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| Abstract Title                            | Environmental Technology Verification: a booster for water transition   |
| Topic                                     | <input type="checkbox"/> Improving water quality<br><input type="checkbox"/> Resilient water systems<br><input type="checkbox"/> Circular solutions: Reuse, Recover and Recycle<br><input checked="" type="checkbox"/> <b>Transitions in water, agro/food and energy</b>  |
| Challenges and Solutions                  | <p>In order to promote the water transition, several challenges have been identified including i) Barriers for the market uptake of innovative water technologies ii) strengthen the communication between stakeholders iii) implement policy measures for research and development technologies scale-up.</p> <p>In this study, made under the LIFEproETV project, a deep analysis on how the third-party technology performance verification through Environmental Technology Verification (ETV) can contribute to solving these challenges is presented.</p> |
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| Abstract                                  | <p>Water sector faces several challenges including water shortage, water pollution, alteration of climatic conditions (rain pattern and drought intensity), among others. This situation urges the need for the development and implementation of emerging and innovative technologies to achieve water sector transition.</p> <p>As a mode of example, technologies are needed for</p>   |

monitoring and eliminating emerging pollutants, for the production of high quality reclaimed water, low-cost sensors for rapid pollution monitoring, digital solutions for water facilities management, etc.

However, despite a huge effort being made in the development of new technologies, few of them achieve to reach the market, this gap between market-ready technologies and their market acceptance is known as the “valley of death of innovation”. To overcome this situation a comprehensive effort is needed from the different stakeholders involved from technology providers, technology buyers and regulators.

Under the LIFEproETV project a deep study was made in order to place the role of third-party technology performance verification through Environmental Technology Verification (ETV) as a tool to be used in the water sector contributing to the water transition.

ETV is an ISO standardized process (ISO 14034) intended for the third party verification of innovative technologies to prove i) their performance, ii) their environmental benefit and iii) their innovative approach. One of the main targeted areas of ETV is related to water treatment and monitoring technologies.

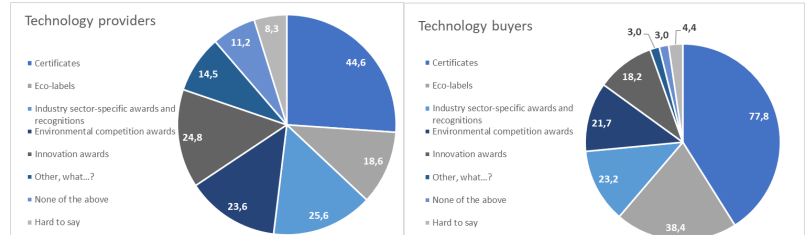
The activities carried out under the LIFEproETV project included, a deep review of innovative and environmental policies at European level and national level (from Spain, France, Italy, Poland, Hungary and Slovenia), in order identify gaps where third-party performance verification could enhance the accomplishment of the policy objectives. A broad survey among technology providers (n: 242) and buyers (n: 184) in order to identify their needs and expectations when dealing with the incorporation of innovative technologies. Consultation with relevant institutions from the water sector to identify their needs for the water transition.

The accomplishment of these activities allowed to define a roadmap for the utilization of third-party technology performance verification through ETV within the water sector under different areas, briefly:

- Strengthen the communication between stakeholders: through the survey analysis, it has been demonstrated the need to align technology buyers and providers language and expectations. For instance, technology performance communication is widely more demanded by buyers than used by providers. Also, the need for a common process to verify technologies performance would allow for a better comparison of solutions facilitating the identification of the ones fitting the best the needs of buyers.
- Implementing programs and policies focused on boosting innovative technologies. It has been demonstrated that facilitating, through financial incentives, a third-party performance verification positively contributes to the marked reach of innovative technologies, specially the ones from emerging companies or start-ups.
- Improve water management by companies (i.e. improve water footprint). Through the identification of technologies that provide a superior environmental performance in terms of water consumption contributes to incorporating them under different processes.

Overall, the study highlighted several opportunities to use the ETV (ISO 14034) as a booster of the water transition.

**Figures/diagrams/illustrations**



**Figure 1. Answers from technology providers (n: 242) and buyers (n: 184) to the following question: What is your preferred way of communicating the innovation and environmental effect of the technology?**