

ICT4Water cluster

AG: Intelligent and Smart Systems

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Main topic(s) of the ISS AG

**Intelligent and Smart Systems
(including AI, data analytics, smart sensors, Decision Support Systems)**

Focus identified:

- 1) Reinforce better utilization and effective deployment of new technology enablers (such as IoT, AI for big data analytics, Digital Twins)
- 2) Improve efficiency and circularity in digitalisation of water use and re-use
- 3) Smartening of the water system

Challenges related to EU Water policies

Policy objectives:

- safeguard and improve the environmental quality and biodiversity in aqueous systems
- make the EU a green, sustainable and climate-proof industry leader in the water sector.



Water domain governed by a myriad of directives and conventions:

- Water Framework Directive, Urban Waste Water Directive, Bathing Water Directive, Drinking Water Directive, Nitrates directive, Natura 2000, OSPAR convention, Water Reuse regulation, ...

Recent directives move from traditional monitoring to risk based approach. This approach, while more holistic, is still static.

No stimulation of dynamic / adaptive approach possible with modern tools such as early warning systems, real-time detection and predictive modelling to support risk assessment and decision making

Plans and actions related to EU Water policies

- Develop policy paper that:
 - analyses requirements in directives concerning monitoring and risk assessment
 - provides insights and recommendations how digital technologies (e.g. EWS, Digital Twins, DSS, ...) can complement and further strengthen a risk based approach
 - provides illustrations of using digital and smart technology enablers in risk-based approaches, using examples from ICT4WATER cluster projects
 - Identifies challenges to a transition to dynamic risk management
- Other actions:
 - Update the DSS marketplace based on new survey (include new projects, update on included projects)
Consider Water Europe market place (<https://mp.watereurope.eu/>)

Thank you for your attention



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