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TIME IS RIPE FOR BUILDING AN INNOVATION WATER ECOSYSTEM IN EUROPE

« As water challenges are becoming more complex and intertwined, one solution appears as particularly suitable: building a strong European innovation ecosystem on water. »

Introduction

Water is a fundamental resource for life, for our ecosystems, economic activities and society as a whole. However, in the face of growing consumption and climate change, the magnitude of water challenges, notably water stress and pollution, is exacerbated. Due to the interconnectedness of water, issues are also becoming increasingly complex and intertwined.

While the situation requires coordinated action between all players, the reality tells a different story: our policy framework does not adequately address the problems at stake and there is a clear fragmentation of efforts across the board.

This is particularly true in the field of innovation. Strong collaboration between the academia, research and business activities is crucial to create an environment that fully exploits and commercialises the knowledge being created. However, there is a current disconnect between the so-called “knowledge triangle” which prevent us from effectively bringing the findings of innovators towards end-users.

One of the solution to address this problem is to build a strong European innovation ecosystem on water. This approach echoes the actions taken by the European Institute of Technology (EIT), whose mission is to strengthen our ability to innovate in the EU. It does so by creating and running several innovation ecosystems, the so-called Knowledge and Innovation Communities ("KICs").

This article will elaborate on the concrete steps I have taken, as Chair of the MEP Water Group in the European Parliament, together with my colleagues Maria da Graça Carvalho (EPP, Portugal) and Christian Ehler (EPP, Germany) to push for the establishment of such an initiative on water. Additionally, this paper will give you an overview on the current state of play and what we can expect going forward.

The importance of an innovation ecosystem

To begin with, let's clearly define what we mean by an "innovation ecosystem". This concept refers to a network of entities that collaborate with one another to create, develop and commercialise innovative solutions (e.g. new products and services). These entities include a wide range of actors: from large and small companies, universities and research institutes to vocational training providers, investors, and NGOs, among others.

In the case of the KIC, two additional dimensions come into play: stakeholders are geographically diverse (27 Member States can participate, as well as EFTA partners such as Norway or Switzerland) and they represent various sectors (for instance, they can be involved in 'freshwater' or 'saltwater' related activities).

Such ecosystems are particularly effective because they capitalise on stakeholders' complementary expertise to help bridge the gap between ideas and their implementation on the market.

This is necessary because tackling complex real-life challenges, such as the water crisis, cannot be solved alone. Instead, it requires a network of knowledgeable and collaborative entities which, by creating synergies, can break down barriers across sectors and borders.

In the case of the water sector, innovative solutions could for instance improve the resilience of our ecosystems, strengthen water quality, reduce waste, as well as mitigate the impacts of climate change.

The “KICs”: Knowledge and Innovation Communities

Inspired by the Massachusetts Institute of Technology which fosters university-industry partnerships, a main aspect of EIT's work is to run KICs. Since 2010, nine of them have been established, each tackling a specific societal challenge: food, health, digital, culture, raw materials, etc.

But how do you create a KIC in the first place? And how do they work? In practice, the European Commission first launches an open call for application to all relevant stakeholders. From then on, interested parties form themselves into groups (usually two or three groups with each 30–50 stakeholders) that compete against each other to become the “winning KIC”. However, this process tends to be highly time-consuming and arduous. Participants not only need to express their potential contributions and expectations, but also to accurately understand others' respective strengths in order to coordinate and strategically form alliances to succeed.

Once the winning team is announced, the structure of the KIC is organised between a headquarter, which leads the work, and five to six regional “co-location centres”, which acts as operational units dedicated to specific objectives.

Financially speaking, the KIC receives European funding for a period of seven years, with a possibility to renew it once for the same length of time. Therefore, after a maximum of fourteen years on EU lifeline, the goal is to become financially sustainable via the products and services it has created, developed, and sold.

Water KIC

Where is the Water KIC in all of this? The latter is expected to become the 10th and latest edition of the series. The Commission announced that a call for application should be launched next year in 2025 in view of establishing the Water KIC a year later, in 2026. This decision was received with great enthusiasm by stakeholders across Europe, which are highly motivated by the potential impact and value from such initiative. Yet, it also means that they need to start working now on the strenuous application process.

In this context, I have together with my colleague Ms Carvalho and Mr Ehler decided to concretely support these participants by setting in motion two actions: on the one hand, kick-starting the coordination process between stakeholders, and on the other hand, requesting a tailored-made study that would provide actionable recommendations going forward.

Fostering cooperation among stakeholders

To activate the coordination process, we have organised a unique one-day interactive workshop in the EU Parliament in Brussels in January. Over 90 stakeholders from 18 countries participated, ranging from Denmark and Cyprus to Ireland and Slovakia. We also had the honour and pleasure of welcoming two high-level speakers, Commissioner for Innovation Iliana Ivanova and EIT Head of Operations Adam Rottenbacher, who both highlighted the value in establishing an upcoming KIC on water.

The objective was to foster collective and in-person interaction, collaboration, networking, and brainstorming, so that participants could better identify and understand their respective tools and needs for working towards a successful KIC.

To achieve that, we have divided all participants into small groups and gave them a dozen of specific and relevant questions to reflect upon and answer (e.g. 'which focus areas do you see as having to the highest potential for value creation?' or 'list, prioritise and explain what impact(s) do we want to achieve in this KIC?'). After multiple rounds of exchanges and debates, participants eventually presented their findings to the audience. At the end, my team and I collected all written inputs, and analysed and compared this data to draft a concise report.

The findings

The results were quite striking. Synergies were created: a majority of the topics identified as having the most potential for value creation were also seen as having the most potential for sustainable innovation and for improving the quality of life of European citizens.

In this context, four key priorities emerged: the use of data digitalisation (to better measure and manage water resources); the improvement of drinking water quality (which is increasingly polluted); the betterment of water infrastructures (which are ageing and leaking); and finally the emphasis on circularity (especially for agriculture management and wastewater treatment).

In terms of challenges, participants revealed that they will have to strike a balance between the interests of the freshwater, marine, and maritime sectors, as well as to act with a unified voice.

STOA study on water

In parallel to this workshop, our second initiative was to request a study to the European Parliament's Science and Technology Options Assessment (STOA) Panel to provide actionable recommendations for the establishment of a KIC. A pan-European team of experts is currently working on the project, which is expected to be published in May.

In particular, the study will advise participants on how to prioritise, design, and organise their work in the future. For instance, it should identify the thematic areas with the highest potential, draw the landscape of current and emerging technologies, and point to the need for more research and possible re-design of regulations when necessary.

Conclusion

To summarise, water is an essential yet threatened resource that needs our most urgent attention. As water challenges are becoming more complex and intertwined, one solution appears as particularly suitable: building a strong European innovation ecosystem on water. By bringing together a wide range of stakeholders, across sectors and countries, we are able to strengthen our ability to break down barriers to innovation and implement concrete solutions. This approach is in line with the EIT's mission, which is expected to launch a KIC on water in 2026.

However, the process to kick-start coordination between all players is typically arduous and time-consuming. This is why, together with two colleagues in the European Parliament, I have taken concrete steps to support them. Firstly, by organising an in-person interactive workshop in Brussels to foster exchanges of ideas and mutual understanding among participants. Secondly, by requesting the STOA Panel in the European Parliament to prepare a study that would advise and guide them in their immediate next steps.

I thus look forward to see how the expected Water KIC will materialise and, more generally, how the European Commission will address water challenges in its upcoming mandate (2024-2029). I am convinced that a holistic approach, where water goes beyond environmental policy to be instead mainstreamed in all EU policies, is the only way forward. This is also why I have repetitively voiced my support – along with the European Economic and Social Committee – for the adoption of a much-needed “Blue Deal”, which should be adopted as a standalone strategic priority for the European Union.