

# Invitation to express interest in Horizon Europe 2024 Calls

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## Introduction

During the summer of 2022, the Una.Resin project, a Horizon 2020 funded project aiming to pool collective research strengths and foster long-term research collaboration within the Una Europa alliance, launched a matchmaking pilot for selected Horizon Europe calls. Following this pilot, which resulted in three proposals submitted in April 2023, the Una Europa One Health self-steering committee would like to repeat this effort for 4 selected Horizon Europe calls within the area of One Health in 2024.

## Call topics

Please find a full description of each topic at the end of this document.

### **HORIZON-CL6-2024-FARM2FORK-01-1: Agro-pastoral/outdoor livestock systems and wildlife management**

Research and innovation action – deadline February 22, 2024 – 1 project of €5.00M

In line with the objectives of the farm to fork strategy for a transition to fair, healthy and environmentally friendly livestock production systems, and of the EU biodiversity strategy for 2030, including the conservation status of certain habitats and species, the successful proposal will help policy makers and other actors to monitor and improve the management of farming and terrestrial wildlife relationships, thus contributing to sustainable agriculture and ecosystem services.

### **HORIZON-CL6-2024-FARM2FORK-01-4: Climate change and food safety: effects of climate change on food safety across food systems**

Research and innovation action – deadline February 22, 2024 – 2 projects of €4.00M

The successful proposal will be in line with the European Green Deal priorities and the farm to fork strategy for a fair healthy and environmentally friendly food system, as well as with the EU's climate ambition for 2030 and 2050. It will support R&I to foster advances in research related to integrated approaches along the food system for detecting, assessing, and mitigating food safety risks influenced by climate change. This is along with contributing to the transformation of food systems to deliver co-benefits for climate (mitigation and adaptation), biodiversity, environmental sustainability and circularity, dietary shift, sustainable healthy nutrition and safe food, food poverty reduction and empowerment of communities, and thriving businesses.

### **HORIZON-CL6-2024-FARM2FORK-01-10: EU-African Union cooperation on agroforestry management for climate change adaptation and mitigation**

Research and innovation action – deadline February 22, 2024 – 3 projects of €6.00M

In line with the European Green Deal priorities and the farm to fork strategy for a fair, healthy and environment-friendly food system, and in support of the climate objectives of the African Union (AU) and the EU, the successful proposal will contribute to the AU-EU High Level Policy Dialogue (HLPD) on Science, Technology and Innovation, and its priority on Green Transition (and the respective R&I

partnerships on Food and Nutrition Security and Sustainable Agriculture and Climate Change and Sustainable Energy), as well as to the implementation of the short-term actions outlined in the working document of the AU-EU Innovation Agenda, aiming to translate R&I efforts into tangible business, development and employment opportunities in Africa and Europe.

### **HORIZON-CL6-2024-ZEROPOLLUTION-02-1-two-stage: Holistic approaches for effective monitoring of water quality in urban areas**

Innovation action – deadline first stage February 21, 2024 - final stage September 17, 2024 – 3 projects of €5.00M

In line with the European Green Deal's zero pollution ambition, successful proposals will contribute to protecting water quality by managing urban water pollution, and consequently also protecting biodiversity and the quality of aquatic ecosystems, as addressed by several impacts under the Destination 'Clean environment and zero pollution', in particular "Move towards achieving clean, unpolluted surface water and groundwater bodies in the EU by advancing the understanding of diffuse and point sources of water pollution in a global and climate change context, enabling novel solutions to avoid degradation and restore water bodies, aquatic ecosystems and soil functionality, and further enhancing water quality and its management for safe human and ecological use, while fostering the EU's and Associated Countries' position and role in the global water scene."

## Process and schedule

### Expressions of interest

This letter is an invitation to express interest to join the process to prepare a proposal for one of the Horizon Europe 2024 call topics listed above. All participants will receive an overview of the answers shortly after closing of the form.

**The expression of interest can be submitted between August 10, 2023 and September 15, 2023 using this on-line form:**

<https://forms.gle/bSFzMdy4FnGAh67A9>

### Online workshop

An online workshop will be organised for each call, to inform the researchers about the particularities of the call, the special characteristics of each topic and to provide opportunities for matchmaking and discussions. All those who have expressed their interest on the online form, will receive an invitation to the workshop.

The workshop dates are:

**Wednesday, September 20, 13:00-15:00 CET:** HORIZON-CL6-2024-FARM2FORK-01-1: Agro-pastoral/outdoor livestock systems and wildlife management

**Thursday, September 21, 13:00-15:00 CET:** HORIZON-CL6-2024-FARM2FORK-01-4: Climate change and food safety: effects of climate change on food safety across food systems

**Friday, September 22, 13:00-15:00 CET:** HORIZON-CL6-2024-FARM2FORK-01-10: EU-African Union cooperation on agroforestry management for climate change adaptation and mitigation

**Monday, September 25, 13:00-15:00 CET:** HORIZON-CL6-2024-ZEROPOLLUTION-02-1-two-stage: Holistic approaches for effective monitoring of water quality in urban areas

For questions, please contact [robbert.boudewijns@kuleuven.be](mailto:robbert.boudewijns@kuleuven.be)

# Full call texts

## HORIZON-CL6-2024-FARM2FORK-01-1: Agro-pastoral/outdoor livestock systems and wildlife management

Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 5.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). <sup>1</sup>
<i>Deadline</i>	February 22, 2024

**Expected Outcome:** In line with the objectives of the farm to fork strategy for a transition to fair, healthy and environmentally friendly livestock production systems, and of the EU biodiversity strategy for 2030, including the conservation status of certain habitats and species, the successful proposal will help policy makers and other actors to monitor and improve the management of farming and terrestrial wildlife relationships, thus contributing to sustainable agriculture and ecosystem services.

Project results are expected to contribute to all of the following outcomes:

- Innovative and sustainable practices and tools at landscape level to prevent and control negative consequences of interactions between livestock and wild animals to protect wildlife and pastoral/outdoor production systems
- Recommendations/policy advice on optimal management at EU level of wildlife and agro-pastoral systems
- Decision-making process on wildlife management and land planning participated by relevant stakeholders
- Improved coordination across Europe in terms of wildlife management, surveillance and data collection systems

**Scope:** Agro-pastoral/outdoor livestock farming systems, which include a large number traditional activities in Europe such as grazing systems, mountain livestock farming, transhumance, silvo-pastoral and agroforestry systems, offer beneficial effects not only to animal production, e.g., in case of scarce fodder resources, or to animal welfare, but also to habitat maintenance, carbon sequestration, biodiversity conservation and soil protection. The increased demand for natural resources by human population with the consequent fragmentation of wildlife habitat, together with the increased population of wild animals and the change in land use have often resulted in human-wildlife conflicts. The interactions between livestock farmers and wildlife are more frequent and cause damages to both sides with conflicts in the management of farming systems and natural resources.

Wildlife population, which is worth protecting, occupies wide geographic area and extend across administrative borders, and public administrations face difficulties with regards to the reduction of the

impact of wildlife on livestock farming. The implementation of a common and integrated approach at EU level is required to optimize the management of the coexistence of terrestrial wildlife (large carnivores, ungulates) and agro-pastoral/outdoor livestock systems at landscape level.

The following elements should be incorporated:

- Review of current wildlife management approaches in agro-pastoral/outdoor production systems in the different EU Member States and Associated Countries and assessment of the effectiveness of different prevention measures
- Map the most common types of damages caused and the positive externalities created by wild animals with respect to livestock and crops in Europe. Create an inventory of good practices and infrastructures at farms and regional levels, within a wider wildlife management approach.
- Improve or develop tools/technologies for (real time) data collection and analysis to assess, monitor and control (wild) animal behaviour and damages
- Cost/benefit analysis of current and new farming strategies that preserve, protect and valorise wildlife and pastoralism in different regions and ecosystems. Socio-economic, environmental, cultural and political aspects should be considered.
- Assess stakeholders' (farmers, hunters, conservationists, general public, policy makers...) perspectives and needs (participatory approach) and improve or develop effective instruments to reduce conflicts between livestock farming and wildlife. Identify the most effective measures to mitigate damages and the most common (monetary, nonmonetary) compensation mechanisms across Europe.

The proposal should take into account projects funded under the LIFE programme, and interact and engage a dialogue with relevant EU organizations such as EU Platform on Coexistence between People and Large Carnivores.<sup>2</sup>

Proposals must implement the 'multi-actor approach' and ensure adequate involvement of the main stakeholders involved in managing wildlife/livestock interaction (e.g., farmers, hunters, game farmers and producers, agricultural advisory services, land managers, ecology and nature conservation experts, animal behaviour scientists, social scientists and other relevant actors).

This topic should involve the effective contribution of social sciences and humanities (SSH) disciplines.

[1] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lsdecision\\_he\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lsdecision_he_en.pdf)

[2] [https://ec.europa.eu/environment/nature/conservation/species/carnivores/coexistence\\_platform.htm](https://ec.europa.eu/environment/nature/conservation/species/carnivores/coexistence_platform.htm)

## **HORIZON-CL6-2024-FARM2FORK-01-4: Climate change and food safety: effects of climate change on food safety across food systems**

<b>Specific conditions</b>	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 8.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and Training Programme of the European Atomic Energy Community (2021-2025). <sup>3</sup>
<i>Deadline</i>	February 22, 2024

**Expected Outcome:** The successful proposal will be in line with the European Green Deal priorities and the farm to fork strategy for a fair healthy and environmentally friendly food system, as well as with the EU's climate ambition for 2030 and 2050. It will support R&I to foster advances in research related to integrated approaches along the food system for detecting, assessing, and mitigating food safety risks influenced by climate change. This is along with contributing to the transformation of food systems to deliver co-benefits for climate (mitigation and adaptation), biodiversity, environmental sustainability and circularity, dietary shift, sustainable healthy nutrition and safe food, food poverty reduction and empowerment of communities, and thriving businesses.

Project results are expected to contribute to all of the following expected outcomes:

- Improved understanding of the medium to longer-term climate change impacts in relation to food safety, and the effect these could have on food systems actors from farm to fork;
- Identification, development and widespread dissemination of mitigation and adaptation measures to reduce/prevent climate change-related food safety risks (individual and cumulative risks). Contribution to the farm to fork strategy objectives, in particular the contingency plan for ensuring food supply and food security and deliver co-benefits on each of the Food 2030 priorities as well as contributing to policy and food safety risk assessment needs and priorities, in particular regulatory control and enforcement aspects.

**Scope:** Proposals should contribute to all of the following aspects:

- Proposals must implement the 'multi-actor approach' and ensure adequate involvement of academia, research-technology organizations, food businesses and other relevant actors of the value chain.
- Anticipate, including through modelling, how climate change may affect food safety in Europe and in particular by increasing the potential for the emergence/re-emergence of new hazards and the changes in exposures and risks;
- Propose methods to monitor the impact of climate change on food safety across food systems and their main critical areas. Explore how climate change could impact risk assessment methods and understand how risk assessment methodologies may need to evolve to meet new climate changed related challenges;

- Analyse the effect of climate change (extreme temperatures, etc.) and its impact with respect to: existing food safety hazards throughout the entire food supply chain (from farm to fork), and risk factors including the appearance of (re)emerging hazards.
- European regions should participate as "demonstrators" areas facilitating research and innovation under different climate conditions;
- Proposals should include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects funded under this topic or other topics such as the HORIZON-CL6-2021-BIODIV-01-11 and HORIZON-CL6-2021-FARM2FORK-01-16 and ensure synergies with relevant activities carried out under other initiatives such as the One Health European joint programme and the LIFE programme ("Strategic Integrated Projects") due to their regional and climate approach.
- Proposals should also foresee the involvement of the European Food Safety Authority (EFSA) as part of the future action once the project starts.

In addition proposals are encouraged to:

- Increase the use of big data and/or artificial intelligence to elucidate the complex interactions between climate change and food safety. Proposals are expected to develop models to understand these interactions experimented and analysed for their replication potential. Proposals might build on existing and new knowledge, data, and models exploiting the full potential of big data and/or artificial intelligence;
- Explore, map and propose funding synergies strategies among European, national and regional programmes and instruments under this scope in a long-term vision;
- Connect research and innovation activities in this topic with start-ups ecosystems.

[3] This decision is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: [https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lsdecision\\_he\\_en.pdf](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/lsdecision_he_en.pdf)

**HORIZON-CL6-2024-FARM2FORK-01-10: EU-African Union cooperation on agroforestry management for climate change adaptation and mitigation**

<b>Specific conditions</b>	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 18.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: Due to the scope of this topic, legal entities established in all African Union member states* are exceptionally eligible for Union funding. * "African Union member states" includes countries whose membership has been temporarily suspended. International organisations with headquarters in a Member State or associated country are exceptionally eligible for funding. The following additional eligibility criteria apply: the places of establishment of at least two of these legal entities must be in the same geographical region of Africa (as defined by the African Union: <a href="https://au.int/en/member_states/countryprofiles2">https://au.int/en/member_states/countryprofiles2</a> ). The following additional eligibility criteria apply: due to the specific challenge of this topic, in addition to the minimum number of participants set out in the General Annexes, consortia must include at least three independent legal entities established in Africa. The following additional eligibility criteria apply: the proposals must apply the multi-actor approach. See definition of the multi-actor approach in the introduction to this work programme part.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 3-5 by the end of the project – see General Annex B.
<i>Deadline</i>	February 22, 2024

Expected Outcome: In line with the European Green Deal priorities and the farm to fork strategy for a fair, healthy and environment-friendly food system, and in support of the climate objectives of the African Union (AU) and the EU, the successful proposal will contribute to the AU-EU High Level Policy Dialogue (HLPD) on Science, Technology and Innovation, and its priority on Green Transition (and the respective R&I partnerships on Food and Nutrition Security and Sustainable Agriculture and Climate Change and Sustainable Energy), as well as to the implementation of the short-term actions outlined in the working document of the AU-EU Innovation Agenda, aiming to translate R&I efforts into tangible business, development and employment opportunities in Africa and Europe.

Projects results are expected to contribute to all of the following expected outcomes:

- Improved availability of qualitative and quantitative data pertaining to the contribution of agroforestry to climate change adaptation and mitigation, biodiversity preservation, and to sustainable agriculture;
- Improved management of agroforestry systems (conventional, agroecological and/or organic), including agro-pastoral systems, in Africa;
- Enhanced capacities to evaluate the socioeconomic and environmental performance of agroforestry for climate change resilience;
- A strengthened agroforestry innovation ecosystem for better user acceptance and implementation of agroforestry in the African Union (AU).

Scope: Achieving sustainable agricultural production that fosters both climate change mitigation and adaptation and biodiversity preservation and enhancement is a policy objective that implies finding a balance with farm productivity, socio-economic viability and wider sustainability goals. Agroforestry

systems include both traditional and modern land-use systems where trees are managed together with crops and/or animal production systems in agricultural settings. These systems have the potential to increase ecosystem services – including soil carbon sequestration, water retention, erosion control, soil nutrients, pollination, pest- and disease-control – and biodiversity, while improving farming productivity, profitability and sustainability of farmers' incomes. Implementation of agroforestry in the EU and the AU needs to be boosted in order to maximise this potential. The management of agroforestry systems is critical for their positive impact on climate and the environment as well as to ensure a balance with productivity and profitability for farmers. This is essential to promote the uptake and long-term sustainability of agroforestry.

Proposals should address the following:

- Identification of the most suitable plant and animal species and breeds to be used in agroforestry for different geographic regions in Africa, generating sustainable ecosystems with positive impact on local communities, and on women, looking for models where this impact is greater. In vegetation management systems preference should be given to local species, to avoid potential unintended consequences linked to the introduction of alien species;
- Assessment of local multi-purpose agroforestry species and breeds with benefits for food, pharmaceutical uses as well as ecosystem functions for the soil, biodiversity and their functions in a vegetation mosaic;
- Assessment of specific agroforestry management measures aiming at preserving/enhancing biodiversity;
- Assessment of the potential of carbon farming<sup>4</sup> as a possible future business for farmers and foresters, and analysis of its potential to contribute to reaching climate neutrality in a few decades;
- Identification of the structural needs of agroforestry crops and animals in different geographical regions in Africa, including the analysis of production burdens, suggesting solutions and addressing traceability of all steps in the production chain to measure the effectiveness of solutions;
- Supporting this new value chain with knowledge and capacity building to be efficient, fair, and easily adopted, or not abandoned, by landowners and farmers;
- Establishing local agroforestry pilot plots.

Proposals must implement the “multi-actor approach” including a wide range of actors to ensure that knowledge and needs from various sectors, such as research, farmers/foresters, advisory services, are brought together.

This topic should involve the effective contribution of SSH disciplines.

Proposals should include a dedicated task, appropriate resources and a plan on how they will collaborate with other projects funded under this topic, as well under topic HORIZON-CL6- 2021-CLIMATE-01-08: 'Agroforestry to meet climate, biodiversity and farming sustainability goals'.

[4] [https://ec.europa.eu/clima/eu-action/forests-and-agriculture/sustainable-carbon-cycles/carbonfarming\\_en](https://ec.europa.eu/clima/eu-action/forests-and-agriculture/sustainable-carbon-cycles/carbonfarming_en)



**HORIZON-CL6-2024-ZEROPOLLUTION-02-1-two-stage: Holistic approaches for effective monitoring of water quality in urban areas**

<b>Specific conditions</b>	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 15.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Admissibility conditions</i>	The conditions are described in General Annex A. The following exceptions apply: Applicants submitting a proposal under the blind evaluation pilot (see General Annex F) must not disclose their organisation names, acronyms, logos, nor names of personnel in Part B of their first stage application (see General Annex E).
<i>Procedure</i>	The procedure is described in General Annex F. The following exceptions apply: This topic is part of the blind evaluation pilot under which first stage proposals will be evaluated blindly.
<i>Deadline</i>	First stage: February 21, 2024 - Final stage: September 17, 2024

Expected Outcome: In line with the European Green Deal’s zero pollution ambition, successful proposals will contribute to protecting water quality by managing urban water pollution, and consequently also protecting biodiversity and the quality of aquatic ecosystems, as addressed by several impacts under the Destination ‘Clean environment and zero pollution’, in particular “Move towards achieving clean, unpolluted surface water and groundwater bodies in the EU by advancing the understanding of diffuse and point sources of water pollution in a global and climate change context, enabling novel solutions to avoid degradation and restore water bodies, aquatic ecosystems and soil functionality, and further enhancing water quality and its management for safe human and ecological use, while fostering the EU’s and Associated Countries’ position and role in the global water scene.”

Projects results are expected to contribute to all of the following expected outcomes:

- Enhance urban water quality with a view of providing better guidance for policy making and prioritisation by developing integrated urban water quality monitoring management plans;
- Sound, safer and risk-based urban water quality management plans supported by enhanced holistic monitoring, advanced novel methods and digital solutions, modelling and evidence-based scenarios;
- Increase uptake of digital tools in the water sector to support water management decisions for all stakeholders.

Scope: Water management in urban areas is confronted with a wide range of water quality issues. Urban runoff, is an increasingly important source of pollution. This is going to be aggravated by an increasing frequency of extreme events, such as floods and droughts, due to the impacts of climate change, as well as the increasing sealing of surfaces and rapid growth of urban areas. Moreover, water leakages from ageing water-service infrastructure and combined sewer or storm water overflows, leads to additional pollution releases into the environment. Water quality deterioration due to trace organic pollutants such as pharmaceuticals and industrial chemicals, microbial contaminants, such as pathogens or antimicrobial resistance genes, micro-plastic, nanomaterial, and diffuse pollution from urban areas (roads, urban runoff) and from upstream agricultural areas or industries and many other pollutants often released unintentionally to the environment and finally leading to several forms of pollution of urban water sources. These issues are also exacerbated by the complex interactions between pollutions sources and pathways at the urban/catchment level interface.

In line with the ambition of the EU zero pollution action plan there is a need to develop an integrated and harmonised approach to monitor all sources of surface and groundwater pollution and their impact,

including micro-pollutants, micro-plastics, pharmaceuticals and other contaminants of emerging concerns, as well as mixtures of pollutants.

This objective of this action is to develop and demonstrate a European wide 'whole system monitoring approach' to address emerging water pollution and water quality assurance in urban areas in various urban areas covering a wide number of water pollution challenges, taking into consideration the interactions of pollution sources and pathways between urban areas and the surrounding river and where appropriate drainage basin, and improve the resilience of urban water systems towards pandemics and global and climate change challenges. New systemic concepts and holistic strategies to enhance urban water quality should be integrated and demonstrated in an operational environment, including decentralised systems, hybrid green-grey infrastructures or cascading use of water.

An advanced monitoring and control system, going beyond the conventional pollutants, linking drinking and wastewater urban cycles, integrating risk management approaches and exploiting upgraded digital solutions to support urban water quality management, should be developed and tested, combined with appropriate modelling tools and scenarios to assess and forecast the long-term impacts of future changing socio-economic and climatic conditions on water quality. This monitoring system should consider the overall monitoring and outlook requirements of the EU zero pollution action plan, the monitoring requirements of existing EU water policy legislation (e.g., Water Framework Directive, Drinking Water Directive, Urban Waste Water Treatment Directive, Bathing Water Directive, etc.) and relevant national and/or European water quality monitoring tools, and develop recommendations and guidance to strengthen the implementation of the EU and/or national legislation. It should allow to identify cause-effect relationships and big data management to address quality pressures. For this purpose there is a need to develop better methods to access chemical data to be able to track the use or the flows of chemicals in urban areas (e.g., to support case studies using mass balance approach to clarify hotspots of pollution sources). New and refined analytical tools and monitoring methods (e.g. effect-based monitoring, biological monitoring) to analyse broad spectrum of contaminants of emerging concerns should be also developed. Recommendations for the standardisation of monitoring and identification of contaminants (including detection limit) should be also provided.

To enhance the capabilities of real-time monitoring of water quality, the potential of earth observations technologies and the use of digital technologies, such as online sensors, artificial intelligence, digital twins, digital data spaces, etc. should be further explored and consolidated.

In general, the participation of academia, research organisations, utilities, industry and regulators is strongly advised, as well as civil society engagement whenever necessary, also aiming to broaden the dissemination and exploitation routes and to better assess the innovation potential of developed solutions and strategies. The direct participation of urban and catchment/river basin managing water authorities and utilities is essential.

Where relevant, activities should create synergies with the projects funded under the protecting drinking water and managing urban water pollution topics in the work programme from WP2021-2022, namely HORIZON-CL6-2021-ZEROPOLLUTION-01-03 and HORIZON-CL6-2022- ZEROPOLLUTION-01-04.