

General Information	
Preliminary title of the European Partnerships	Water4All: Water security for the planet
Short description of the partnership	The partnership aims at securing all water demands in terms of quality and quantity, and that both economic and natural systems, as well as people are protected from water-related hazards.
Services directly involved	Lead services: RTD and ENV. Other services: AGRI, CLIMA, SANTE, ENER, DEVCO, EEAS
Context and problem definition	<p>Impacts of the risks related to water, classified in TOP 3 priorities by the World Economic Forum since 2015, are widespread and cross-sectoral, as it is illustrated in the following figure.</p> <p>Access to water and water-related ecosystem services are also considered as central for several sectors &amp; human activities (safe food production, safe environment, energy production-cooling / biofuels...). The growing needs of population and climate change will make the availability of water in sufficient quantity and quality a challenge in Europe and beyond in the future with significant environmental, societal and economic consequences. Hydrologically extreme events such as floods and droughts, increasing water abstraction for agricultural and industrial activities, escalating global demand for energy which is strongly water dependent, and the pollution of surface waters and groundwater mean that water security is the primary challenge in the coming decades. In addition, the loss of livelihood due to increasing water variability can also exacerbate migration phenomena and flows with an impact on social stability.</p> <p>Water R&amp;I has been at the heart of EU Framework Programmes, with the production of important knowledge and solutions to address several of the above-mentioned challenges, i.e. provide solutions for drought and flood risk management . Horizon2020 expanded the scope of previous water research activities by addressing the whole chain of RDI with the aim of unlocking the innovation potential in the field of water management. In addition, it helped strengthening complementary and synergies among EU MS activities in this area, by supporting the implementation of the Water Joint Programming Initiative, as well as with other major EU initiatives and partnerships, such as the EIP Water and the WssTP (Water Supply and Sanitation Technology Platform).</p> <p>However the diversity of challenges we are now facing to secure water for all, while ensuring transition to a healthy planet, respect of planetary boundaries and a resilient Energy Union and implementing EU climate neutral policy, requires a new partnership that bring together all public and private research funders and support a more efficient collaboration and integration of EU and MS water RDI activities.</p> <p>At the same time more than any other region in the World, Europe boasts a wealth of experience in collaboration, innovation and the creation of proven solutions in addressing past and current water challenges. Therefore, this new partnership will be important to strengthen water diplomacy and EU's role as global actor by supporting regional and international cooperation and use water as a path to reach the UN SDGs. By placing the engagement of civil society in the centre of its action, the partnership expects making progress and leveraging research and innovation in order to generate green growth and sustainable financing opportunities and create more impacts by accelerating the application of research results for policy implementation.</p>
Objectives and expected impacts	The overall objective of this partnership is to provide a unified and shared systemic strategy to secure water for all and demonstrate its feasibility.

	<p>The partnership will be goal oriented, providing measurable targets at different levels, such as:</p> <ul style="list-style-type: none"> <li>decentralised solutions in a water-energy-food nexus approach at the ad-hoc scale, for being accepted by local / regional stakeholder communities for being more efficient for implementing river basins management plans (RBMP) and resilient cities.</li> <li>living labs, connected to scientific centres of excellence, deploying this approach in a number of geographical focus regions that are currently water insecure, representing different challenges so as to actively engage scientists, technologists, manufacturers, innovators, businesses, educators, policy-makers, civil organisations and citizens.</li> <li>increased uptake of innovations, especially systemic solutions addressing at the same time multiple global challenges, up-taken by decision-makers (both at water resources management and technology market level) leading to affordable and fairness access of this scarce resource)</li> <li>shared research infrastructures and data sets from thematic Agencies (policy monitoring), research projects, and citizen science monitoring for a better understanding and modelling of changes.</li> </ul> <p>The partnership expects to:</p> <ul style="list-style-type: none"> <li>provide scientific progress on innovative and affordable solutions in a concerted action at a relevant scale, the water catchment level, addressing the pertinent global challenges (Health, Food and Natural Resources, Climate, Energy and Mobility, Industry development) and the establishment of an Inclusive, Resilient and Secure Society</li> <li>support policy makers implementing relevant EU and national policies, ensuring interconnections and interdependencies between sectors and scales and therefore continuum in actions (between research programme, innovation, scaling-up projects and policy-making) and leveraging impacts, while considering key trade-offs in an holistic way</li> <li>provide opportunities for business to minimise water use while realising greater value from water reuse and recycling</li> <li>provide a unified, shared and measurable goal for all stakeholders, placing the engagement of civil society in the centre and leveraging R&amp;I in order to generate green and sustainable growth opportunities.</li> </ul>
<p>Necessity test: rationale for a European Partnership</p>	<p>The current landscape of water R&amp;I funding (e.g. EU Framework Programme, Water JPI, PRIMA, EU MS bilateral international cooperation, EUREKA, European Water Association, COST, EIB, private companies), research performers (EURAQUA, EWA, ...), EU water policy setting and implementation (DG ENV, AGRI, GROW, CLIMA, REGIO), and R&amp;I end-users such as water utilities and services, (e.g. WssTP, EUREAU, EIP Water, European Water Partnership), regions, cities, NGOs is extremely complex and fragmented, within the EU and national programmes and more globally. During the last 6 years, actions were undertaken for rationalising this landscape: shared strategic research and innovation agenda with other stakeholders (including international institutions and partners), complementarity between Horizon2020 water programme and Water JPI programme, ERA-NET cofunds under the umbrella of Water JPI defined in cooperation with other stakeholders, launch of science – policy interface for delivering specific documents for supporting the implementation of the European Water Framework Directive &amp; associated daughter directives (drinking water, urban waste water treatment, upcoming water reuse), or</p>

	<p>other EU policies (7th EAP, REACH, Industrial Emissions Directive, CAP and Food 2030, SET Plan (alternatives to fossil fuels – water dependent) and of the international conventions (UN SDGs, COP21 – Paris Agreement). The proposed European Partnership builds on existing successful cooperation and on the work already done in this area by creating the cross-sectoral collaboration that is needed to demonstrate Europe's unique capability to achieve actual water security for all. European Partnership could be more efficient than Horizon Europe calls because activities should be carried out across the whole research and innovation chain (from the generation of new knowledge to its transfer to end-users for a rapid and concrete implementation), in a coordinated way and in close cooperation with all relevant actors. The global challenges to be tackled need also different forms of cooperation (for maximising the types and number of partners to involve). By essence, international cooperation in RDI programming is complex and requires lessons learning process and related adaptation, flexibility and variable geometry interventions. Moreover a European Partnership could help leveraging cooperation at global scale, allowing finding solution to many of the global issues that are outside of Europe.</p>
Relevant for the following parts of Horizon Europe	<p>Pillar II 'Global Challenges and European Industrial Competitiveness'</p> <p><input checked="" type="checkbox"/> Cluster Health</p> <p><input checked="" type="checkbox"/> Cluster Culture, creativity and inclusive society</p> <p><input checked="" type="checkbox"/> Cluster Civil Security for Society</p> <p><input checked="" type="checkbox"/> Cluster Digital, Industry and Space</p> <p><input checked="" type="checkbox"/> Cluster Climate, Energy and Mobility</p> <p><input checked="" type="checkbox"/> Cluster Food, Bioeconomy Natural Resources, Agriculture and Environment</p> <p><input checked="" type="checkbox"/> Cross-cluster</p> <p><input type="checkbox"/> Pillar III 'Innovative Europe'</p>
Currently identified links with other partnership candidates / Union programmes	<p>The proposed partnership is relevant to a number of EU policies and funding programmes, beyond Horizon Europe. Synergies with other EU funding programmes, like ERDF, LIFE, ERASMUS, EFSI will be considered to maximise impacts.</p> <p>At this stage collaboration with the following European Partnerships proposed under Cluster 6 as well as other Horizon Europe clusters, is foreseen:</p> <ul style="list-style-type: none"> <li>• European partnership for chemicals risk assessment</li> <li>• European alliance for enhanced land-based solutions to increase the resilience against climate-related extreme events</li> <li>• Carbon Neutral and Circular Industry</li> <li>• Accelerating farming systems transition: agro-ecology living labs and research infrastructures</li> <li>• Environmental Observations for a sustainable EU agriculture</li> <li>• Rescuing biodiversity to safeguard life on Earth</li> <li>• A climate neutral, sustainable and productive Blue Economy</li> <li>• Future-proofing our Food System for People, Planet &amp; Climate</li> </ul>
Does the proposed partnership build on currently active ones?	<p>The proposed partnership builds on the work of Water JPI, EIP Water and WssTP partnerships and their ongoing cooperation. From these partnerships only Water JPI is receiving funding from Horizon 2020 (until 2024). It also builds on the cooperation Water JPI has built with FACCE JPI on sustainable agriculture and food, JPI Oceans and JPI AMR on emerging contaminants and health, JPI Urban Europe, NetwercH2O, EIP Smart cities on sustainable and resilient cities, BiodivERsA on biodiversity conservation and restoration, and the cooperation of WssTP with SPIRE PPP and EIP Water with EIP Agriculture.</p>

Expected type and composition of partners	Due to the diversity of water challenges and local, regional, national and international level, and the diversity of water policies and financing, this partnership requires a wide public and private R&I partnership. Collaboration with Member States R&I funding agencies, universities and research organisations will be needed for the development of innovative solutions, while collaboration with industry, regions and other economic actors will be needed for activities linked to deployment of solutions and market uptake
Contributions and commitments expected from partners	Both cash (with substantially higher budgets than previously) and in-kind contributions are foreseen from EU MS (RDI funding agencies, sectoral agencies, regions, ....), water utilities, municipalities and the wider water private sector for a variety of activities, going from knowledge generation, demonstration projects collaborative projects, as well as activities related to market uptake, regulatory, societal or policy uptake (to be further detailed later by all foreseen partners)
Currently envisaged implementation mode(s).	<input checked="" type="checkbox"/> Co-programmed European Partnership <input checked="" type="checkbox"/> Co-funded European Partnership <input type="checkbox"/> Institutionalised European Partnership <input type="checkbox"/> Article 185 <input type="checkbox"/> Article 187 <input type="checkbox"/> EIT-KIC
Justification of the implementation mode	<p>A <b>Co-funded European Partnership</b> would allow an objective and impact driven approach, allowing a strong and efficient international cooperation required by the challenge and achieving inclusiveness within European Member States (EC contribution facilitating the participation of EU13). It will also allow to implement a large range of types of actions from academic research, applied research, innovation, including transfer of innovation to enterprises, science – policy interface, while having better use of access to research infrastructures and connecting to implementation tools (financial, regulatory). It will provide the coverage of actions needed and the necessary longer-term flexibility and the possibility for integrating rapidly a larger range of activities devoted to the achievement of proposed targets.</p> <p>A <b>Co-programmed European Partnership</b>, as alternatively considered may not be able to ensure the long term commitments required to be able to achieve the proposed targets, while the funding of actions will be fragmented (partially organised by MS, partially under Horizon Europe), be dependent on the financial contribution of the Member States, Associated Countries and other partnering countries, which remains insufficient and on case by case basis (voluntary basis for each activity), considering the global challenges to be tackled. The legitimacy of such partnership to adequately engage with international fora and conventions could be questioned.</p> <p>Finally an <b>Institutionalised Europe Partnership</b> is not considered, implementation by either co-funded or co-programmed appears feasible.</p>
Proposed starting year	2022 or 2023, depending on HE conditions and partners commitments.