund (ERDF)** → smart specialization strategies of MS and regions.
 - **LIFE - Programme for the Environment and Climate Action** → investigate pilot projects in this field



5. EU funds for investments in water reuse

- EU funding for Water Reuse infrastructure available:
 - **European Regional Development Fund (ERDF).**
 - **Cohesion Fund (CF).**
 - **European Agricultural fund for Rural Development (EARDF).**
- Encouraging MS to use these opportunities and prioritize water reuse investments in their Operational Programmes.
- Look for opportunities in the **European fund for Strategic Investments (EFSI).**





**Thank you
for your attention!**

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Access to documents

Dedicated EC Internet page:

<http://ec.europa.eu/environment/water/reuse.htm>

