PCP WISE

Report on the result of the open market consultation (including Annexes)

July 2025

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The PCP WISE project receives funding under the European Union's Horizon Europe framework program for research and innovation under the grant agreement N° 101182917. The EU is however not participating as a contracting authority in the procurement.

A Prior Information Notice (PIN) has been published in Tenders Electronic Daily (TED) to announce the Open Market Consultation (OMC) on potential future procurement activity: 213317-2025 - Planning - TED

Document abstract
This Deliverable outlines the objectives, methodology, timeline and activities of the Open Market Consultation (OMC) of the PCP WISE project. Additionally, it describes the results of the whole process as well as the findings of the market, providing intelligence and information on rural and urban soil-water-vegetation (SWV) system conditions and related risks for many of the focus areas of the PCP WISE project, such as agriculture, nature, urban climate resilience and planning, climate risk management, and resilience to water-related natural disasters.

Keywords
Open Market Consultation (OMC), Request for Information (RFI), Pre-commercial Procurement (PCP), Frequently Asked Questions (FAQ), Buyers & Suppliers Interaction, Findings, Market Suggestions, Earth Observation (EO) data, Soil-Water-Vegetation (SWV) system, Soil-Water-Vegetation-Atmosphere (SWVA) system

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List of abbreviations

Abbreviation	Meaning
AHP	Analytic Hierarchy Process
AI	Artificial Intelligence
AIX	Anomaly Index
API	Application Programming Interface
CAP	Common Agricultural Policy
CapEx	Capital Expenditure
CCI	Climate Change Initiative
CET	Central European Time
CINEA	European Climate, Infrastructure and Environment Executive Agency
DEM	Digital Elevation Model
DInSAR	Differential Interferometric Synthetic Aperture Radar
DSM	Digital Surface Model
DSS	Decision Support System
EAFIP	European Assistance for Innovation Procurement
EARSC	European Association of Remote Sensing Companies
EC	European Commission
ECCA	European Climate Change Adaptation
ECFAS	European Coastal Flood Awareness System
EDO	European Drought Observatory
EFAS	European Flood Awareness System
EO	Earth Observation
ESA	European Space Agency
EU	European Union
EuroGEO	Europe's part of the Group on Earth Observations

FAIR	Findable, Accessible, Interoperable, Reusable
FAQ	Frequently Asked Questions
FMI	Functional Mock-up Interface
GAC	Global Approach Consulting Group
GDPR	General Data Protection Regulation
GEO	Group on Earth Observations
GIS	Geographic Information System
HAND	Height Above Nearest Drainage
hWh	Het Waterschapshuis
ICT	Information and Communication Technology
InSAR	Interferometric Synthetic Aperture Radar
IoT	Internet of Things
IPR	Intellectual Property Rights
JPI	Joint Programming Initiative
KPI	Key Performance Indicator
LAI	Leaf Area Index
LANDSAT	Land Satellite
L-band	Long-wavelength band
LiDAR	Laser Imaging Detection and Ranging
LST	Land Surface Temperature
LSTM	Long Short-Term Memory
ML	Machine Learning
MIP4Adapt	Mission Implementation Platform for Adaptation
MODIS	Moderate Resolution Imaging Spectroradiometer
MS	Member States
MSI	Multispectral Instrument
NbS	Nature-Based Solutions

NDMI	Normalised Difference Moisture Index
NDVI	Normalised Difference Vegetation Index
NISAR	NASA-ISRO Synthetic Aperture Radar
NLP	Natural Language Processing
OpEx	Operational Expenditure
OGC	Open Geospatial Consortium
OM	Operation & Maintenance
OMC	Open Market Consultation
OMI	Open Modelling Interface
PBG	Public Buyers Group
PCP	Pre-commercial Procurement
PIN	Prior Information Notice
Pol-In-SAR	Polarimetry - Interferometry - Synthetic Aperture Radars
PPI	Public Procurement of Innovative Solutions
Q&A	Questions and Answers
R&D	Research and Development
RFI	Request for Information
RfT	Request for Tenders
ROSE-L	Radar Observing System for Europe in L-band
SAIH	Sistema Automático de Información Hidrológica - Automatic System of Hydrological Information
SAAIH	Sistema Avanzado Automático de Información Hidrológica - Advanced Automatic Hydrological Information System
SAR	Synthetic Aperture Radar
SAVI	Soil-Adjusted Vegetation Index
SMAP	Soil Moisture Active Passive
SMEs	Small and Medium-sized Enterprises
SMOS	Soil Moisture and Ocean Salinity (SMOS)

SOTA	State-Of-The-Art
STOWA	Stichting Toegepast Onderzoek Waterbeheer
SVIS	Soil-Vegetation Information System
SWAT	Soil & Water Assessment Tool
SWV	Soil-Water-Vegetation
SWVA	Soil-Water-Vegetation-Atmosphere
TD	Tender Documents
TED	Tenders Electronic Daily
TFEU	Treaty on the Functioning of the European Union
TIR	Thermal Infrared
TRL	Technology Readiness Level
UAV	Unmanned Aerial Vehicle
VC	Venture Capital
VHI	Vegetation Health Index
VSI	Vegetation Stress Index
UHI	Urban Heat Island

1. Introduction

This document describes the results of the Open Market Consultation (OMC) of the PCP WISE project regarding the development of innovative solutions to address five use cases related to monitoring local water balances (both urban and rural), advancing beyond the current SOTA in climate adaptation. The approach relies on satellite-based Earth and environmental observation (EO) data to help prevent and mitigate water-related crisis challenges, such as floods, fires, heat stress, droughts, and infrastructure impacts:

- Use Case 1: Urban Drought (North Europe)
- Use Case 2: Urban Flooding (North-Central Europe)
- Use Case 3: Rural Drought (Northwest-Central Europe)
- Use Case 4: Rural Drought & Flooding (Southern Europe)
- Use Case 5: Rural Drought & Flooding (Northern Europe)

More details on the commonly identified challenge and the five use cases can be found in the OMC Document with Annexes.

The OMC began on the date of the publication of the Prior Information Notice (PIN) in the Tenders Electronic Daily (TED), and ends on the date indicated as such in this document. The rules and objectives of the PCP WISE OMC, as well as the challenges, the potential public buyers and the Pre-Commercial Procurement (PCP) approach are described in the PROTOCOL "For the communication and interactions between the demand and the supply side" and the OMC Document with Annexes respectively.

1.1. Purpose of the OMC

Through the OMC, the Public Buyers Group (PBG) organised under the PCP WISE project (as identified in Section 2 of the OMC Document with Annexes), with Het Waterschapshuis (hWh - the Netherlands) acting as Lead Procurer, informed market operators regarding the upcoming PCP of Research and Development (R&D) services for the "Customisation/pre-operationalisation of water management innovations from space for European climate resilience" and gathered feedback to support its preparation.

The OMC also aimed to understand the market operators' capabilities to satisfy the PBG's needs and to obtain their input on the viability of the procurement plans and conditions as described in the OMC Document with Annexes.

In sum, the objectives of this OMC were to:
1) Validate the findings of the State-Of-The-Art (SOTA) analysis and the viability of the set of technical and financial provisions.
2) Raise awareness of the industry and relevant stakeholders (including other users) regarding the upcoming PCP.
3) Collect insights from the industry and relevant stakeholders (including other users) to finetune the tender specifications.

This OMC was performed under the law of the lead procurer, which is Dutch law.

The public buyers involved in the PCP WISE project are not legally bound in any way by the outcome of the OMC. No rights can be derived from statements and/or communications during this OMC in any future tendering procedure and/or purchasing procedure. The OMC is not part of any pre-qualification or selection process. No advantage or disadvantage will be given to any supplier/group of suppliers to the detriment of others during the OMC and the sub-sequent competitive procedure for the award of contracts.

All information provided during the OMC and other background information is published online in English. Where appropriate, parts of the information received from market parties can be shared with the European Commission (EC).

1.2. OMC Rationale & Methodology

A central instrument in the preparatory phase of a PCP is the OMC, which is an integral step of the European Assistance for Innovation Procurement (EAFIP) Methodology as well. An OMC is an open dialogue between procurer(s) and the market, in which the procurers ask for the view of the market to identify the ability thereof to meet the needs of the procurer(s).

Under European Union (EU) law, the OMC is grounded primarily in the 2014 EU Public Procurement Directives[1]-[2]. The relevant provisions of the Directives apply regardless of whether the procurer later conducts a PCP - outside the scope of the Directives - or a Public Procurement of Innovative Solutions (PPI) - subject to them. They permit the market consultation to address not only tender specifications but any element relevant to procurement planning — including technological feasibility, procedural choices, selection criteria, Intellectual Property Rights (IPR) arrangements, and budget or timing constraints.

The OMC supports strategic alignment between public sector demand and innovation supply and ensures that any future procurement is informed, realistic, and inclusive. Importantly, it is conducted in accordance with the fundamental principles of EU public procurement law as derived from the Treaty on the Functioning of the European Union (TFEU): equal treatment, non-discrimination, transparency, and proportionality. These principles safeguard the integrity of the consultation process and ensure a fair and competitive basis for any subsequent procurement.

The OMC enabled the PCP WISE Consortium to assess whether the technological solutions, needed to address the commonly identified challenge of the project along with all five of its

[1] Article 40 of the Public Sector Directive and article 58 of the Utilities Directive provide that "Before launching a procurement procedure, contracting authorities may conduct market consultations with a view to preparing the procurement and informing economic operators of their procurement plans and requirements. For this purpose, contracting authorities may, for example, seek or accept advice from independent experts or authorities or from market participants. That advice may be used in the planning and conduct of the procurement procedure, provided that such advice does not have the effect of distorting competition and does not result in a violation of the principles of non-discrimination and transparency."

[2] Furthermore, article 41 of the Public Sector Directive and, respectively, article 59 of the Utilities Directive complete the general provisions aforementioned and provide the rules for the prior involvement of candidates and tenderers: "Where a candidate or tenderer or an undertaking related to a candidate or tenderer has advised the contracting authority, whether in the context of Article 40 / 58 (market consultation) or not, or has otherwise been involved in the preparation of the procurement procedure, the contracting authority shall take appropriate measures to ensure that competition is not distorted by the participation of that candidate or tenderer."

use cases, are already commercially available or whether they still require further research and development.

Finally, the OMC was structured in accordance with best practices, including the use of early PIN publication and multiple events & dissemination activities, in order to engage a wide range of technology providers, public buyers, end-users, and other interested actors.

For more information regarding the activities and the timeline of the OMC, please check Section 2.

1.3. Participation in the OMC

The target groups of this OMC were mainly technology providers and other users. All interested parties were invited to take part in the OMC.

Participation in the OMC was voluntary and non-binding and was at the own expense and risk of market operators. A market operator could not charge any costs to the PBG for participation in the OMC or for (re) use of its information in the context of a future procurement procedure.

Participation in the OMC is not a condition for submitting a tender in the subsequent procurement, does not lead to any rights or privileges for the participants, and is not part of any pre-qualification or selection process. The provided input in this OMC will not be used to evaluate future proposals.

Based on the feedback provided in the Request for Information (RFI) questionnaire, the majority of respondents belong to start-ups and Small and Medium-sized Enterprises (SMEs), as indicated in the figure below. The total number of respondents was twenty-one (21).

Type of organisation:

		Answers	Ratio
Start-up/SME		13	61.90 %
Academic/Research institute		0	0.00 %
Public organisation		0	0.00 %
Private organisation		9	42.86 %
Other		0	0.00 %
No Answer		0	0.00 %

Figure 1: Type of organisations who replied to the RFI using the EU Survey tool

The participants who replied to the RFI questionnaire are from organisations in France (2), Luxembourg (2), Italy (1), Spain (3), the Netherlands (9), Germany (2), Belgium (1) and Denmark (1).

Participation during the OMC online and hybrid events was larger. Across the four events, PCP WISE engaged **266 online and 65 in-person participants** from **19 countries**, **including 17 EU countries**, with strong representation from the Netherlands, Spain, France, Germany, and Greece.

For more information about the statistics of each individual OMC event, please refer to the respective sub-section of Section 2.

All events were recorded and are publicly accessible at:

- Info Day: https://www.youtube.com/watch?v=woEqxPDpZlg
- First OMC: https://www.youtube.com/watch?v=wNJSa0E80f4
- Second OMC (EXPANDEO): https://www.youtube.com/watch?v=jDuk4M3Pass
- EO Café: https://www.youtube.com/watch?v=7dFpNHU3NvQ

The data collected, processed, stored and used by the PCP WISE Consortium has the only purpose of implementing the PCP WISE project and is handled according to the General Data Protection Regulation (Regulation 2016/679 of the European Parliament and of the Council - GDPR). Participants may exercise your right to access your personal data and the right to rectify such data by contacting: info-PCP-WISE@group-gac.com.

2. Timeline & activities

The timetable of activities and required actions of the OMC is indicated below:

Date	Event
2 April 2025	Publication of the PIN on TED.
3 April 2025	Publication of the RFI Questionnaire (via the EU Survey tool).
4 April 2025	Publication of the OMC Document on the PCP WISE Website and e-Procurement platform.
4 April 2025	Open module on the e-Procurement platform to ask questions about the PCP WISE OMC.
28 May 2025	Info Day (online event). Recording and slides available.
3 June 2025	OMC Main Event 1 – Webinar (online event). Recording and slides available.
12 June 2025	OMC Main Event 2 – EXPANDEO in Brussels (hybrid event). Recording and slides available.
19 June 2025	EO Café webinar organised (online event). Recording available.
22 June 2025 – 23:59 (CET)	Deadline for submission of the RFI (EU-Survey tool).
22 June 2025	Deadline to submit questions about the PCP WISE OMC through questions module of e-Procurement platform.
25 June 2025	Publication of answers to questions about the PCP WISE OMC through the PCP WISE website and e-Procurement platform.
15 July 2025	Publication of the OMC Report – End of the OMC period.

Table 1: OMC detailed timeline and activities

The OMC took place in the form of:

- Four events, three of them completely online and one hybrid, which took place from the 28th of May until the 19th of June 2025. The events were carried out in English and broadcasted online. For more details regarding each one of them, please see below (sections 2.1 onward).
- A RFI questionnaire, using the EU Survey tool, which was filled out by 21 respondents.
- Other activities and questionnaires as deemed necessary within the scope of the project, including a publication of a Questions and Answers (Q&A) document.

The PCP WISE Consortium was entitled to adjust the planned activities or to include new activities at any time according to the needs and responses of the market, as it happened in certain circumstances such as the extension of the deadline for submission of responses to the RFI.

2.1. Info Day

Purpose of the event:
The Info Day was an informative session designed to present the rationale, including its objectives, scope, and timeline, behind PCP WISE, introduce the use cases outlining the broader commonly identified challenge, and explain the technical and functional requirements needed to meet the buyers' needs. The event also provided an overview of the PCP process across its three stages, along with key contextual information on IPR, funding, and legal aspects. As its name suggests, this session was primarily about sharing details on the PCP WISE intended Call for Tenders, which may evolve based on insights gathered throughout the broader OMC process. Early supplier questions, during the Q&A session, focused on technical eligibility, data availability, and partnership building.

Discussed topics:

- The rationale behind PCP WISE.
- All five use cases that constitute the commonly identified challenge were presented through five respective pitches.
- The topic of passing from a very generic or very specific solution to one that is tailor-made, interoperable, and scalable at a European level.
- The PCP process and the OMC Document were presented in a nutshell in order to allow the participants to grasp the specifics of the OMC and subsequent PCP processes, their respective objectives, activities, and timeline, as well as the applicable rules and overall framework.
- The RFI questionnaire was presented to the participants along with its structure, questions, relevant link, and way to respond accurately.
- A moderated Q&A session.

Registrations and participation: Info Day (online event) took place on May 28th, attracting **97 registrations** and **79 actual participants** from **14 countries**, including 13 EU Member States (MS) and Canada.

For more information about the agenda of the event, please see Annex I.

2.2. First Online OMC Event

Purpose of the event:
The first OMC event was a primary interaction point with the supplier community. Its main objectives were to validate the SOTA, gather insights on existing and emerging water management or other relevant technologies for the project, and collect market feedback to refine the upcoming tender specifications. Participants were quite active during the event, engaging in structured polling to share their views and help tailor the overall PCP WISE tender to actual market conditions. This event offered suppliers a chance to delve deeper into interoperability requirements, data integration strategies, and anticipated procurement volumes. Market actors inquired, during the dialogue session, about budget allocations, proposal evaluation criteria, and long-term exploitation prospects.

Discussed topics:

- The rationale behind PCP WISE, specifically focusing on the Soil-Water-Vegetation (SWV) system as an indicator for drought, flooding, wildfires, and soil subsidence in rural and urban areas.
- The five use cases, their European application, and the differences between them.
- The process and rules of the OMC were explained in detail, and they were references to the PCP process per se as well as some significant matters related to it.
- Once more, the PCP WISE Consortium presented the RFI questionnaire to the suppliers and provided instructions regarding the information that was critical for the upcoming PCP, as well as the way to properly fill in the survey.
- A short session took place to present the matchmaking opportunities and the community of the PCP WISE project, in order to showcase the importance of collaboration in the context of the upcoming PCP.
- A moderated interactive session was held, including polls and an extensive Q&A, acquiring preliminary information from the market and responding to the inquiries of the interested parties.

Registrations and participation: The first online OMC event took place on June 3rd, attracting **72 registrations** and **72 actual participants** from **13 countries**, with the majority of the audience coming from the Netherlands, Spain, and Greece.

For more information about the agenda of the event, please see Annex I.

2.3. Hybrid Event at EXPANDEO

Purpose of the event:
The second OMC event took place in the context of the 6th edition of EXPANDEO 2025, held in Brussels, a key platform for representatives from the European EO industry, user communities, and institutional actors. In particular, the PCP WISE session closed the event and presented the PCP project focusing on water management resilience, where speakers from

the consortium outlined opportunities for suppliers and buyers to co-develop soil moisture and vegetation monitoring solutions, with tenders scheduled for later this year.

Overall, the event was another significant opportunity for interaction with the market and technology providers. Its main objectives remained similar to the ones described above (see Section 2.2) linked with the first OMC event, but in this case enabled face-to-face exchanges, technology showcases, and more technical Q&A sessions. Discussions focused on real-world EO applications, data fusion capabilities, platform interoperability, and performance benchmarks. Finally, there was a particular focus on the significance of forming consortia for the suppliers in order to combine their skills efficiently and acquire the capacity to address the commonly identified challenge of the PCP WISE project.

Discussed topics:

- The PCP WISE project, its rationale and objectives linked with the topics of climate change, resilience, hydrology and soil-moisture vegetation.
- The five use cases that constitute the commonly identified challenge of the PCP WISE project, the analysis of their functional, information and general requirements.
- The notion of interoperability and holistic approach required for addressing the challenge
- The functions of MODFLOW along with the rationale for its use in the context of PCP WISE project.
- A session regarding the OMC accompanied by guidelines for the suppliers, the procedure, the benefits for all the involved parties, the information encompassed in it and where to find them and all the overall framework along with the upcoming steps after this phase.
- A session dedicated to community building and matchmaking activities within the context of the project underlined not only the opportunities but also the importance of combining skills, expertise and experience by forming consortia with multiple economic operators.
- A long interactive session with the demand and the supply side entering a dialogue

Registrations and participation: The second OMC event was organised in a hybrid format on 12th of June 2025, during the EXPANDEO conference hosted by European Association of Remote Sensing Companies (EARSC) in Brussels. The hybrid format allowed both on-site and remote participants to engage actively in a dynamic setting as **65 participants attended in-person**, and **74 participants attended online**. The total number of participants reached 505 online and 160 in-person attendees.

For more information about the agenda of the event, please see Annex I.

2.4. RFI Questionnaire

The RFI questionnaire constitutes best practice in the context of the OMC phase, and it was drafted by the PCP WISE Consortium, utilising the EU Survey tool, in order to gather as much feedback and information as possible in a concrete manner and in a written format from the market regarding several aspects of the PCP WISE project and challenge.

It was published on the 3rd of April, inviting every interested party to contribute with its feedback. Several promotional activities regarding the RFI questionnaire took place and it was also presented during the OMC Events to draw the attention of the market operators.

The questionnaire contained twenty-five (25) questions, and it was split into four sections; Contact Details, PCP WISE challenge and requirements, SOTA analysis, and Miscellaneous. The responses to the questionnaire could not contain any confidential information. The questionnaire was intended to explore the market 'as is', there are no wrong or right answers. In total, twenty-one (21) suppliers responded to it and the results of those responses were analysed, leading up to a summary which can be explored more in detail in Section 3.3 of the present OMC Report. The answers provided will be used as input for the procurement strategy and contract conditions.

For the detailed structure and questions of the RFI questionnaire, please see Annex IV.

2.5. One-on-One meeting(s)

Organisations who have filled out the RFI questionnaire, had the possibility to request for a One-on-One meeting with members of the PCP WISE Consortium in order to elaborate on their provided input in the RFI and to discuss their ideas. Only one organisation has specifically requested such a meeting. Below a summary of this meeting can be found.

In order to ensure the EU principles of the Treaty of Functioning of the European Union (TFEU) of transparency, proportionality, equal treatment, non-discrimination and fair competition are being followed while having bilateral meetings between the demand and the suppliers side, PCP WISE has presented a document containing a protocol for this kind of communication: PROTOCOL "For the communication and interactions between the demand and the supply side"

Summary of the One-on-One meeting #1
On 7 July 2025, hWh as Lead Procurer of the PCP WISE project, received a request for a One-on-One meeting with one of the suppliers that has filled out the RFI questionnaire.

The PROTOCOL "For the communication and interactions between the demand and the supply side" has been shared with the supplier to take into account.

On 8 July the supplier has sent a list of questions to be discussed during the One-on-One meeting.

On 11 July the One-on-One meeting has taken place.

The meeting	
Date	11 July 2025
Attendance from the supplier side	2 participants

Attendance from the PCP WISE consortium	4 participants
Duration of the meeting	Approximately 45 minutes
During the meeting the guidelines of the protocol were followed	Yes
Note: any information shared during the meeting which has been marked as confidential by the supplier will not be disclosed.	

The agenda
A brief introduction of all participants
Short presentation of the supplier about their company, proposed consortium and proposed solution
Questions from buyer to supplier
Questions from supplier to buyer
Round up

The following questions from the supplier have been discussed:

Question	Answer
Can you give some insights in what the solution would be worth / the earning capacity after the PCP WISE project?	We can't provide an exact number. Of course this depends on the quality of the solution. What we can say is that in addition to the 12 public buyers in PCP WISE, there is large group (150) of potentially interested buyers across Europe (with their own user groups) following from the PROTECT CSA. *PCP Call – PROTECT Analysis-of-climate-challenges-in-European-regions.pdf*
Is there a limitation to the hourly rate that qualifies for the subsidy?	No, in the PCP tender there is no limit on the hourly rate that is eligible for funding. There is a maximum budget per contractor per phase. In addition, the proposal must comply with the definition of R&D services, so this means that at least 50% of the total value of the contract must be spent on R&D. Please also refer to #50 of the Q&A document. *PCP-WISE-OMC_QA-Document.pdf*
Who will we be dealing with after the bids have have been selected and the	hWh will act as the Lead Procurer representing all the PCP WISE Buyers for the purpose of the signature of the

contracts have been awarded? Who will we be having the agreement with?	Framework Agreements and Phase contracts, and the execution of the contract. The Governance structure of PCP WISE includes technical and financial committees to ensure the quality of the outcomes. Further information can be found in the Tender Documents.
Is there any structure on who will provide the data and whether we need to get it ourselves or will it be delivered?	The goal is to make use of openly available data as much as possible. There will also be available certain data sets relevant for specific use cases. In addition, you can use your own datasets or buy your own data sets as well. The information on the available data sets that can be used will be provided in the Tender Documents. *In the Request for Tender we ask the providers to indicate which data they want to use, and we are merely indicating data sets that can be used. Some of them will even give additional points (as award criteria). Please note that during PCP WISE you need to develop and test a solution tackling the 5 use cases with the data that you choose to use, but after the conclusion of PCP WISE you are mandated to further commercialise the solution. It is important to consider this aspect when selecting the data sets you may want to use.*
Will it be possible to have contact with the participants of the Use Cases during the PCP WISE project (during the development phase)?	We are writing User Story lines that give elaborate insight into the needs of the buyers. You will find these story lines in the Tender documents once they are published. In addition, this kind of contact is possible, because we want a solution that fits the needs of the public buyers, so we deem it important that they are involved with the suppliers during the project.
How will the availabilty of those people (public buyers) be?	We see huge involvement from all the 5 use case leaders already. Their engagement is expected throughout the

	PCP phases when needed to provide their feedback.
Is it possible to add new use cases that are not already involved in this project?	Our focus is on the needs of the 5 use cases which are mandatory. However, if you think it is useful to add new use cases, it would be possible, but it will be at your own cost.
Is there any estimation on how much involvement there is from other countries as well?	There has been involvement from many different European countries in all the PCP WISE events. The OMC report that most likely will be published on the 31st of July on the PCP WISE website will provide more insights in this regard.
Do you have an exact date on when you will publish the Call for Tenders?	Don't pin us on this, but our goal is to publish on the 5th of September.
When will you expect the bids?	This has for now been set at the beginning of January (approximately on the 7th of January).

The following questions have been sent by the supplier prior to the meeting via e-mail, but were not discussed during the meeting:

Question	Answer
Do you have any specification on the resolution and frequenty of the data?	The output resolution in urban areas is about 5 to 30 meters and in rural areas 100 meters. This means you need strive in finding higher detailed resolution for your inputs or have creative statistical sound sub resolution solutions.
Do you have expectations of the format of the bid response?	This will be clearly outlined in the tender documents (we have formats for the submission of the bids). There will be info sessions on the submission to clarify any questions you may have once you have access to the tender documents.
Is PCP WISE planning to shed light on buyers' requirements (must-haves, nice-	This will be duly indicated in the Request for Tenders (RfT).

to-haves) in the RFP, or is this part of the discovery during the solution design phase?	

2.6. Dissemination Activities

To build awareness around the OMC, encourage early engagement, and foster stakeholder collaboration, PCP WISE implemented a comprehensive dissemination strategy across events, digital platforms, and targeted outreach campaigns.

2.6.1. Webstival

The PCP WISE Webstival marked a major milestone in stakeholder engagement in the context of the OMC, bringing together diverse actors through a series of thematic webinars.

2.6.1.1. The Webstival in a nutshell

The first PCP WISE Webstival was held online from 7 to 28 April 2025, serving as a key milestone in the preparatory phase of the PCP process under the PCP WISE project. Organised by Global Approach Consulting Group (GAC), with the support of Barrabés, Corvers, hWh, Climate-KIC and Stichting Toegepast Onderzoek Waterbeheer (STOWA), this Europe-wide virtual event was conceived to initiate structured engagement between key stakeholders involved in the development and procurement of innovative, climate-resilient water management solutions.

Structured across six thematic webinars, the Webstival brought together a broad spectrum of actors, including SMEs, startups, research institutions, public authorities, investors, networks and other supporting organisations across Europe. The programme provided participants with an in-depth orientation to the PCP WISE journey, with particular emphasis on the role of space and digital technologies in advancing the climate adaptation agenda within the water sector.

The Webstival featured dedicated sessions addressing the needs and perspectives of both demand and supply-side stakeholders. It included target presentations, interactive discussions, and live Q&A segments designed to clarify the innovation procurement process and encourage early-stage collaboration. A significant highlight of the event was the formal launch of the PCP WISE Matchmaking Platform, which is intended to support networking, consortia formation, and future participation in the forthcoming Call for Tenders.

By facilitating dialogue, knowledge exchange, and early alignment between technology providers and public buyers, the Webstival has contributed substantially to the strategic preparation phase of the PCP process.

The presentations and recordings of the webinars are available on the PCP WISE Community Platform.

2.6.1.2. The Webstival participation

A total of 158 participants from 19 countries – including 17 EU MS – took part in the PCP WISE Webstival, with strong representation from the Netherlands, Spain, France, Germany and Greece, as illustrated by the map below:

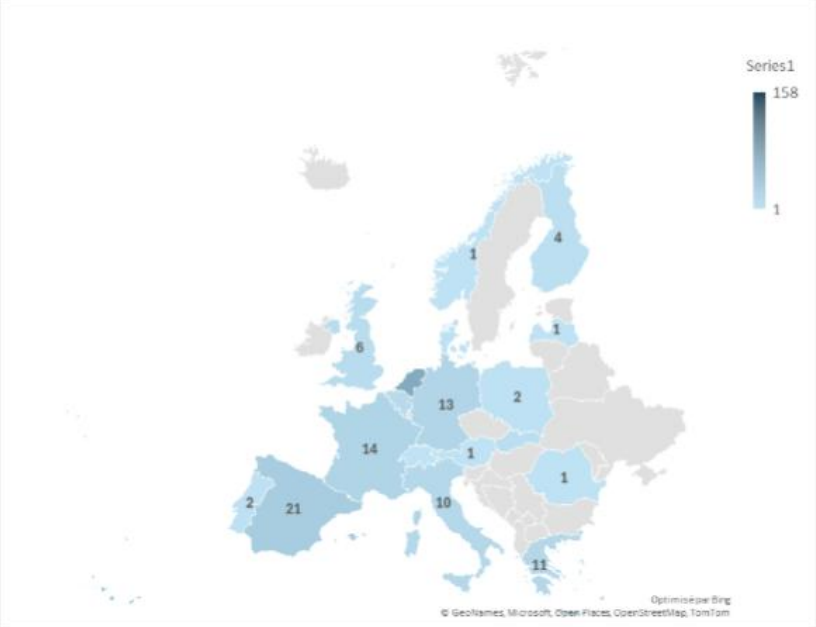


Figure 2: Webstival's participation: geographical coverage

2.6.1.3. Overview of the six webinars

Date	Event
7 April 2025 – 10:00 to 13:00 (CET)	Webinar 1: PCP WISE Explained & Matchmaking Launch
9 April 2025 – 10:00 to 11:30 (CET)	Webinar 2: The PCP Process – From Call to Contract
17 April 2025 – 10:00 to 11:45 (CET)	Webinar 3: EU Project Synergies & Cross-Project Collaboration
22 April 2025 – 10:00 to 11:30 (CET)	Webinar 4: Scaling Water Innovation – The Private Sector and Venture Capital (VC) Perspective
23 April 2025 – 10:00 to 11:30 (CET)	Webinar 5: EO & Digital Innovation for Climate Resilience
28 April 2025 – 15:00 to 16:30 (CET)	Webinar 6: Closing & Next Steps

Table 2: Overview of the six Webstivals

The opening webinar introduced participants to the PCP WISE initiative and its central role in driving water innovation across Europe. It provided a comprehensive overview of the project's opportunities for SMEs, technology providers, and public buyers. The session also marked the launch of the PCP WISE Matchmaking Platform, facilitating early connections among stakeholders. Key highlights included an introduction to future buyer engagement opportunities and the upcoming OMC activities. The webinar concluded with a dynamic networking session, encouraging participants to express interest in joining the PCP WISE Community.

The second session focused on demystifying the PCP process for SMEs and suppliers. Participants gained clarity on the legal, procedural, and practical aspects of participating in PCPs. The webinar offered actionable guidance on how businesses could align their solutions with the needs of public buyers and prepare for the tender process. Matchmaking support was provided to help SMEs register interest and explore consortium opportunities, with public buyers sharing insights into their expectations for innovative solutions.

The third webinar highlighted synergies among EU-funded projects working in water innovation, digitalisation, and climate resilience. Six dynamic lightning talks showcased initiatives supported by Horizon Europe, European Climate, Infrastructure and Environment Executive Agency (CINEA), Joint Programming Initiative (JPI), and European Space Agency (ESA). These presentations facilitated knowledge exchange and sparked discussions on cross-project collaboration. The matchmaking segment connected researchers and technology providers across projects, while public buyers identified complementary efforts to potentially replicate or align with PCP WISE objectives.

The fourth webinar explored how the private sector contributes to scaling water innovation, particularly through investment and strategic partnerships. Presentations addressed the transition from public funding to commercial success, VC expectations, and corporate-startup collaborations. Case studies and national programmes illustrated successful pathways from R&D to market readiness. The session also examined how to bridge financing gaps, providing valuable insight for SMEs aiming to attract private sector backing.

The fifth webinar examined how EO and digital tools enhance climate resilience in water management. Speakers shared case studies and regional applications of technologies like early warning systems and predictive modelling. The discussion highlighted how data-driven innovation can help mitigate climate risks such as droughts and floods. Real-world examples from projects like “NBRACER” and “VALORADA” illustrated the potential for EO applications in creating adaptive, resilient solutions at the local level.

The final webinar wrapped up the Webstival series by summarising key takeaways and outlining next steps for participation in the upcoming PCP WISE Call for Tenders. It featured reflections on real-world challenges addressed during the series, offered practical tips for bidders, and presented the roadmap for future engagement. A final matchmaking opportunity enabled suppliers and buyers to solidify potential partnerships. The session closed with a look ahead to future networking events and ongoing collaboration opportunities within the PCP WISE framework.

2.6.2. Participation and promotion at events

To raise awareness and foster early market engagement, PCP WISE was actively promoted at key European events. These occasions offered strategic platforms to present to project, connect with stakeholders, and generate interest ahead of the upcoming Call for Tenders.

2.6.2.1. Group on Earth Observations (GEO) Global Forum (May 5-9 2025)

The GEO Global Forum 2025, held in Rome from 5 to 9 May 2025, provided an important opportunity for PCP WISE to disseminate information and engage stakeholders in the context of the OMC. During a dedicated presentation at the EU booth, the project's objectives and the upcoming Call for Tenders were presented, generating strong interest from EO companies. PCP WISE was also highlighted during a high-level session on Copernicus EO Services, reinforcing its role in addressing water and climate challenges through PCP. The event enabled valuable exchanges with numerous companies and contributed significantly to early market engagement.

2.6.2.2. EXPANDEO (June 11-12 2025)

Please refer to section 2.3. Hybrid Event at EXPANDEO.

2.6.2.3. European Climate Change Adaptation (ECCA) Conference (June 16-18 2025)

PCP WISE was presented at the 7th ECCA Conference, held in Rimini and online from 16 to 18 June 2025. As part of a session "Upscaling climate services: sharing approaches and insights" organised by the Climate Services Working Group under the Mission Implementation Platform for Adaptation (MIP4Adapt), the project highlighted the role of PCP in advancing climate adaptation through EO-based solutions. The event served as a key opportunity to disseminate information on PCP WISE and engage with a broad range of stakeholders. In the context of the OMC, the session facilitated valuable exchanges with companies interested in the forthcoming Call for Tenders.

2.6.2.4. Living Planet Symposium 2025 (Jun 23-27 2025)

The PCP WISE project actively participated in the Living Planet Symposium 2025, held from 23 to 27 June in Vienna, Austria, and organised by the ESA. As one of the most prominent international events in the field of EO, the symposium provided a valuable platform for communication and dissemination of information about PCP WISE. In the context of OMC, the team engaged with a broad range of stakeholders, including companies, research organisations, and public authorities. The strong interest shown at our booth facilitated meaningful exchanges, particularly regarding the project's objectives and the forthcoming Call for Tenders planned for September 2025.

2.6.3. Communication on social media, website, and Community Platform

As part of its comprehensive communication and dissemination strategy, PCP WISE ensured wide visibility of the OMC activities (i.e. webinars, OMC events, RFI questionnaire) and documents (i.e. OMC document, PIN) through multiple channels. Key announcements and updates were shared via LinkedIn, the PCP WISE website (News and Events section), and the PCP WISE Community Platform through dedicated news posts. The LinkedIn campaign, in particular, achieved notable outreach during the OMC, with over 500 followers, reaching more

than 15,000 members, attracting over 1,600 visitors, generating over 40,000 impressions, and receiving more than 1,900 reactions, demonstrating strong engagement from the EO and climate services community.

To maximise transparency and share knowledge, detailed write-ups summarising the key outcomes and takeaways of each Webstival webinar and OMC-related event were published on both the website and the Community Platform. Furthermore, all recordings of the Webstival webinars and OMC events were made publicly available via these same platforms, ensuring open access for all stakeholders, including those unable to attend in real time.

In addition, the PCP WISE Webstival webinars and OMC events were promoted through the Europe's part of the Group on Earth Observations (EuroGEO) online calendar, enabling extended outreach to the EuroGEO network and further enhancing stakeholder engagement across the European EO community.

2.6.4. Outreach strategy

To support early engagement and ensure effective market outreach during the OMC, PCP WISE leveraged the stakeholder database developed since the start of the project. This database, comprising over 950 contacts, served as a key tool to reach potential suppliers and relevant stakeholders in preparation for the upcoming Call for Tenders. Targeted communications to this audience achieved a response rate of 22%, reflecting a strong level of interest and engagement within the EO and climate services community.

In this context, several dedicated outreach campaigns were conducted in May and June 2025 to promote participation in the OMC events and to encourage responses to a questionnaire designed for the SOTA analysis. These efforts contributed to a more informed and inclusive consultation process.

3. The OMC Results

3.1. Procedure and reporting

The OMC started on the date of its publication in the EU's Supplement to the Official Journal - TED and ended on the date set in the timetable above.

Interested parties were requested to register in order to participate in the events and receive additional information of the project. Additional written contribution in the form of a RFI questionnaire was requested through the RFI questionnaire. The PCP WISE Consortium supported interested parties throughout the whole OMC during the Info Day, OMC Events (in online and hybrid format), through the EO Café and by answering questions through a Q&A document which was published in the project's website.

Market operators who wished to provide additional confidential information during the OMC could send this to the email: info-PCP-WISE@group-gac.com. The information had to be clearly marked as confidential. Confidential information is not included in the OMC Report.

The language of this market consultation is English.

3.2. OMC Report

After processing and analysing the answers, the PCP WISE Consortium aims to disseminate the results to the widest possible audience through this OMC Report. Nevertheless, all answers provided by market parties are anonymised. The PCP WISE Consortium will therefore provide only the general findings, and a summary of the answers obtained in the RFI questionnaire. The OMC Report is published on the website of PCP WISE.

3.3. Summary of the replies to the RFI questionnaire

This section summarises the feedback provided to each of the 25 questions of the EU Survey under 5 topics: (1) The PCP challenge and requirements; (2) The SOTA analysis; (3) and (3) Miscellaneous.

3.3.1. The PCP challenge and requirements

1. **Do you know any technological developments related to the aforementioned main challenge in the climate adaptation domain that PCP WISE needs to take into account? Please indicate which technological developments.**

Most respondents answered positively to this question (see Figure 3).

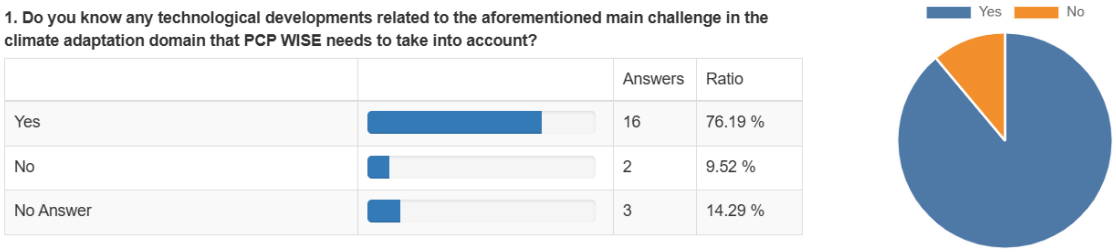


Figure 3: Answers regarding technological developments addressing the main challenge of PCP WISE (climate adaptation)

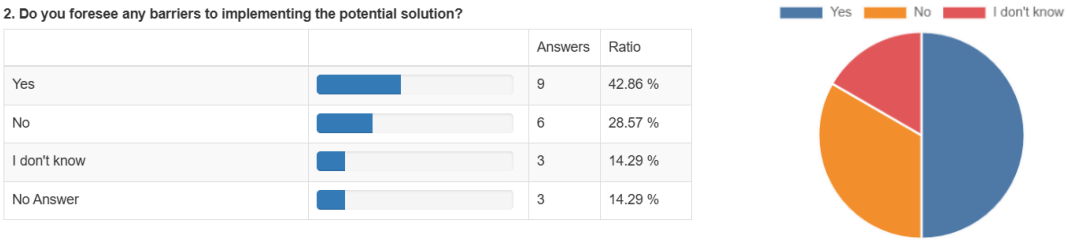
A summary of the answers is provided below:

- Combination of thermal infrared (TIR) imaging with (multi) super or hyperspectral image data offering an opportunity to monitor rainwater run-off drainage into urban surfaces. The surface types classified form this combination of data [possibly again in combination with multi-frequency Polarimetry - Interferometry - Synthetic Aperture Radars (Pol-In-SAR) data] should provide inputs for a spatio-temporal modelling of urban water regimes including the effects of different types of vegetation covers and subsurface characteristics.

- Artificial Intelligence (AI)-driven flood and drought prediction, digital twins, and social sensing.
- Integration of Soil & Water Assessment Tool (SWAT)+, Machine Learning (ML)-based models, remote sensing, and Natural Language Processing (NLP)-based social media analysis to develop an Advanced Automatic Hydrological Information System (SAAIH)+, a user-centric decision-support platform that goes beyond traditional Automatic System of Hydrological Information (SAIH).
- Digital Twin Technology paired with AI, Internet of Things (IoT) sensing, satellite data and the integration of 5G technology ensuring faster data transmission and reliable connectivity.
- Flood modelling and EO.
- Digital soil mapping based on satellite data paired with AI and robotics.
- Evaporation dynamics using EO and freely distributed weather data.
- Highly modular flood forecasting systems for urban flooding.
- Unmanned Aerial Vehicles (UAV)s > satellites, capture better localised areas.
- Synthetic Aperture Radar (SAR), launch of NASA-ISRO Synthetic Aperture Radar (NISAR) program [Long-wavelength-band (L-band) SAR data are considered relevant for soil moisture monitoring by several respondents].
- Software that quickly creates a basic model of an area—including land use, water features, terrain, and subsoil—and allows fast, flexible scenario calculations for surface and groundwater using both built-in and external data.
- Critical development in Information and Communication Technology (ICT) including a shift toward open-source tools, separation of applications from data, and a move from centralised data storage to federated data sharing—where data remains with the owner, who controls access and use—driving the development of "middleware" solutions such as data-exchange platforms.
- ROSE-L (Radar Observing System for Europe in L-band) Mission leading to better monitoring of humidity at a global scale.
- High-resolution satellites and new sensors (e.g. L-band SAR) offering meter-scale imagery and deeper subsurface insight, improving groundwater proxy detection.
- AI-driven analytics enable near real-time flood mapping from radar and early drought warnings via vegetation stress detection.
- Multispectral monitoring [e.g. Sentinel-2 Multispectral Instrument (MSI)] allows tracking of turbidity and algal blooms in water bodies without full reliance on in-situ sampling.
- Copernicus data with weather inputs to deliver on-demand, scalable analytics
- Integration and cloud computing via platforms.
- Forecasting technology creating adaptable, high-resolution digital twins of the atmosphere using satellite data, offering spatially detailed, sub-season to long-term probabilistic weather and climate predictions tailored to specific needs, supporting early warning systems and climate risk management.

2. **Do you foresee any barriers to implementing the potential solution? Please elaborate.**

This question divided the respondents whom answers were quite diverse. Nine (9) responded that they foresee barriers to implementing their potential solution, six (6) that they don't foresee any and the rest took a more neutral approach on the matter (see Figure 4). Some of the identified barriers will be presented below.



2. Do you foresee any barriers to implementing the potential solution?

		Answers	Ratio
Yes		9	42.86 %
No		6	28.57 %
I don't know		3	14.29 %
No Answer		3	14.29 %

Figure 4: Answers regarding potential barriers to the implementation of the potential solution of PCP WISE

A summary of the answers is provided hereby:

- Spatial resolution.
- Scalability to other areas besides the selected pilot zones.
- Data availability and real-time coverage.
- Potential administrative or regulatory constrains at the moment of the implementation of the solution(s).
- Data heterogeneity across spatial scales, formats, and domains poses a major challenge for integrating Remote Sensing, IoT, Social Sensing, and hydrological models in both urban and rural contexts.
- Scalability and transferability of solutions across diverse climates and infrastructures (e.g., flood-prone cities vs. drought-impacted farmlands) demands adaptive model calibration and robust modular design.
- Institutional fragmentation and uneven digital maturity among public authorities can delay uptake and complicate coordination.
- The long-term sustainability of tools such as dashboards or digital twins remains uncertain beyond project funding unless embedded in governance and operational frameworks.
- Citizen engagement in rural areas requires tailored social sensing strategies that are culturally and technologically appropriate.
- The availability of consistent data across different territories.
- Gathering all the relevant skills to develop a solution which will be adaptable to all use-cases – complex project.
- The MODFLOW model main use for groundwater, but not much for inland water which is an important component of the SWV system model.
- The timeframe is too short [only according to a small minority with low Technology Readiness Level (TRL) solutions]
- The challenge of capturing very high resolved in-situ Soil, Moisture, and Groundwater data across Europe, continuously and automatically, so that AI systems can systematically analyse and make predictions about wet/dry conditions and ensuing risk scenarios.
- The challenge of aligning multiple European parties to create a true dataspace that will foster data exchange, in a sustainable manner to facilitate all stakeholders involved.

- Requiring a single, fixed model framework for outputs limits flexibility and innovation; instead, interoperability should be achieved through data standards and compatible tools, allowing the market to propose diverse solutions.
- Digital soil mapping is promising, yet most digital tools still rely on outdated soil data, and widespread adoption is held back by conservative farmer behaviour; broader uptake requires changes in digital practices and farmer incentives, ideally supported by authorities or large food companies.
- The technical complexity, large volume of satellite data (especially SAR imagery), the need for advanced expertise to extract insights, and difficulties with data integration and usability for non-experts.

3. **Can you identify relevant needs that have not been described in the market consultation document? Please elaborate.**

The respondents answered this question in a truly diverse manner depending on their expertise, business and technological maturity as well as their knowledge of the market (see Figure 5).

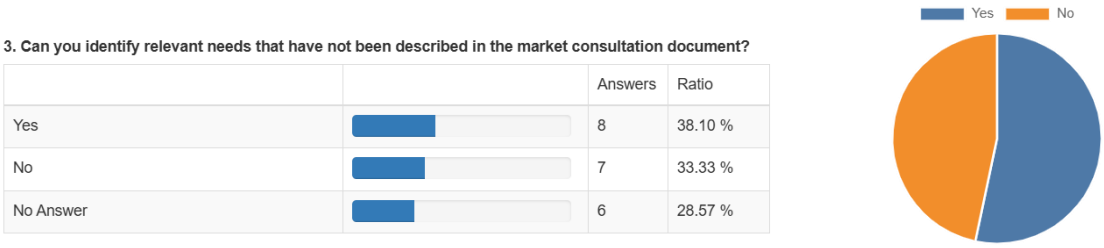


Figure 5: Answers regarding relevant needs beyond the ones described in the OMC document

A summary of the answers is provided hereby:

- PCP WISE is very well documented in terms of objectives and requirements.
- The webinars and OMC events were very informative – no further needs.
- Human-centric data sources integration, through social sensing, NLP-based citizen feedback, or structured citizen science, is essential for capturing early signals of risk (e.g., blocked drains, flash floods, drought stress) that traditional monitoring may miss.
- Ensuring interoperability of digital twins is key to link SWV models with broader territorial data ecosystems.
- Low-power, edge AI technologies are vital for reliable operation in rural and under-instrumented areas with limited connectivity.
- Tailored strategies for community engagement and participatory co-creation.
- Adherence to open licensing and Findable, Accessible, Interoperable, Reusable (FAIR) data principles, ensuring transparency, reuse, and replicability of solutions beyond the pilot settings.
- Better methodologies for early warning.
- Data sharing and distribution over the different topics in an efficient and accurate manner, making them available to all parties involved.

- Digital soil mapping - the OMC document seems to be focusing on the elements of the water cycle (evapotranspiration, soil moisture etc.) but the underlying conditions (soil types, vegetation etc.) aren't taken into account.
- Long-term sustainability and operationalisation beyond the PCP.
- Standardised cross-border data governance to support interoperability and scalability across EU MS.
- Access to detailed, local-scale data and for different timeframes (long-term planning to short-term forecasts or real-time monitoring).
- Availability of in-situ (on-site) data for model calibration, real-time forecasting and situational awareness.
- Affordable and reliable tools (e.g. IoT sensors) to measure key variables like water levels, rainfall, and atmospheric conditions in various environments.
- Modularity (serving climate services based on building blocks, rather than fixed integrated systems) is essential to allow co-design processes.
- Water Quality Monitoring; climate adaptation isn't only about water quantity but also water quality.
- Solutions should include EO-derived water quality indicators (e.g. sediment load, algal bloom proxies) for reservoirs and rivers.
- Water Loss and Leak Detection; reducing wastage in water distribution networks is a key resilience measure, especially under drought.
- Need for tools to pinpoint underground pipeline leaks, using satellite SAR data and AI, significantly improving leak detection accuracy, saving water and infrastructure costs
- User-friendliness, intuitive dashboards and decision-support tools.
- Groundwater and Subsidence Monitoring.
- Innovative use of EO data (e.g. long-wavelength radar that senses deeper soil moisture or satellite gravimetry/interferometry to detect aquifer changes) to manage aquifer depletion and land subsidence risks.

4. **Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 1: Urban Drought (North Europe)? Please elaborate.**

Many different answers have been received by the respondents in this question (see Figure 6).

4. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 1: Urban Drought (North Europe)?

		Answers	Ratio
Yes		12	57.14 %
No		4	19.05 %
No Answer		5	23.81 %

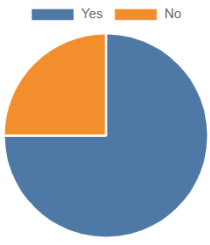


Figure 6: Answers regarding potential suitable technologies or combination of technologies for PCP WISE – Use Case 1

A summary of the answers is provided hereby:

- AI-based Digital Twin local short-to-long-term modelling and probabilistic forecasting technology addresses forecasting (excluding typical weather forecasting), risk management and climate adaptation tasks of all 5 use cases.
- Digital Twin of the physical assets (land use, soil moisture, crops' irrigation, etc.) for water management at basin level.
- A combination of EO, IoT, AI, and digital twin technologies.
- EO based tree metric assessments.
- EO based drought early warning signs.
- EO-driven monitoring of soil moisture, groundwater proxies, and infrastructure leveraging satellite data (e.g. Sentinel-1 radar and Sentinel-2 optical) to map soil moisture distribution across the city and identify anomalies, producing risk maps that highlight subsidence-prone zones and heat island areas.
- A combination of satellite-based EO, hydrological modelling, AI-driven analytics, and in-situ monitoring, enabling early warning, infrastructure protection, and climate-resilient planning.
- Analysis of EO data and derived products related to Land Surface Temperature (LST) and 2-meter Air Temperature over large urban agglomerations, monitoring of heatwave events and Urban Heat Island (UHI) phenomena.
- Flood (based on the LISFLOOD model) and drought Early Warning Systems, including visualisation options.
- Satellite data, drone data, digital mapping technologies, Geographic Information System (GIS), data spaces.
- Dataspace with a data-exchange based on the iShare Trust Framework
- Models allowing Big Data (multi-platform remotely sensed data, data from agro-meteorological stations, core data from Copernicus services, commercial data, census data) to be processed using AI techniques.
- Automatic, cloud-based geoinformation service for subsidence, landslide and ground motion monitoring and analysis over time, designed to deliver periodically fresh and accurate satellite-based data and information.
- Satellites, UAVs and Multisource Sources Hybrid Information Processing.
- Nature-Based Solutions (NbS) for UHIs mitigation.
- Analysis of historical time series of satellite-derived thermal data and detection of thermal anomalies for the thermal zoning of urban areas.
- Integrated analysis of historical thermal datasets in combination with morphological, thematic, and socio-demographic datasets (e.g., urban morphology, land use, infrastructure, population data) to assess vulnerability and risk associated with UHI phenomena.
- Software for calculating integral scenarios and for assessing the extent to which functions are affected by them.
- Integrated SWAT+ and urban hydrological models with EO datasets—such as Sentinel-1/2 imagery and high-resolution Digital Elevation Models (DEMs) to monitor key

indicators including surface dryness, soil sealing, and shallow groundwater fluctuations.

- Copernicus data, in-situ IoT sensors, and machine learning models to assess drought-related impacts in highly anthropised coastal environments.
- Real-time monitoring frameworks using citizen reporting, Long Short-Term Memory (LSTM)-based forecasting, and integration with water resource planning systems.
- Low-power edge-AI sensors deployment.

5. **Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 2: Urban Flooding (North-Central Europe)? Please elaborate.**

Most respondents answered positively to this question (see Figure 7).

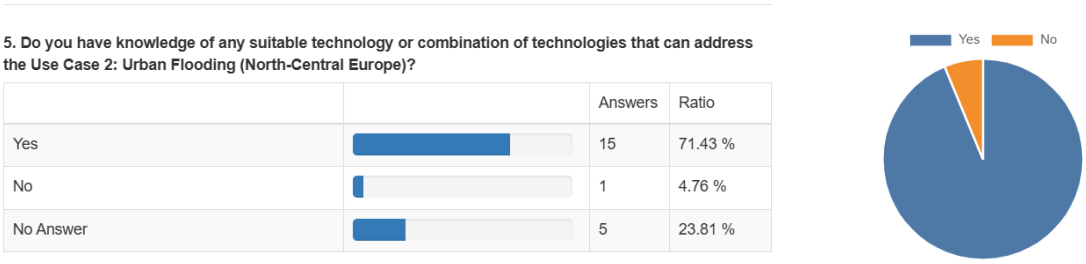


Figure 7: Answers regarding potential suitable technologies or combination of technologies for PCP WISE – Use Case 2

A summary of the answers is provided hereby:

- Analysis of catchment areas to calculate the susceptibility to blockage of drains due to rain and associated accumulation of detritus.
- DEM created with Laser Imaging Detection and Ranging (LiDAR), modelling the water accumulation flow taking into account the depressions in the urban area, identifying the areas of greatest accumulation.
- Sentinel-2 satellite imagery.
- Soil-Vegetation Information System (SVIS) to optimise management of irrigation resources, through multi-temporal monitoring of the health of urban vegetation based on Sentinel-2 satellite data, integrated into the municipal GIS; - NDVI (Normalised Difference Vegetation Index) - SAVI (Soil-Adjusted Vegetation Index) - LAI (Leaf Area Index) - Vegetation Stress Index (VSI) - Anomaly Index (AIX).
- Commercial EO SAR data to task and assess flooding extent in combination with a digital surface model (DSM).
- Dataspace with a data-exchange based on the iShare Trust Framework.
- Satellite data, drone data, digital mapping technologies, GIS, data spaces.
- Integrated satellite precipitation (e.g. rainfall) and soil saturation indicators with Sentinel-1 SAR observations - flood impact web-platform ingesting Copernicus

Emergency flood maps and local exposure data to provide timely situational awareness to decision-makers file.

- Modular forecasting system.
- Satellites, UAVs and Multisource Sources Hybrid Information Processing .
- Software for calculating integral scenarios and for assessing the extent to which functions are affected by them.
- Technology providing inland water height, surface velocity and surface temperature.
- Rapid Mapping of flood extent and depth from SAR satellite images.
- Visual interpretation of very high-resolution optical satellite images.
- European Coastal Flood Awareness System (ECFAS).
- A combination of high-resolution flood modelling, real-time EO data, and predictive analytics.
- Digital twins combining Copernicus, in-situ, and simulated data, effective for urban flood scenario simulation and proactive planning.
- Edge-AI flood detection system, using UAV imagery processed in real time via deep neural networks on embedded AI computing devices.
- A combination of EO data, radar rainfall, and AI-driven assimilation techniques allowing accurate post-event reconstruction and flood pattern analysis in dense urban areas.
- Multi-layered system integrating hydrological models (SWAT+), real-time data from IoT flow and rainfall sensors, and LSTM-based AI models to forecast urban flooding events complemented with participatory social sensing mechanisms.
- Satellite-based EO data, such as high-resolution DSMs created using Interferometric Synthetic Aperture Radar (InSAR), along with vegetation and soil information from multispectral and hyperspectral imaging, used in advanced modelling and simulation tools.
- Near real-time urban flood monitoring using EO - high-resolution digital elevation models (e.g. Copernicus DEM) combined with historical flood data to map flood susceptibility.
- Multi-criteria static model using factors such as terrain slope, Height Above Nearest Drainage (HAND), distance to rivers, land cover-based runoff coefficients (Curve Numbers), and known floodplain maps supplemented by flood hazard maps, highlighting vulnerable infrastructure.

6. **Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 3: Rural Drought (Northwest-Central Europe)? Please elaborate.**

Twelve respondents answered positively to this question, four answered negatively and another five didn't respond at all to this question (see Figure 8). Additionally, the respondents found similarities with Use Case 1, hence didn't repeat previously mentioned technologies.

6. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 3: Rural Drought (Northwest-Central Europe)?

		Answers	Ratio
Yes		12	57.14 %
No		4	19.05 %
No Answer		5	23.81 %

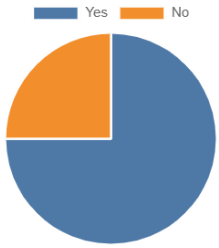


Figure 8: Answers regarding potential suitable technologies or combination of technologies for PCP WISE – Use Case 3

A summary of the answers is provided hereby:

- EO based drought early warning signs.
- Dataspace with a data-exchange based on the iShare Trust Framework.
- Digital soil mapping technology, satellite data, drone data, digital mapping technologies, GIS, data spaces - collaboration with robotic firms for autonomous soil testing equipment.
- Situational awareness for wildfires - risk maps and/or guidance, similar to forecasts of flash floods.
- A mix of EO-based soil moisture monitoring and hydrological modelling can effectively address rural drought challenges - analysis of satellite imagery to identify the historical impact of the extreme periods of drought and rainfall.
- Satellites, UAVs, Multisource Sources Hybrid Information Processing and AI models for soil moisture and agriculture.
- Software for rapid creation of digital models of an area, incorporating land use, water systems, terrain, and soil data - supporting quick calculations and easy adjustments, making it suitable for exploring different planning scenarios and understanding their impact - it can also integrate results from other models.
- Copernicus Emergency Management Service – On-demand Mapping.
- Fire hazard model including weather parameters such as the Fire Weather Index, fuel moisture, anthropogenic ignition probability and fire front propagation and intensity modelling.
- Multi-sensor data; optical satellites (Sentinel-2) to assess vegetation stress and soil colour (dryness), thermal data [Land Satellite (LANDSAT)/Sentinel-3 LST) to identify hot spots, and microwave sensors [Sentinel-1, Soil Moisture and Ocean Salinity (SMOS), or Soil Moisture Active Passive (SMAP)] to measure soil moisture deficits.
- Continuous and historical monitoring of soil moisture and groundwater proxies, with alerts for when and where drought stress may trigger impacts like crop losses or ecosystem degradation.
- Satellite-based climate indices and anomaly detection – calculation based on standardised anomaly indices (z-scores) for key variables over critical periods, compared against the historical norm for that time and location, normalised by variability.
- TIR, multispectral, and longer wavelength Pol-In-SAR data use.

- Modular architecture combining the SWAT+ model, calibrated with high-resolution EO data [e.g., Sentinel-2 NDVI, Normalised Difference Moisture Index (NDMI)] and in-situ sensors, to simulate soil–water–vegetation dynamics at basin scale, complemented by physical modelling with AI techniques, such as LSTM and gradient boosting, to produce short-term forecasts of soil moisture and evapotranspiration anomalies, integrating climate projections and real-time sensor data.
- Low-power IoT networks for monitoring (e.g. temperature, humidity, and soil moisture) feeding into decision support platforms like Digital Twins.
- To address data scarcity; utilisation of social sensing approaches, enabling stakeholders to report drought impacts via mobile apps or social media.

7. **Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 4: Rural Drought & Flooding (Southern Europe)? Please elaborate.**

Most respondents answered positively to this question (see Figure 9).

7. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 4: Rural Drought & Flooding (Southern Europe)?

		Answers	Ratio
Yes		14	66.67 %
No		2	9.52 %
No Answer		5	23.81 %

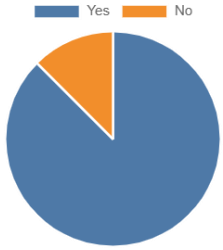


Figure 9: Answers regarding potential suitable technologies or combination of technologies for PCP WISE – Use Case 4

A summary of the answers is provided hereby:

- Erosivity (one of the parameters of the RUSLE equation for estimating soil loss) modelling using precipitation data.
- Hydrogeological and wildfire hazard [Analytic Hierarchy Process (AHP) methodology] and risk maps.
- Vulnerability analysis of electricity grids and risk maps.
- Technology providing inland water height, surface velocity and surface temperature
- Satellites, UAVs, Multisource Sources Hybrid Information Processing and AI models for soil moisture, agriculture and flooding.
- Software for calculating integral scenarios and for assessing the extent to which functions are affected by them.
- Dataspace with a data-exchange based on the iShare Trust Framework.
- Digital soil mapping technology, satellite data, drone data, digital mapping technologies, GIS, data spaces.
- Robotics for autonomous soil testing equipment.
- Technological solutions for monitoring crop conditions and guiding decisions on irrigation.

- Integrated EO systems, hydrological and hydraulic models, and predictive dashboards, monitoring and mapping flood and drought risk, supporting with early warning systems.
- Holistic EO-based approach handling both scarcity and excess of water (combining drought indices and flood models) through continuous soil moisture & groundwater monitoring paired with flood and heavy rainfall alerts, all derived from Copernicus data and advanced modelling.
- System monitoring how drought conditions exacerbate flooding, flagging areas with such conditions (extremely low soil moisture followed by forecasted heavy rain) as high flood risk, enabling proactive measures - integrated erosion risk indicators (using land cover and slope data) to predict where flash floods could cause significant soil loss or mudflows affecting agriculture.
- Advanced geospatial and analytical technologies for wildfire risk assessment, combining satellite-based land and vegetation mapping, historical fire data analysis, and multi-criteria decision methods (like AHP), supported by machine learning and deep learning techniques for real-time and accurate risk evaluation.
- Integration of EO, hydrological modelling, AI, edge computing, and participatory tools
- Digital twin combining SWAT+ models, Copernicus satellite data, and in-situ sensors to simulate extreme weather scenarios.
- AI models (e.g., LSTM, physics-informed ML) combined with meteorological forecasts and hydrological data to predict transitions from drought to flash floods.
- Satellite-based drought and flood monitoring technologies combined, using remote sensing data (e.g. NDVI, precipitation, soil moisture), weather forecasts, and high-resolution terrain models to assess moisture deficits and predict flood risk at catchment scale, supported by flood modelling and historical or satellite-derived flood data.
- Low-power edge-AI systems deployment for detecting floods in ephemeral streams capable of functioning in areas with limited infrastructure or connectivity.
- Soil moisture sensors, smart irrigation systems, and EO-derived indices [e.g., NDMI, Vegetation Health Index (VHI)] to quantify agricultural stress, visualised through platforms like Digital Twin.
- Social sensing and participatory methods that capture localised impacts and improve institutional responsiveness.

8. **Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 5: Rural Drought & Flooding (Northern Europe)? Please elaborate.**

Most respondents answered positively to this question (see Figure 10). There was a significant minority of respondents that either didn't answer or answered negatively to this question.

8. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 5: Rural Drought & Flooding (Northern Europe)?

		Answers	Ratio
Yes		12	57.14 %
No		4	19.05 %
No Answer		5	23.81 %

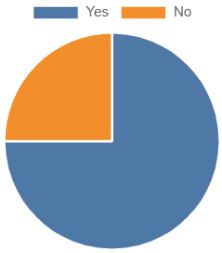


Figure 10: Answers regarding potential suitable technologies or combination of technologies for PCP WISE – Use Case 5

A summary of the answers is provided hereby:

- Ground motion (subsidence).
- Water and waste-water infrastructure.
- Business intelligence tool designed to provide geoanalytics and alerts for monitoring water and wastewater networks.
- Satellite RADAR data - Differential Interferometric Synthetic Aperture Radar (DInSAR) interferometry providing continuous information about ground motion and subsidence phenomena.
- Digital soil mapping technology, satellite data, drone data, digital mapping technologies, GIS, data spaces – potential collaboration with robotic firms for autonomous soil testing equipment.
- Dataspace with a data-exchange based on the iShare Trust Framework.
- Processing of InSAR /Pol-In-SAR data technique applied in research and pilot projects, addressing both drought and flooding in rural Northern Europe.
- Modular framework combining hydrological models (e.g., SWAT+), real-time sensor data, and AI-based forecasting (LSTM, gradient boosting) to manage basin-scale water balance under highly variable climate conditions.
- EO data integration (Sentinel-1/2, NDMI, snow cover, soil moisture proxies) with high-resolution meteorological forecasts to enhance spatial and temporal prediction
- Low-power IoT and edge-AI systems for continuous streamflow and soil moisture monitoring in remote areas.
- Social sensing tools to capture hyperlocal impacts via mobile input or social media, enriching formal data sources with community intelligence.
- Dual-mode alerting coupled with digital twins and open dashboards (e.g., SAAIH+), allowing authorities and water boards to visualise and act upon complex hydrological dynamics.
- A combination of satellite(s), UAVs, and Multisource Sources Hybrid Information Processing.
- Software for rapid creation of digital models of an area, incorporating land use, water systems, terrain, and soil data - supporting quick calculations and easy adjustments, making it suitable for exploring different planning scenarios and understanding their impact - it can also integrate results from other models.
- EO-based subsidence monitoring and risk mapping.
- Groundwater monitoring alongside surface indicators.

- EO data with hydrological modelling to capture both high groundwater (leading to waterlogging) and low groundwater (causing drought and land subsidence) scenarios - high groundwater level maps (with risk of soil saturation or shallow water table) and low groundwater maps (drought vulnerability, potential land subsidence areas).

9. **If you were to develop the solution for all the five PCP WISE use cases, how much time would you need for each of the three phases of the PCP: (1) solution design, (2) prototype development, (3) original development and testing of the solution?**

Four respondents didn't provide an answer to this question, while another two require more time and/or details in order to provide a more accurate and realistic response. Additionally, there are two respondents that find the proposed timeline reasonable, and they seem confident to be able to adhere to it, though another supplier suggests that "a lot of time" is needed. The rest (12) answer the question providing concrete feedback regarding the time needed to successfully complete each and all three phases of the PCP, with some providing the time for the whole project. The major takeaway from the input received in this question is that the estimated time needed for the PCP WISE project as well as the time allocation per PCP phase is not that far from the indicative average time needed proposed by the market.

A summary of the most concrete answers is provided below:

- Phase (1) 6 months, Phase (2) 12 months and Phase (3) 8 months
- 24 months for the whole project
- Phase (1) 6 months, Phase (2) 14 months and Phase (3) 9 months
- Phase (1) 6 months, Phase (2) 12 months and Phase (3) 12 months
- Phase (1) 1-2 months, Phase (2) 3-4 months and Phase (3) 3-6 months, plus additional time depending on the client's involvement
- Phase (1) 2-4 months, Phase (2) 1-4 months and Phase (3) 6 months
- Phase (1) 4 months, Phase (2) 11 months and Phase (3) 6 months
- Phase (1) 5 months, Phase (2) 10 months and Phase (3) 6 months
- Phase (1) 12 months, Phase (2) 6 months and Phase (3) 12 months
- Phase (1) 6 months, Phase (2) 10 months and Phase (3) 12 months
- Phase (1) 6 months, Phase (2) 18-24 months and Phase (3) 12 months
- Phase (1) ~1 month, Phase (2) ~2 months and Phase (3) ~6 months, plus additional ~6 months for a real-world pilot operation period, where the system runs continuously in the field

Estimated time needed per PCP phase (indicative)			
PCP Phase	**Minimum estimated time**	**Average estimated time**	**Maximum estimated time**
Solution design	~1 month	~5.5 months	~12 months

Prototype development	~2 months	~11 months	~24 months
Original development and testing of the solution	~6 months	~9 months	~12 months
Entire project	~9 months	~25 months	~48 months

Table 3: Indicative estimated time needed per PCP phase based on the market's input

PCP WISE proposed timeframe (per PCP phase)			
PCP Phase	**Solution design**	**Prototype development**	**Original development and testing of the solution**
Duration	4 months	11 months	5 months

Table 4: PCP WISE proposed timeframe needed per PCP phase

10. **If you were to develop the solution for all the five PCP WISE use cases, could you indicate an estimated budget for the development and deployment of the solution? Please justify your answer.**

Six respondents didn't provide an answer to this question and another four either require more time and/or more details in order to provide a more accurate and realistic response. One respondent completely agrees with the estimated budget provided by the PCP WISE Consortium, while the rest (ten) utilise their own respective methods (budget per PCP phase, PMs or hourly rating per person, lump sum, etc.) to calculate an estimated budget for the development and deployment of the solution, which makes it more challenging to draw uniform conclusions. The major takeaway from the input received in this question is that the estimated budget of PCP WISE Consortium as well as the budget allocation per PCP phase is not that far from the indicative average budget proposed by the market, even if we take into account the aforementioned disclaimer on the methods of calculating it per respondent.

A summary of the most concrete answers is provided below:

- Capital Expenditure (CapEx) ~ €4.000.000 and Operational Expenditure (OpEx) ~€750.000 per year.
- Development: €150.000 (phase 1), €200.000 (phase 2) – Deployment: €200.000-400.000 per year (phase 3).
- Development budget of around €900.000-1.400.000 - Deployment: discounted lump sum or a licence fee and a lower-priced annual service subscription fee.
- For the 9-month project duration - total estimated budget of €100.800 (2 persons × 40 hours/month × €70/hour = €5,600/month × 2 = €11,200/month, €11,200/month × 9 months = €100,800).

- €6.000.000 to complete all three phases of the development of each of the solutions for each use case (consortium context).
- At least, €3.000.000 for the completion of the entire project (all three PCP phases).
- Around €3.000.000 per supplier.
- Around €500.000 per region, meaning €2.500.000 for all five use cases.
- Alignment with the proposed budget, but additional €500,000 to commercialise and scale the solution after the PCP-funded development and deployment phases.
- For a full solution covering all five PCP WISE use cases, we estimate a total budget of €3.500.000–€4.000.000. This includes: (1) €500.000 for solution design; (2) €1.200.000 for prototype development; and (3) €1.800.000–€2.300.000 for original development and testing.

Estimated budget per PCP phase (indicative)			
PCP Phase	**Minimum estimated budget**	**Average estimated budget**	**Maximum estimated budget**
Solution design	~€150.000	~€400.000	~€600.000
Prototype development	~€200.000	~€1.200.000	~€1.500.000
Original development and testing of the solution	~€400.000	~€2.000.000	~€2.500.000
Entire project	~€750.000	~€3.600.000	~€4.600.000

Table 5: Indicative estimated budget per PCP phase based on the market's input

PCP WISE proposed budget allocation			
PCP Phase	**Solution design**	**Prototype development**	**Original development and testing of the solution**
Contractors	5	3	2
Budget per contractor	€300.000,00	€2.400.000,00	€1.532.669,40
Total budget	€1.500.000,00	€7.200.000,00	€3.065.338,80

Table 6: PCP WISE proposed budget allocation

11. Based on your market knowledge, what is the current market value of similar solutions (applicable for all UCs 1-5), and what is your projection for the future market value of the proposed solution(s)? Please justify your answer.

Only thirteen out of twenty-one respondents answered this question. Half of those respondents preferred not to answer directly the question but underlined that they either require more internal consultation to define the exact value of such solutions or that the use cases and the potential solutions to them are many and diverse, hence a specific response is not an easy task. The responses that provide exact numerical values differ from one another depending on the estimated duration of a contract, the highlighted solution and sector as well as more specific factors and circumstances taken into account during calculation.

A summary of the more precise answers is provided below:

- The value of such solution(s) should be driven by the impact and linked to early-warning-system for geo-hazards.
- €6.000.000-16.000.000 for the next 3 to 5 years.
- There are a lot of different "solutions", although scale dependence is linked to the economic value among other factors.
- No guessing on numbers, but market potential is significant.
- The cost of a water supply management system depends on the scale, technology, and complexity of the system plus a number of variables such as data costs and volume estimated market value around €150,000-300,000 per annum per deployment/customer.
- €500,000-1,000,000 to design and develop per case, and then about €20,000-30,000 per year to maintain.
- Current market value of comparable multi-hazard water intelligence solutions (e.g., digital twins, AI-based flood/drought monitoring, EO-IoT platforms) is estimated at €100.000.000–150.000.000/year in Europe - projected market potential exceeding €400.000.000/year by 2030, especially if solutions are modular, interoperable, and policy-aligned.
- The current market for EO- and AI-based water solutions is shaped by long-term, large-scale public tenders related to water infrastructure, climate resilience, or utility modernisation, with contracts spanning several years and exceeding €1.000.000 in value.
- Current embedded solution's estimated value at €100.000–€500.000 per deployment, with a total addressable EU market reaching over €500.000.000/year within five years, driven by directives like the Water Framework and Drinking Water Directives.
- A European Data Space for Water would offer major value by providing a single, shared access point for up-to-date water-related data - reduced licensing costs, no duplication, improved efficiency for researchers and solution providers, lower failure risks and societal costs, improved overall data quality and availability and efficient data sharing.

12. Based on your proposed solution(s), what key benefits — both direct and indirect — do you anticipate it/they could deliver to public buyers and stakeholders? Please consider operational, environmental, economic, and societal impacts. Please justify your answer.

A summary of the answers is provided below:

- AI forecasting technology - forecasting needs for all 5 use cases, including groundwater levels, soil moisture matrix, and extreme weather event forecasting (droughts, floods, heatwaves).
- Spatial risk-mapping in the form of virtual maps.
- Proactive decision making longer in advance.
- Reduced socio-economic disruptions caused by natural disasters.
- Reduced ecological footprint of emergency interventions, often involving resource-intensive crisis management operations.
- Seamless alignment with the European Green Deal's vision of enhancing societal resilience to climate change.
- (For the rural use cases) Better insights in soil structure and variability helping to make better models, relevant for predictive analyses of the components of the hydrological cycle.
- (For the urban cases) Deep understanding of the spatial technologies and data, preventing a "over promise - under deliver" effect.
- Early warnings and continuous monitoring of floods, drought, water quality, and leakage — improved public service responsiveness, reduced emergency response time and proactive management.
- Reduction of non-revenue water losses and lower maintenance costs through proactive detection.
- Compliance with EU Water Framework and Drinking Water Directives by delivering EO-based indicators.
- Risk maps and early alerts (e.g. flood) protect communities and save lives.
- Enhanced quality of life by preventing disruptions in agricultural and industrial water use.
- Resilience boost by ensuring safer water access and protecting production systems
- Easy integration of the solution with public infrastructure, ensuring long-term adoption and impact thanks to open and interoperable standards foundation.
- Data-driven tools promote transparent, evidence-based policy decisions and improve public trust in authorities.
- Early warnings and better planning reduce infrastructure damage, agricultural losses, and emergency costs.
- Predictive tools support efficient resource allocation and long-term investment planning - resources pre-positioning.
- Improved monitoring of soil moisture and water flows supporting sustainable land and water use, reducing fire and flood damage, and helping protect ecosystems

- Real-time EO and modelling tools enhance situational awareness and decision-making for water managers, enabling faster responses to droughts, floods, and subsidence risks.
- Information tailored to the environment and the institution, leading to better decision support, and models that can be maintained and updated as new better information becomes available.
- Integration of many different possible models and EO + in-situ sensing.
- In case of a pan-European “one service for all”; reduced debate and doubts on data quality and data validity in event evaluations.
- Public safety and access to clean water, stabilising rural economies.
- €1.000.000.000-2.000.000.000 prevention in annual urban damage from floods and droughts.
- Boosted crop yields by 10-20% through precision irrigation, enhancing food security and farmer incomes in rural areas.
- Optimised water use and allocation, reducing waste by 25% in urban and rural areas.
- Mitigated soil degradation and peat fires, cutting emissions by 10-15%.
- Enhanced data accuracy for urban drought, flooding, and rural challenges.
- Scenario planning.
- Impact and risk assessment (flood, wildfire, subsidence, damages).
- Maximised return on investment for public authorities.

13. Are you familiar with the MODFLOW hydrological model as a standard for (operational management) interoperability or do you have suggestions for other standard models or descriptions? Please mention and elaborate with reference/link.

Four respondents of the RFI questionnaire didn’t respond to this question, another four are not aware or familiar with the MODFLOW hydrological model, while the remaining possess knowledge about the model to different degrees. From the ones that responded positively to this question, some have already experience using the model, others seem confident that their model of preference can be adapted or can be interoperable with it, while some don’t consider it as a “standard” per se and they aren’t in favour of imposing a model as "standard" suggesting to get rid of existing models already in use. The latter propose alternative models with different comparative advantages, especially regarding the aspect of interoperability. Overall, the responses from the market showcase a broad awareness and respect for its status as a widely adopted standard for groundwater modelling, but also a range of practical concerns and technical limitations depending on context and use case.

Alternative models proposed along with their respective utility:

- SWAT+: Preferred for large rural catchments; highly interoperable with EO and climate data.
- HEC-HMS: Used for rainfall-runoff modelling and integration in digital twins.
- MIKE SHE, iMOD, LARSIM: Widely used in water resources and operational planning contexts.

- LISFLOOD: Employed for flood forecasting; easier to integrate in some EO-driven solutions.
- WOFOST: Favoured for drought and crop modelling due to its strong representation of the unsaturated zone.
- Open-MI frameworks: Promoted for model coupling and to avoid lock-in with rigid tools.

Advantages and limitations linked to MODFLOW model by respondents:

- Well-established and trusted.
- Validated and widely used standard for simulating groundwater flow.
- Suitable for groundwater modelling.
- Potential interoperability layers (according to some respondents).
- Many stakeholders are already familiar with the model and have in-house capacity or experience to deploy it if needed.
- Limited scope – ground specific.
- Not designed for flexible integration.
- Inherent lack of interoperability (according to some respondents).
- Risk of technological lock-in, in case of a universal mandatory "standard", leading to loss of data or unexploited tools.
- MODFLOW is a modelling suite, not a standard for data exchange.

14. Do you have the ambition and the internal (ICT, Human) capacity for future scaling (even at a pan-European level) of the PCP WISE services?

The responses to this question were diverse. There are some suppliers that don't have the ambition and/nor the capacity to scale at such level, or at least they have limited ambitions at the moment. There are others that have the ambition, yet they require more time and resources to scale up at such degree. Finally, there the suppliers that possess both the ambition and the capacity for future scaling at a pan-European level, but there are conditions which would contribute positively to this task (such as collaboration with third parties, human resources related matters, etc.).

A summary of the answers is provided below:

- Limited ability to host and maintain large scale ICT solutions 24/7.
- In general, the answer would be yes but depends on the composition of the consortium.
- The team is now set for scale up, after receiving support from other European initiatives and schemes.
- Advanced DevOps capabilities in-house will allow for a pan-EU level deployment on the Cloud.
- Potential to be a supplier within a consortium of in-situ services, which can scale sufficiently.

- Limited ambitions and lack of human resources as well as of capacities to deliver a large future scaling – preference towards collaboration with partners that are taking up concepts and serve a large customer base.
- Yes, the whole organisation is structured to grow and expand internationally.
- Ambition to scale to a pan-European and even international level – actions taken to develop internal capacities for this goal.
- Yes, willingness to scale solutions rapidly in line with the market and costumer demands, not only at pan-European level - multiple partnerships to achieve this goal
- Strong ambition and clear capacity for pan-European scaling demonstrated by established cooperations, prior experience, similar contracts, etc.
- Clear ambition and readiness to scale PCP WISE services Europe-wide supported by prior experience, multidisciplinary team, robust ICT infrastructure, strategic alignment with EU priorities, etc.
- Capacity and willingness to scale, emphasising in a series of supporting facts ranging from experience with the use of EO data, cloud-based and scalable architecture, and global deployment experience to strategic alignment with PCP WISE's climate resilience goals.
- Ambition and capacity to scale existing integrated Satellite–UAV–Multisource platform across Europe for all WISE use cases, aiming for market-ready solutions by Phase 3 – utilisation of cloud-based infrastructure, use of ROSE-L radar, high-resolution UAV data, and interoperable platform to ensure technical scalability, while a large, experienced team and established partnerships can support wide implementation and regional adaptation.

15. Do you have suggestions for developing solutions in areas without existing ancillary information or prior knowledge (worst case)?

The responses to this question indicate a strong consensus among respondents; while data-scarce contexts present significant challenges, they are not insurmountable. Providers outlined a range of practical, scalable, and innovative strategies to ensure that reliable solutions can be developed even in the absence of historical datasets or in-situ measurements.

A summary of the answers is provided below:

- Satellite data [e.g., Sentinel-1 and Sentinel-2, Copernicus Land Monitoring Services, Moderate Resolution Imaging Spectroradiometer (MODIS)] can be used to derive land use, soil moisture, vegetation indices, and flood extent.
- Global datasets, such as SoilGrids, ESA Climate Change Initiative (CCI), and ERA5 re-analysis data, provide essential inputs for soil characteristics, historical weather, and climate conditions.
- DEMs, including from Copernicus, offer terrain information that is critical for hydrological modelling.
- Drone-based surveys for high-resolution orthophotos and LiDAR elevation models

- Targeted field campaigns using geo-tagged data collection devices.
- Installation of low-cost, low-power in-situ sensors, which can collect real-time data for rainfall, soil moisture, or flow without relying on existing infrastructure.
- Combine remote sensing with social sensing and expert input; clearly communicate uncertainties and limitations in outputs.
- Apply transfer learning and self-organising modelling; leverage analogous regions for adapting models to new contexts.
- Use expert judgment and qualitative validation; employ anomaly detection and synthetic datasets when ground truth is unavailable.
- Social sensing, such as mobile app reports and participatory mapping, can offer hyperlocal and contextual insights.
- Pre-trained models (e.g., SWAT+, LSTM) can be transferred to new areas with limited calibration.
- Utilise anomaly-based approaches using long-term EO records to establish baselines, then detect deviations (e.g., for drought or flood indicators).
- Use white-box AI modelling to generate interpretable equations, which can fill knowledge gaps or support analysis even without full datasets.

16. Can you provide any other recommendations regarding the PCP WISE use cases?

Respondents offered a diverse and insightful set of recommendations concerning the PCP WISE use cases. While some responses reiterated previous inputs or reserved further comment for future stages, several common themes emerged.

A summary of the answers is provided below:

- Hybrid modelling combining physics-based hydrological systems (e.g., SWAT+, MODFLOW, MIKE SHE) with AI/ML techniques (e.g., LSTM, Graph Neural Networks, ensemble forecasting) was suggested to enhance predictive capacity and resilience in data-scarce areas.
- Digital twin architectures were highlighted as critical tools for dynamic, real-time simulation. They should integrate hydrological, infrastructural, and behavioural data layers and support “what-if” scenario planning.
- Low-power edge-AI systems (should be considered).
- Explainable AI (should be considered).
- Intuitive visual analytics (should be considered).
- Design systems that support multi-hazard and cross-sectoral integration, addressing not only floods and droughts but also related risks.
- Ensure interoperability with existing infrastructures (e.g. SAIH) and compliance with EU frameworks such as the Green Deal and INSPIRE Directive.
- Multiple use cases may complicate solution design, instead common requirements should be identified, with solutions demonstrated in one representative area
- Enhance cross-use-case integration.

- Access to existing in-situ sensor data during development to improve model calibration and validation.
- Flexibility and openness to different technological approaches should be a priority.
- Water use efficiency and enforcement was flagged as an emerging need, particularly in agricultural areas.
- Potentially incorporate water quality monitoring.
- Potentially include industrial and drinking water needs.

3.3.2. SOTA Analysis

17. Do you identify relevant solutions under development or already available in the market beyond the SOTA?

The vast majority of respondents either didn't respond to this question or answered negatively, meaning they couldn't identify solutions in the market, relevant for the challenge of the PCP WISE project, either under development or commercially ready. Some suggested that they already offer solutions in the market beyond the SOTA that can be adapted to the "client's" needs.

Meanwhile, there were a few respondents who provided more detailed information on the matter and the summary of their responses can be found below:

- Not within the short period of time of the project (18 months), but solutions will come in the near future.
- New satellite missions focused on soil and water, which enhance data availability.
- Use of AI to improve modelling and statistics, with an emphasis on the need for explainable AI.
- HydroMT and HydroFlows, advanced tools for model and workflow building, as solutions beyond the SOTA – they need to be turned into operational products.
- AI-enhanced hydroinformatics platforms (e.g., HydroNET, MIKE OPERATIONS) for real-time decision-making and predictive analytics.
- High-resolution EO services (e.g., from Planet, Descartes Labs) providing sub-daily soil moisture and vegetation stress data.
- Digital twin technologies (e.g., iTwin, FIWARE, 3DEXPERIENCE) that integrate models, sensors, and infrastructure data for climate scenario simulations.
- Cloud-based platforms (e.g., WaterWebTools) for ensemble modelling and real-time services.
- Synthetic data generation and deep learning for weather forecasting (e.g., Google DeepMind's WeatherNet).
- Participatory water tools (e.g., SmartWater, open-source flood apps) using NLP and citizen data for real-time monitoring.
- Edge-AI and TinyML technologies (e.g., SenseCAP, Bosch XDK) enabling decentralised, low-power data processing, ideal for connectivity-limited areas (for rural settings).

- Copernicus Emergency Management Service that has the European Flood Awareness System (EFAS) and European Drought Observatory (EDO), which provide continent-scale flood and drought indicators based on satellites and models.
- Satellite-based leak detection and AI-powered flood mapping using SAR imagery.
- Precision irrigation tools based on EO for agricultural drought.
- Urban climate services monitoring heat islands.

18. Do you know the TRL of those solutions / developments?

From all the answers of the respondents to this question the average TRL of the solutions or developments in the market at this moment that could tackle the challenge of the PCP WISE project is TRL=5 (Technology validated in relevant environment). This response is very useful for the progress and the future of the upcoming PCP, since it validates that there is room for innovation and R&D development.

Having said that, it is important to mention three points of interest regarding the responses in this question:

a) not all the respondents of the RFI questionnaire provided an answer to the TRL question, actually only eight (8) did so;
b) from the respondents that provided an actual answer, multiple TRL have been included in the response referring to multiple technological solutions and/or developments, not to a single one per answer; and
c) in some cases, there seems to be a misclassification of the relevant TRL, since tailor-making of a solution in the context of the unique circumstances and specifications of the PCP WISE project isn't taken into account.

19. Can you identify any patents, standards or publications that are relevant to the challenge? If yes, please indicate them.

The respondents provided plenty of information under this question and the sum-up of their responses can be found below:

- Giménez et al. (2024), Deep learning and EO for shallow water quality, Journal of Ambient Intelligence and Smart Environments
- Gómez-Jakobsen et al. (2024), Monitoring chlorophyll-a in Mar Menor, Remote Sensing Applications: Society and Environment
- Peña-Haro et al. (2023), Low-power, image-based flood detection in ephemeral streams, AGU Fall Meeting Abstracts
- Morales-García et al. (2024), AI-based irrigation forecasting, Computers and Electronics in Agriculture
- Cecilia et al. (2023), Crowd and in-situ sensing for hydrological monitoring, IEEE Network
- Tamagnone, P., Campo, C., and Schumann, G.: An automated remote sensing approach for monitoring hydrological impacts of vegetation cover changes, EGU General

Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-16091, https://doi.org/10.5194/egusphere-egu24-16091, 2024

- Schumann, G. J.-P., Tamagnone, P., and Suttor, B.: Surface runoff estimation in urban areas via remotely sensed greenery and composite curve number, EGU General Assembly 2023, Vienna, Austria, 23–28 Apr 2023, EGU23-11838, https://doi.org/10.5194/egusphere-egu23-11838, 2023
- Gaffinet, B., Hagensieker, R., Loi, L., Schumann, G.: Supervised machine learning for flood extent detection with optical satellite data, https://ieeexplore.ieee.org/document/10282274
- Campo, C., Tamagnone, P., Gallion, G., and Schumann, G.: Flood Segmentation with Optical Satellite Images Under Clouds Using Physically Constrained Machine Learning, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-16923, https://doi.org/10.5194/egusphere-egu24-16923, 2024
- Campo, C., Schumann, G., Tamagnone, P.: Enhancing near real time wildfire risk assessment with Earth Observation, https://ieeexplore.ieee.org/abstract/document/10641930
- Tamagnone, P., Schumann, G., and Suttor, B.: Pluvial flooding in urbanscapes: a full-coupled flood modelling approach, EGU General Assembly 2023, Vienna, Austria, 23–28 Apr 2023, EGU23-12397, https://doi.org/10.5194/egusphere-egu23-12397, 2023
- Montalvo, C., Tamagnone, P., and Cea, L.: Assessment of sewer network data quality on urban pluvial flood modeling with a 2D/1D dual drainage model, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-11521, https://doi.org/10.5194/egusphere-egu24-11521, 2024
- https://joss.theoj.org/papers/10.21105/joss.04897
- www.dmi-ecosysteem.nl
- https://ishare.eu/nl/
- https://dssc.eu/
- Relevant standards include the Open Geospatial Consortium (OGC) standards [e.g., WMS, WFS, Application Programming Interface (API)], the INSPIRE Directive for geospatial data infrastructure, and FIWARE NGSI-LD for interoperability in smart environments. For modelling, Open Modelling Interface (OMI) and Functional Mock-up Interface (FMI) enable the coupling of hydrological and infrastructure simulation models.
- Relevant patents include: US11270478B2 (AI-based flood risk assessment via satellite imagery), EP2870577B1 (water quality monitoring with wireless sensors), and US10578823B2 (edge-AI for environmental data in flood prediction), which reflect growing IP around AI-enhanced environmental modelling and edge sensing.
- The WaterWebTools platform developed by WaterItech reflects a standards-based, TRL-8 implementation of cloud-accessible hydrological models.
- Google DeepMind's WeatherNet has been referenced in recent scientific reports (e.g., Pathak et al., 2023, Nature) for deep learning-based weather forecasting using physics-informed models.

- World Meteorological Organisation (WMO) Standardised Precipitation Index (SPI) No. 1090 for drought analysis
- OGC specifications (e.g., GeoTIFF, NetCDF, RESTful APIs) for data sharing and interoperability
- Rincón et al. (2018) on GIS-based flood risk mapping
- Some patents exist in leak detection (e.g., sensor/IoT methods)

20. Are you aware of any patents that may constitute a barrier for you to deliver a solution in the envisaged PCP procurement? If yes, please indicate them.

The vast majority of respondents replied negatively to the aforementioned question of the RFI, meaning that they are not aware of any patents that would constitute a hindrance for the development and deployment of the PCP WISE project's solution. Some declare confidently that there aren't blocking patents at all since the monitor at a regular basis the patent landscape, while others remain more reserved declaring that they simply don't know anything about this matter.

A summary of some responses provided can be found below:

- Commercial use of open-source data may become an obstacle to deployment of end solutions.
- Some do not expect any patent barriers, as their solutions rely on open data, open-source algorithms, and standard scientific methods. Nonetheless, they will conduct due diligence during development and aim to produce openly shareable results aligned with European open data principles.
- No patents have been identified that would pose a barrier to delivering a solution under the PCP WISE procurement, based on current market knowledge and the technologies proposed. The core components of the proposed architecture—such as hydrological models (e.g., SWAT+, MODFLOW), open EO data (e.g., Copernicus), open-source AI frameworks (e.g., TensorFlow, PyTorch), and established interoperability standards (e.g., OGC, OpenMI, FIWARE)—are all publicly available or offered under open licenses. While certain commercial technologies, including proprietary flood models or edge hardware firmware, may be protected by patents, these are not included in the approach to ensure that the solution remains modular, replicable, and free from restrictive intellectual property constraints.

3.3.3. Miscellaneous

21. What information do you still need in order to make a good plan of action for the development and/or implementation of solutions suitable to address the challenge?

Multiple respondents mentioned that PCP WISE project is really well documented in terms of objectives and requirements and that the Info Day as well as the OMC Events were very

informative. Nonetheless, there is always the chance that questions may arise during the preparation phase.

There were other respondents though who needed more information. A summary of their answers is provided below:

- More background information about the use cases.
- A better understanding of the buyers' needs.
- The kind of datasets that are already used by the end users.
- Technical Specifications and Requirements, such as response time requirements, spatial and temporal resolution specifications or minimum acceptable accuracy thresholds.
- As many "pain points" as possible and concrete examples from end-users.
- A good description of the expected concrete outcome and result of this project.
- Detailed specifications on data requirements, user interface expectations, performance indicators, access to test sites, available local datasets, expected spatial and temporal resolution of outputs and integration standards with existing public infrastructure.
- Clear information on the tools, data, formats, infrastructure, and computing environments used by end users to effectively plan and design integrated solutions during the critical design phase.
- Clear expectations and requirements for the urban use cases, especially regarding the role of EO and in-situ data, given the limitations of EO and hydrological modelling in urban settings without detailed ground information.
- Access to existing in-situ sensor data from the selected test sites during solution development phases.
- Deployment and Operational Requirements.
- Geographic, climatic, and environmental profiles of the pilot areas, including soil types, land use, hydrological regimes, and existing climate vulnerabilities.
- A clear view of the existing data infrastructure, such as deployed sensor networks, available EO products, digital twin environments, or Decision Support System (DSS) platforms, along with data accessibility conditions.
- A better understanding of the institutional and stakeholder landscape, including which authorities are involved, their digital maturity, alerting protocols, and operational thresholds.
- Clarification on interoperability requirements, particularly regarding integration with existing systems like SAIH, or INSPIRE-compliant repositories.
- Well-defined Key Performance Indicators (KPIs) and evaluation criteria for each PCP phase—covering technical performance, usability, explainability, and environmental or societal impact.
- Information on budget envelopes and resource allocation for design, prototyping, and field validation phases, broken down by use case.

- Information on the role that hWh and the other public buyers play in connecting with the organisations in the use cases and what is expected from the suppliers in this regard.

22. Do you have specific requirements to achieve the functionalities that PCP WISE should take into account? If yes, please indicate them.

A summary of the answers is provided below;

Suppliers highlighted the following requirements:

- A hydrologist with experience of MODFLOW
- An independent non-commercial entity who acts as the Data Space owner, including in matters of governance
- An in-person discussion with relevant stakeholders - utilisation of user personas for the end consumer/user of the service
- Open and standardised data access (e.g., via OGC APIs, SensorThings, INSPIRE) for EO, in-situ, and model data as well as local high-resolution datasets (e.g., LIDAR DEMs, land use/cover maps, weather radar) – access is requested to any such regional datasets via project partners, especially for pilot zones.
- A key non-technical requirement is the availability of end-user feedback loops resulting to periodic input from the stakeholders to align and finetune the respective functionalities.
- Interoperability with existing platforms (e.g., SAIH, smart city DSS) to ensure uptake and scalability. PCP WISE procurers should confirm that their platforms support standards compliance (such as OGC standards) or provide API endpoints [API Specifications (RESTful API design)] so the results can be pushed into their operational environments efficiently and data exchanges with public systems can take place.
- Clear performance and scalability metrics for each phase.
- Field validation opportunities at test sites.
- Edge-cloud integration, allowing real-time processing and resilience in low-connectivity areas.
- Support for hybrid modelling (e.g., coupling SWAT+/MODFLOW with AI components).
- Co-creation interfaces for participatory input and feedback from local stakeholders.
- Explainable AI integration, especially for alert systems and public-sector use.
- Modular architecture to adapt components (e.g., social sensing, prediction models) to different use cases.
- Concerns regarding MODFLOW as a mandatory dashboard due to constraints for the technology providers, suggestion to reconsider.
- Adequate computational infrastructure, since processing terabytes of EO data, especially SAR, multi-temporal optical, and AI model outputs, requires scalable cloud environments.

23. What are the risks associated with the development and implementation of a solution that tackles the functional needs of PCP WISE?

A summary of the answers is provided below;

Suppliers indicate the following key risks:

- Data heterogeneity and access limitations, especially in rural or low-instrumented areas, which may affect model accuracy.
- Data Gaps/Quality due to the fact that some areas may lack full satellite coverage or have low-resolution data – additionally issues may occur due to limited access to consistent high-quality ground-truth data.
- Data availability in certain countries and data quality can significantly impact the effectiveness of solutions, necessitating tailored approaches.
- Integration challenges with legacy systems or fragmented institutional infrastructures, delaying implementation.
- Scalability issues, where models or tools fine-tuned in one context (e.g., urban flooding) may underperform in others (e.g., rural drought).
- User adoption risks, particularly if interfaces are not co-designed with end users or trust in AI-driven alerts is low.
- Maintenance and sustainability gaps post-project, especially for edge devices and digital twins.
- Regulatory constraints, such as GDPR compliance for citizen sensing.
- Factors such as resolution, quality, open-source accessibility, and cost play crucial role heavily impacting the development and implementation of a solution - high-resolution and high-quality data enable more accurate analyses and better decision-making - open-source data can reduce costs and increase accessibility, fostering innovation.
- The computational power that is required for preparatory actions and operational response.
- The risk of such a general European solution (one-size-fits-all solution) is that it does not fit the needs of all local authorities, sectors and perhaps even individual MS.
- Operation & Maintenance (OM) funding bridge is needed to permit subsequent commercialisation otherwise there is the risk of discontinuation of services after the end of the project - continuity since long-term viability requires ongoing updates.
- Delays in stakeholder feedback affecting iterative development.
- Variability in urban/rural infrastructure across sites.
- User Adoption; tools may be underused if interfaces are complex or unfamiliar.
- Technical Integration; merging and harmonising EO, climate, in-situ, and model data across time/space scales is a complex procedure.
- Timeline/Performance; delivering a real-time multi-hazard EO service within project timelines is demanding.

- Overpromising solutions, general technical and integration challenges aligning with multiple respondents, performance shortfalls, and data governance issues, emphasising the need for a staged approach and strong focus on governance over rushing to implement a solution.

24. What support do you expect from PCP WISE?

A summary of the answers is provided below;

Suppliers expect from the PCP WISE Consortium:

- To be responsive to their questions during the preparation phase.
- To have an ongoing dialogue with end-users to guide solution development, research, and implementation in local water management and to align the solution with long-term public needs and ensure post-PCP scalability.
- A clear and detailed technical and operational requirements per use case, including data availability, institutional context, and evaluation criteria as well as clarity regarding the datasets and existing tools used by the public buyers.
- Access to relevant public authorities and end users, regular feedback loops, co-creation & co-design.
- Access to relevant datasets [especially support in facilitating access to local data (e.g., municipal water use, sensors, historical reports)], test environments and coordination for field validation.
- Support for integration with existing platforms, including APIs, datasets, and reference models (e.g., SWAT, MODFLOW, SAIH).
- Fair and transparent evaluation procedures across all PCP phases, with flexibility to adapt modular solutions.
- Facilitation of knowledge exchange among consortia, including good practices, data governance guidance, and links to related EU initiatives.
- Visibility and networking through matchmaking and dissemination events – more specifically promoting pilot results via PCP WISE channels (e.g., EU events, stakeholder meetings) would increase visibility and open paths for post-PCP adoption, while assistance connecting with end-user networks would expand the solution's reach.
- Country specific legal support, regulatory guidance and overall administrative facilitation.
- Clarity on how PCP WISE will support coordination events during the tender phase to plan accordingly.
- To enable the inclusion of SMEs in the PCP tendering phase by preventing excessive legal and financial compliance barriers in the tender.
- Involvement in the design and implementation processes with early and ongoing feedback from end-users helps tailor outputs, improve usability, and foster user

ownership. - regular checkpoints (e.g., site demos, workshops) with end-users are essential to validate design choices and align with operational needs.

- Integration guidelines (e.g., preferred cloud environment, dashboard compatibility), ensuring that all solutions align with the shared standards.
- Clear architectural guidance and technical support streamlining onboarding and avoiding compatibility issues.
- Funding, monitoring, and exchange of information.

3.4. Frequently Asked Questions (FAQs)

The PCP Consortium from the beginning of the OMC period always put its best efforts to interact with the market as much as possible, receive concrete feedback, mitigating any potential risks and responding to questions that arose either in writing or orally for example during the Info Day and the OMC events dedicated sessions (Q&A, dialogue, polls, etc.). Additionally, it organised an additional online event; the EO Café, hosted by EARSC, and having 80 registrations and 41 actual participants, as a follow-up opportunity for suppliers—particularly SMEs—to ask more targeted questions about participation, risk-sharing models, and innovation thresholds.

Moreover, a dedicated FAQ-page was created and is constantly updated in the PCP WISE website, providing answers to critical questions from the supply side regarding the upcoming PCP.

A detailed and polished version of all the questions asked during the OMC phase was published in the form of an information notice for all interested parties. The questions are classified based on thematics such as budget allocation and contracting, the five use cases, the OMC – its rules and its framework, administrative and procedural inquiries, eligibility, IPRs, technical and data requirements, financial proposal and bidding.

After publishing the initial Q&A document, more questions were asked through the bilateral One-on-One meeting(s) (see section 2.5 of this document) (both during the meeting(s) itself and via preparatory emails), that were requested after filling out the Request for Information. Because of the EU principles of the Treaty of Functioning of the European Union (TFEU) of transparency, proportionality, equal treatment, non-discrimination, and fair competition, all the questions and answers that have been discussed during the One-on-One meeting(s) have been added to the Q&A document in the form of an updated version 2.0. An information notice containing this updated Q&A document has been published on the 14th of July 2025.

In total the FAQ-page and the UPDATED Q&A document contain concise responses to eighty-eight (88) questions and provide valuable information to all potential tenders & consortia which aim to take place in the PCP's tendering phase.

For more information about the FAQ (Q&A document) and its content, please see Annex II.

4. Market suggestions for the procurement

An OMC constitutes a primary opportunity for the PCP WISE Consortium to interact with the market and the technology suppliers, validate its SOTA analysis findings and acquire feedback for the finetuning of the technical specifications and functional requirements for the upcoming PCP procedure.

The suggestions received from the market operators can be summarised as follows:

General Suggestions

- The broad scope of PCP WISE, covering diverse climatic zones and both urban and rural use cases is apreciated, but it brings complexity, requiring different parameters and methods to achieve a flexible and adaptable approach that could successfully address the challenge.
- A small minority of respondents expressed concern about the feasibility of developing the required solution and suggested different budget and timeline alternatives. Nonetheless, the majority of involved market operators were mostly aligned with the proposed budget and time frames alike.
- Stakeholder participation was a point of interest for several suppliers that emphasised on designing a solution with and for the public buyers, requesting a more active stance from the latter.

Strategic Suggestions

- Some suggested that PCP WISE project should fully align with EU strategies [e.g. Green Deal, Common Agricultural Policy (CAP), Digital Europe] and adhere to FAIR data and open science principles.
- Some highlighted the need to ensure long-term replicability beyond the PCP and plan for integration of the developed solution(s) into national/regional infrastructures.
- Another important strategic aspect that was suggested related to aspect of sustainability of the project and developed solution(s), an approach that would benefit not only those directly involved but also multiple other parties.
- A few suggested the development of a scalability framework (for scaling up solutions beyond pilot sites) to allow solutions to be adapted to different regions and conditions.

Technical Suggestions

- Some essential datasets (e.g., satellite data) are costly. It is suggested that those datasets should be centrally procured and made available to all participants. The management of those data should follow FAIR principles.

- It is suggested to ensure interoperability standards and data exchange protocols are defined as early as possible, since they are deemed crucial for future integration and scalability.
- It seems important for suppliers to clarify real-time processing requirements, including latency and update frequency.
- Emphasis should be given on modular, interoperable, and policy-aligned solutions that can address local variability and technical complexity.
- Some respondents suggested to incorporate multi-layer groundwater, surface water, sewerage, and rainfall data with focus on a "digital twin" approach.

5. Conclusions

The OMC conducted within the framework of PCP WISE was an exceptional opportunity to interact with market operators and receive their feedback on the five use cases presented, as well as the commonly identified challenges, and other procedural and technical aspects for the fine-tuning of the tender specification of the foreseen PCP procedure. The level of participation from technology providers across different European countries has revealed great interest in this project, and consortia appear to be forming.

More in detail, the analysis of the responses to the twenty-five (25) questions posed through the RFI questionnaire and the feedback received during the interaction with the market via the Info Day, the two OMC events, and the EO Café revealed several key insights. The outreach of the OMC was significant, engaging either through the events or through the RFI questionnaire more than 266 participants across Europe. The participation wasn't equally dispersed among the EU MS with the Netherlands having a significant numerical difference compared to other countries, followed by Spain, Germany, France and Greece. Participants from 17 out of the 27 EU MS participated in the OMC activities, solidifying the pan-European aspect of PCP WISE project and its challenge.

In particular, the OMC revealed that the market is ready to participate in a PCP. The assumption of PCP WISE that there is room for innovation was confirmed by most of the respondents. Several fields for R&D were identified, along with a great potential for tailoring already developed technological and scientific solutions to address the challenge of the project. In summary, while certain components of the solution exist (drought indices, flood models, etc., please see section 3.3 for more details), no single existing (or under development) solution packages them along with daily updates and user-friendly decision support across all these use cases, address the project's challenge in its entirety.

The OMC showed that the market is characterised by a diverse range of technological solutions and expertise from multiple sectors ranging from more technological such as ICT, software development, data collection and management, AI, etc. to more scientific such as hydrology, hydrometry, water management, water modelling, climate services, etc. Additionally, there are other experts and innovators in fields like engineering, aerospace, consulting, and design. This diversification is depicted in the feedback received from the market operators in areas such as the estimated budget, proposed timeline of the PCP phases, their maturity as companies, and their capacity to tackle specific parts of the PCP WISE project's challenge. Apart from the wide array of perspectives received, this diversification leaves room for synergies and collaboration, showcasing the complexity of the project, which requires expertise from multiple sectors.

Some providers indicated that they could add value to tackling multiple use cases, while fewer indicated that they could deal with the entire challenge due to the wide range of services they can cover and thanks to their expertise in multiple sectors. Most providers can tackle some elements of the solution required, and they contribute to part of the functional requirements

of one or more use cases. Therefore, the majority of technology providers would be interested in cooperation and synergies to address the challenges.

Moreover, MODFLOW (the hydrology model simulating the groundwater flow through layers), which is strongly “recommended” for the purposes of PCP WISE, seems to be either a tool utilised by multiple suppliers in their day-to-day business or at least it seems interoperable with the tools that other suppliers tend to use at the moment. Only a few respondents seem to be unaware of the MODFLOW model or suggested to utilise a different one.

Finally, a significant risk that is underlined throughout the OMC is the reliance on the success of the development of the solution that will address the use cases and challenges of the project from two major aspects related to data: data availability and data quality. The aforementioned matter was mentioned several times by several suppliers; hence, this is a topic that requires attention and relevant information in the tender documents.

The PCP tender is expected to be launched, starting with the publication of the relevant Contract Notice on TED, on the 5th of September 2025, thus commencing the tendering phase of the project, which is planned to run from September 2025 until February 2026, followed by the PCP Implementation Phase starting from March 2026 until December 2027.

Annex I. Agenda of the events

A. Info Day – Detailed Agenda

10:00 – 10:05 (5 minutes)	**Moderator Joost Buntsma, Het Waterschapshuis** **Welcome & Opening remarks by Joost Buntsma, Het Waterschapshuis**
10:05 – 11:15 (70 minutes)	**PCP WISE project explained** **What is the rationality behind PCP WISE? (Hans van Leeuwen, STOWA)** The SWV system as indicator for drought, flooding, wildfires, soil subsidence in rural and urban areas. (15 minutes) **5 Pitches explaining the use cases (5 public buyers)** Use case 1: Urban Drought (Northern Europe) Use case 2: Urban Flood (North-Central Europe) Use case 3: Rural Drought (Northwest-Central Europe) Use case 4: Rural Drought and Flooding (Southern Europe) Use case 5: Rural Drought and Flooding (Northern Europe) (35 minutes) **PCP WISE: From use case to European application (Hans van Leeuwen, STOWA)** From tailor made to European scale and inter-operability (20 minutes)
11:15 – 11:45 (30 minutes)	**The PCP WISE process** **PCP process and the OMC-document (Ana Lucia Jaramillo Villacis, (Corvers)** Technological competition in phases, timeline, budget, matchmaking and consortia skills, eligibility, IPR, OMC-document (25 minutes) **RFI questionnaire (Arnoud Gringhuis, hWh)** Which information do we need (5 minutes)
11:45 – 12:00 (15 minutes)	**Questions and Answers, moderated by Joost Buntsma, Lead procurer**

B. First (online) OMC event – Detailed Agenda

10:00 – 10:05 (5 minutes)	**Moderator Joost Buntsma, hWh** **Welcome & Opening remarks by Joost Buntsma, hWh**
10:05 – 10:35 (30 minutes)	**PCP WISE project explained (Hans van Leeuwen, STOWA)** **What is the rationality behind PCP WISE?** The SWV system as indicator for drought, flooding, wildfires, soil subsidence in rural and urban areas. **From 5 use cases to European application** Urban versus rural area's Drought versus floods
10:35 – 11:00 (25 minutes)	**The PCP WISE process** **Process and rules of the OMC (Corvers)** Technological competition in phases, timeline, budget, matchmaking and consortia skills, eligibility, IPR, OMC-document (20 minutes) **RFI questionnaire (Arnoud Gringhuis, hWh)** Which information do we need? (5 minutes)
11:00 – 11:15 (15 minutes)	**Community building and matchmaking (Melissa Campagno, G.A.C.)** Combining skills and matchmaking
11.15 – 12:00 (45 minutes)	**Dialogue with potential suppliers** Polls Questions and answers RFI questionnaire
12:00	**Closure (Joost Buntsma, het Waterschapshuis)**

C. Second (hybrid) OMC event – Detailed Agenda

15:00 – 15:05 (5 minutes)	**Ana Lucia Jaramillo, Corvers** **Welcome & Opening remarks by Ana Lucia Jaramillo, Corvers**
15:05 – 15:35 (30 minutes)	**What is PCP WISE about (Hans van Leeuwen, STOWA)** **Why PCP WISE? (Problem definition)** **Goals of this project** (explained) **5 Use Cases** Use case 1: Urban drought (Northern Europe) Use case 2: Urban Flood (North-Central Europe) Use case 3: Rural drought (Northwest-Central Europe) Use case 4: Rural drought and Flooding (Southern Europe) Use case 5: Rural drought and flooding (Northern Europe) **Holistic view / Interoperability**
15:35 – 15:45 (10 minutes)	**OMC Guidelines (Ana Lucia Jaramillo, Corvers)** **Most important highlights.** Explanation of the procedure / What's in it for you? Where to find information (OMC document, website, platform, RFI, etc.) Upcoming steps
15:45 – 15:55 (10 minutes)	**Community building and matchmaking (Melissa Campagno, G.A.C.)** Importance of combining skills / forming consortia Matchmaking and Community platform (where to find)
15:55 – 16:00 (5 minutes)	**Closure remarks (including reference to the RFI) + questions and answers / dialogue (to be continued after the session)**
16:00 - ...	***After the session we have more time for questions and dialogue. Several buyers from the PCP WISE consortium will be present to engage in meaningful discussions!***

Annex II. Complete list of FAQs published on the project website and e-procurement platform

Publication date of this section: 25 June 2025

Category: PCP Budget allocation and contracting

#	Question	Answer
1	When you doubt whether the project is feasible "within the proposed budget", it means that the budget for the 3 phases of the later precommercial procurement is already (more or less) set?	The total budget for PCP WISE is fixed at € 11.765.338,80. However, we are seeking feedback on the proposed distribution of the budget across the 3 different phases of the PCP, as well as on the envisaged number of contracts to be awarded within each phase through the RFI questionnaire or during the OMC events. The final distribution of this budget between the 3 phases, taking into account the feedback given during the OMC, will be published in the tender documents.
2	Could you indicate how many projects you are thinking about funding, and the approximate budget per project?	In principle, we offer 5 contracts in Phase 1, 3 contracts in Phase 2, and 2 contracts in Phase 3. Be mindful that flexibility will be provided to transfer the leftover budget from one phase to the next phase in case offers with a lower price than expected are received. For all phases, contracts will be financed until the remaining budget is insufficient to fund the next best tender. The exact number of contracts finally awarded will thus depend on the prices offered and the number of tenders passing the evaluation. The information about the (maximum) total budgets per phase is detailed in Table 3 of the OMC document. There is budget allocated to each one of the different phases, which will be awarded to winning suppliers. However, we are seeking feedback on the proposed distribution of the budget across the different phases, as well as on the number of contracts envisioned to be awarded within each phase through the RFI questionnaire or during the OMC events. The final budget allocation and number of contractors per phase will be published in the tender documents.
3	If the total budget of the PCP is about 12 M€ and if only 2 projects are finally defined, can we conclude that it is about €6.000.000/ each project?	The information about the (maximum) total budgets per phase is detailed in Table 3 of the OMC document. A specific budget is allocated to each of the three phases, which will be awarded to the winning suppliers. The current intention is to have competition between 5 contractors in Phase 1, 3 in Phase 2, and 2 in Phase 3. A maximum budget per contractor is defined for each phase. Based on the current proposed allocation, a maximum of €4.232.669,40 would be available per project that successfully reaches Phase 3.

4	How many suppliers will be admitted in PCP Phases 1-3? Was it 5, 3, 2 suppliers respectively?	Please see answer #2
5	What's the expected budget for each PCP Phase per supplier?	Please see answer #3
6	I have a question regarding the number of contractors and the different PCP phases. You mentioned that for the first phase you will take 5 contractors. Is this something you're set on? From other PCP projects we're used that the number of taken contractors in the first phase is higher (+10).	Given the scope of our challenge, we are currently proposing a budget allocation and number of projects according to Table 3 of the OMC document. This is indeed 5 contractors for Phase 1 of PCP WISE. If we were to provide 10 or more contracts, this would also lower the budget, which may be an insufficient reward for the to be developed solution. However, if according to the answers given by market entities in the OMC, our envisioned budget allocation and number of contractors is inaccurate, this is subject to change. The definite budget allocation and number of contractors per Phase, considering overall market needs and preferences, will be provided in the final tender documents.

Category: Use Cases

#	Question	Answer
7	Could you please state clearly whether you will procure 1 solution that shall tackle all 5 groups/cases; or whether a solution can focus on 1 single group/case?	The aim is that the solution tackles all 5 use cases. The core of the new solution consists of monitoring the soil-water-vegetation system to provide data relevant to the five use cases related to floods, wildfires, infrastructure risks in rural and urban areas.
8	We may use EO such as satellite altimetry and surface areas, however, this is not specifically key to our solution. Is GNSS (water levels and ground movements) considered sufficient in terms of satellite-based Earth/environmental observations?	More information on the use cases that your solution needs to tackle has been provided during the Info Day on the 28th of May and during the OMC-events. Recordings of these events are available. Currently, as part of the tender preparation, we are still exploring the requirements of the to-be-developed solutions. Feedback provided during the OMC will be considered when drafting our final tender documents. This will also include the requirements and wishes regarding the datasets that PCP WISE consortia will use to test their solutions.
9	Could the solution combine remote sensing with in-situ sensing? i.e. satellite EO technologies combined with local sensoring platforms?	The solution may combine such technologies, as long as the integration of remote sensing and in-situ measurements—such as satellite-based EO and local sensor platforms—contributes to the objectives of the project.
10	Do you plan to create sub groups related to the use cases in the community platform or is it too soon?	We have several sub-groups within the Community Platform, however not formed groups related to the Use Cases. The current division of the groups is: - Buyers - Suppliers - Replicators - Followers - Support organisations

		Interactions regarding the upcoming Call for Tenders are possible between members belonging to the same group but also to two different groups. We currently do not plan on forming groups related to the use cases, but this might be a possibility in the future if we deem this helpful. Always bearing in mind that bids must address all the 5 use cases.
11	Is a consortium expected to cover all five use cases, or can it focus on a selected few of interest (e.g., only rural or urban use cases)?	Please see answer #7
12	What is meant by high resolution in CASE 3?	In hydrology terms: A) In city area (is street level) 5 to 30m B) In rural area about 100m
13	Any contractor could apply to up to 5 use cases but it is not mandatory to do so. Is that right?	Please see answer #7
14	Who are your expected end users? (Managers, Specialists, etc.)	For example: Water managers, City managers, Nature managers, Agricultural managers. Also, we expect use from the utility sector and local governments.

Category: OMC and general procedure questions

#	Question	Answer
15	How long and when do you (by now) plan implementation of phase 3 of the PCP? The project's calendar is quite pre-framed. So please indicate in the OMC information, what's the actual flexibility possibility. For gathering really valuable and representative evidence and data, the solution - whatever it will be - must ensure a long enough time span. E.g. drought or wildfire situation in Catalunya is quite different in summer than in autumn; same as we have usually no major flood incidence in summer ... Please inform about your preliminary planning for making the OMC answers relevant.	The current timeline for the duration of each Phase is outlined in Table 3 of the OMC document, indicating 4 months for Phase 1, 11 months for Phase 2, and 6 months for Phase 3. However, based on the responses and justifications provided through the RFI, published as part of the OMC process, adjustments between phases may be considered. Please note that any suggestions to modify the proposed timelines must be clearly substantiated and duly justified in your responses.
16	Which is the deadline for the RFI survey?	The deadline for the RFI was 22 June 2025 (23:59 CET).
17	Will the selection criteria be "best value for money"?	In the question received, the term “selection criteria” appears to have been used mistakenly. We assume that “award criteria” were actually meant and have based our response on that understanding. We intend to use award criteria based on "best value for money". The definite award criteria will be published in the Tender Documents, when the Call for Tenders is published. (Selection

		criteria relate to the qualifications of the supplier, while award criteria concern the evaluation of the proposal itself).
18	Is the PPI, following the PCP, only available to the Phase 3 PCP suppliers, or all PCP suppliers, or even beyond?	The potential future PPI procedure entails a new tender procedure OPEN to all interested market parties. Participation in the PCP neither the lack of selection precludes per se the possibility to present a bid in a future PPI.
19	If I understood correctly, the PCP will be going for sure, while is not granted a PPI, right?	Correct; for now, PCP Wise just covers the PCP procedure. The intention of the PBG is to have a follow up PPI after the conclusion of this PCP Wise project. Please bear in mind that PCP Wise is the follow-up of another project called "PROTECT CSA" by the PBG. Participants should see this as a sign that the PBG has a strong commitment to purchase the developed solutions, also after the PCP.
20	How do you ensure that you receive a suitable amount of bids? I'm guessing: 1) too few tenders indicates too tight specifications/scope or insufficient promotion of the call, but 2) too many bids are challenging to assess, or perhaps indicate that the scope is not ambitious enough? Is 1) or 2) typically the bigger challenge in a PCP?	Receiving a high number of bids would be favorable as it allows us to select the best contractors for PCP WISE. This will yield the best results for our challenge. If we receive too few bids, it may be more challenging to fulfil PCP WISE's needs. To ensure we receive enough bids during our call for tenders we are: 1) Disseminating information on PCP WISE through different media channels in the EU 2) And hosting the OMC to help us specify our call for tenders to align with the market capabilities.
21	Questions submitted through the e-procurement platforms will be answered by 13 June or made public to all by 13 June?	We have delayed our first information notice regarding the answers to questions. We will publish an information notice with the answers to the asked questions that is publicly available on the 25th of June.
22	At which point can the suppliers DISCUSS their innovations with the customers? OMC Event is a one way chance to ask a question, but is there, and when exactly?, an option for dialogues?	As we are currently in the OMC phase, active engagement with the market is anticipated through structured interactions. In this context, you are invited to provide your feedback via the OMC events, the RFI questionnaire, and the upcoming one-to-one meetings between buyers and suppliers, which will be conducted through the PCP WISE Community Platform over the coming period.
23	Is there any obligation from the buyers to follow-up with a PPI? Does it depend if there are suitable conditions?	Please see answer #19.
24	Does the participation but not selection to any of the 3 phases preclude the possibility to participate to the PPI?	Please see answer #18.
25	Does the PCP OMC phase enter into the "Competitive Dialogue" category (among the EU admitted procurement procedures)?	The PCP's OMC phase is part of the preparatory activities of the PCP procedure. PCP is a different procedure, aiming to contract and spur R&D activities to develop 'commercially unavailable solutions'. This is a different procedure than the 'competitive dialogue'. You can find more information on the PCP approach in the OMC-document or on the website of the EC: https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/new-european-innovation-

		agenda/innovation-procurement/pre-commercial-procurement_en
26	Will PCP WISE have follow up activities/actions after the end of this project? How will the result continue to be exploited operationally after the R&D period?	Please see the answers to question #18 and #19.
27	We just heard a concern about who would pay for the services in one of the OMC sessions. Who do you see as the buyers and how willing do they appear to be paid?	The public buyer group for PCP WISE is stated in the OMC-document and will also be included in the final tender documents published in the PCP WISE Call for Tenders. Assuming you are interested in the public buyers that are willing to pay for the developed solution after the PCP, we have formulated an answer to this in question #19.

Category: Eligibility to participate in PCP WISE

#	Question	Answer
28	We have the idea to combine, also for rivers that become very wide, EO-derived water surface area with GNSS observations. That would expand the capabilities and EO component, but it is also in a lower level R&D stage. Would this be eligible?	PCP WISE is looking for solutions that address critical challenges related to floods, droughts, heat stress, fires, and infrastructure impacts in both rural and urban areas. The project aims to develop an integrated, real-time soil-water-vegetation water intelligence solution. This solution will provide comprehensive information through monitoring, decadal hindsight, prediction, of the Soil-Water-Vegetation-Atmosphere (SWVA) system for climate change adaptation. The use of space and EO-based information will help prevent and mitigate water-related crises, such as floods, droughts, heat stress, fires, and infrastructure impacts, with related spatial risk indicators for each sector. Please note that the expected starting TRL is between 4 and 6. The objective is for the developed solutions to reach a TRL of 8 by the end of the PCP process.
29	Can consortia also include public body (universities, research centres?)	In principle, this is allowed; but please note that participation in this Call for Tenders and the subsequent tendering procedure is open on equal terms to all types of operators that are established in and controlled by EU MS or HE associated countries. Please also note that prior participation in the preparation of the PCP WISE tender might lead to exclusion if there is no other more proportionate way to avoid a potential conflict of interest and to ensure a level playing field with the rest of the tenderers. The PCP WISE Call for Tenders will contain an overview of eligibility criteria for suppliers. Prior participation in the preparation of the tender that results in a conflict of interest or distortion of competition shall be avoided and measures need to be in place to ensure a level playing field for all interested tenderers.
30	Will partners of the PCP Wise consortium, like Fraunhofer, be able to compete with the supply of innovative solutions	No, the PCP WISE consortium partners cannot compete in the PCP tender. This would imply a conflict of interest that would breach the TFEU principles of equal treatment and non-discrimination.

	against non-members of the Consortium?	
31	Are Swiss companies allowed to be part of the consortium?	Yes, they are part of the Horizon Europe participating countries. https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/list-3rd-country-participation_horizon-euratom_en.pdf Please note that participation in this call for tenders and the subsequent tendering procedure is open on equal terms to all types of operators that are established in and controlled by EU MS or HE associated countries. The PCP WISE Call for Tenders will contain an overview of eligibility criteria for suppliers.
32	Can consortia include universities?	Please see answer #29.
33	It was mentioned that PCP WISE procurers have a preference for a consortium led by a large SME with domain knowledge like civil engineering. Do you have a preference of a multi-national consortium?	The only limitation is that participation in this call for tenders and the subsequent tendering procedure is open on equal terms to all types of operators that are established in and controlled by EU MS or HE associated countries. PCP Wise consortium has no preferences. The aim is to obtain relevant expertise.
34	What is the definition of 'SME', what is the maximum number of employees?	The definition that PCP-WISE uses for Small and Medium-sized enterprises is according to the definition of the EC: https://single-market-economy.ec.europa.eu/smes/sme-fundamentals/sme-definition_en
35	We have 6.700 employees. Does that mean that there can't be a role for us in PCP WISE?	You can definitely participate. Also, companies that are not SMEs can have a role and synergies in PCP WISE. Please note that participation in this call for tenders and the subsequent tendering procedure is open on equal terms to all types of operators that are established in and controlled by EU MS or HE associated countries. The PCP WISE Call for Tenders will contain an overview of eligibility criteria for suppliers.
36	Are public bodies (Research Institutes, University etc.) eligible to participate in a consortium?	Please see answer #29.
37	Are there any eligibility constraints on consortia, fx no of countries and/or companies?	We are still drafting the tender documents for the upcoming PCP. In any case participation in this call for tenders and the subsequent tendering procedure is open on equal terms to all types of operators that are established in and controlled by EU MS or Horizon Europe associated countries.
38	I would appreciate if you could confirm that research centres can participate and that it is	Participation in this call for tenders and the subsequent tendering procedure is open on equal terms to all types of operators that are established in and controlled by EU MS or HE associated countries. I.e., a subsidiary from a third country established in a Member State of HE

	not only addressed to companies.	Associated country can be partner in a consortium to submit an offer. A company established in a third country and not established in a Member State or HE associated country can act as a subcontractor. But not as main contractors. The tender document that will be published in September will provide more information on exclusion and selection criteria that a tenderer must comply with.
39	As an experienced GeoAI Space company based in Germany, could you still participate on the project to provide our added value solution components?	If your solution contributes to tackling the use cases and adds value to the goals of PCP WISE within the scope of the tender, it will be valued. Please bear in mind that the eligibility criteria will be published in the final tender documents published during the Call for Tenders. To submit an eligible offer, consortia/parties need to possess all the competences needed to address this challenge and the use cases.
40	Would it be more valuable for proposals to come from inter-European companies (i.e., companies from different EU countries)?	Please see answer #33.
41	What is the expected number of partners in a consortium?	This depends on the number of partners needed to obtain the needed competences, resources and capabilities to develop a solution for PCP WISE. We have no specific expectations about the number of partners.

Category: IPR

#	Question	Answer
42	Is the call-back period applicable only to solutions/consortia at the end of phase 3 or to all solutions/consortia admitted to any of the 3 phases?	The PBG can apply the call-back clause: (1) To the technology vendors that complete phase 3, in case of lack of commercial exploitation of the results (best effort to commercially exploit the Results of the PCP in a period of 4 years after the end of the Framework Agreement and Specific Contracts). In the previous phases the results of the PCP are still on a lower TRL (not close to the market to be commercialised). (2) To participants in all three PCP phases, in case of using Results to the detriment of the public interest, including EU strategic autonomy or security interest. Before exercising the right to require the transfer of the ownership of the Results, the lead procurer (hWh) will first contact the Contractor to verify any measures that the Contractor has taken to achieve successful commercial exploitation of the Results, to safeguard EU strategic autonomy and security interests and rules, to prevent use of the Results to the detriment of the public interest and to comply with its contractual obligations.
43	Is my understanding correct that the developed solution has to remain in a pre-commercial licensing mode, so meaning it cannot be sold also already to private	As a technology provider not only will you retain the IPR of the developed solutions (so after the PCP you could further develop it), but you are also mandated to commercialise it in a period of 4 years after the PCP is over. We do want you to sell your solution after the

	sector buyers? If this is the case, this would be counter-market productive and not a good idea in my opinion because it is actually usually the private sector buyers that tell you if a solution has serios market traction.	PCP is over. What we mean is the Public Buyer Group will have a license to use the solution that has been developed up until the TRL level it was developed during the PCP. But bear also in mind that this license is NON-exclusive and NON-commercial. If you have a sellable solution, with pre-existing rights, you maintain these rights and have the right to commercialise the technology as you deem best.
44	Can a participating consortium "sell" commercially during the PCP?	If you have a "commercial" solution, nothing in this PCP prevents you from selling it. However, please bear in mind that the early phases of a PCP are related to lower TRL.
45	Each company in a consortium could bring parts of solution that already sell as individual components in the market now but indeed the requested solution for the PBG is not there yet and would be the result of the combined efforts of the consortium	This question appears to refer to the pre-existing rights that may be used as building blocks for developing the solution within PCP WISE. In principle, any pre-existing components or technologies brought in by consortium partners remain the property of those partners, and they are free to commercialise them as they see fit.

Category: Technical and Data requirements

#	Question	Answer
46	From the OMC, is required the combination of "various types of data" including "field measurements". Does it mean that the consortium should possess field data related to the different use cases and test sites at the time of proposal submission? Or rather that the consortium should demonstrate the technical capacity to take field measurements? Or rather that these are already available and in possession of all public buyers and the consortium should demonstrate the ability to use/integrate/interpret them?	The contractor should demonstrate the capacity during the proposal stage to obtain the data, integrate available data and take field measurements needed for the proposed solution development. More details on data/infrastructure availability will be provided in the tender documents.
47	From the OMC, "real-time" data and monitoring is required. It would be helpful to understand for each use case and test sites: -what data is available -what technology/infrastructure is available and if existing technology/infrastructure is expected to be integrated in the proposed solution	The contractor should demonstrate the capacity during the proposal stage to obtain the data, integrate available data and take field measurements needed for the proposed solution development. More details on data/infrastructure availability will be provided in the tender documents.

48	For (hyper) local and short-term forecasting, real-time in-situ monitoring, will be essential to get decent skills. We could offer that with several of some intended project partners. Is this a logical component of an offer for research?	The tender documents will provide an overview of the necessary professional skills, capabilities and requirements of the to-be-developed solutions. The submitted offer will be evaluated against these criteria and requirements.
49	MODFLOW is very specific, why not OGC standards for instance? MODFLOW is only groundwater, I recommend data standards that warrant interoperability, not one model suite.	This is valuable and appreciated feedback. The RFI contains questions regarding this topic. Market feedback has been taken into account regarding other OGC standards, and we will provide further information on MODFLOW in the OMC Report and the final tender documents.

Category: Financial proposals / Bids

#	Question	Answer
50	Can you please explain more details about the financial aspects of the tender? What costs are eligible for funding, what hourly rates are applicable, etc.?	The financial aspects will be included in TD9 (Tender Document 9). FINANCIAL FORM. Each tenderer will have to provide a cost breakdown for Phase 1 and then an estimation for both Phase 2 and Phase 3. This breakdown will include as separate categories: personnel incl. hourly rates, materials, facilities, overhead costs, travel, sub-contracting, other potential costs that you might be incurring in and that do not fall in any other of the categories and the total price with shared IPR (that will be owned by you). Bear in mind that the proposal MUST comply with the definition of R&D services as described in the most recent version of the Frascati Manual. This means that the value of the R&D services provided by the contract must be more than 50% of the total value of the PCP framework agreement.
51	Is it possible to buy sensor equipment for insitu measurements and validation of our products with the PCP budget?	Be mindful that the project is a PCP, focusses mainly on the R&D Services. I.e. your proposal MUST comply with the definition of R&D services as described in the most recent version of the Frascati Manual. This means that the value of the total amount of products covered by the contract must be less than 50 % of the total value of the PCP framework agreement: (1) The offers for all 3 Phases may include only items needed to address the challenge in question and to deliver the R&D services described in this RfT; and (2) The total value of products offered in Phase 1 and in Phase 2 must be less than 50% of the value of the Phase 1 and Phase 2 Contracts' value. Tenders that go beyond the provision of R&D services will be excluded.
52	What types of costs are eligible for reimbursement (e.g., overhead costs, travel)?	The tender must include a detailed financial offer, as part of TD9. Financial form (provided in the tender documents). This form should be used to specify: -Binding unit prices for all items needed for carrying out phase 1 and for items that are expected to be needed for phase 2 and phase 3 (given in euros, excluding VAT but including any other taxes and duties). The unit prices quoted for each category of items (e.g. hourly rates for junior and senior researchers, developers and testers) remain binding for all phases (i.e. for the duration of the framework agreement). Where new units/unit prices (e.g. for new

		tasks or equipment) are subsequently added to the phase 2 or 3 offers, they will become binding for the remaining phases. -A fixed total price for phase 1 and an estimated total price for phase 2 and 3, broken down to show unit prices and the number of each unit needed to carry out phase 1 (given in euros, excluding VAT but including any other taxes and duties). In addition, the financial section must include: -A price breakdown that shows the price for R&D services and the price for supplies of products (to demonstrate compliance with the definition of R&D). -A price breakdown that shows the location or country in which the different categories of activities are to be carried out (e.g. x hours of senior researchers in country L at y euro/hour; hours of junior developers in country M at b euro/hour), which personnel profile corresponds to R&D personnel. To demonstrate compliance with the requirement relating to place of performance. The information provided in the financial section of the tender will be used to evaluate the tenders on the basis of the compliance criteria and the price award criteria. The price paid to the contractor will cover all costs incurred by the contractor. The PBG is not going to pay any additional costs.
53	Are standard funding rates applicable, or can we propose our own rates and is the proposal assessed based on value-for-money?	Please see answer #52.
54	If standard rates are applicable, could you explain how these are built up?	Please see answer #52.
55	Are financial or in-kind contributions within the project required, or taken into account in the assessment of the proposal?	Financial or in-kind contribution are not required but may be taken into account in the assessment. Please see answer #52 for more information.
56	I noticed that there are different phases with different budgets and number of contracts. Does this mean that we can apply for different phases only?	You need to submit a bid at the very beginning of the PCP (for phase 1 already). Only tenderers selected at this stage and successfully completing phase 1 will be invited to submit a bid for phase 2. And only providers successfully completing phase 2 will be invited to bid to phase 3.

Publication date of this section: 14 July 2025

We have added a second Q&A section, containing all the questions and answers that were asked during the One-on-One meeting(s) with suppliers that have filled out the RFI. This table contains questions that have been asked both during the meeting(s) and via e-mail.

Category: Financial proposals / Bids

#	Question	Answer
57	What is your vision on stakeholder involvement during the development phase? Given the buyers are also end-users? We don't want to create something that is not going to be used.	PCP Wise has been carefully prepared in collaboration with end users (it has as foundational project : PROTECT CSA https://www.protect-pcp.eu/knowledge-hub/). I.e., the challenge and the use cases have been drafted together with the public buyers and end users (to ensure it reflects real life needs). Moreover, during the execution of the PCP, there will be milestones to be completed, deliverables to be submitted and regular points of contact with the Lead Buyer to ensure that no major deviations occur and to give feedback to the supplier. The end goal is precisely to ensure obtaining a working prototype that tackles the real needs of the PCP WISE public buyers (and related end users) and of other buyers outside of the PCP WISE Consortium but participating in the project in the User Observatory Group. I.e., to ensure the further commercialisation and uptake of the final solution
58	Do you have expectations of the format of the bid response?	This will be clearly outlined in the tender documents (we have template formats for the submission of the bids). There will be info sessions on the submission to clarify any questions you may have once you have access to the tender documents.
59	Is there a limitation to the hourly rate that qualifies for the subsidy?	No, in the PCP tender there is no limit on the hourly rate that is eligible for funding. There is a maximum budget per contractor per phase. In addition, the proposal must comply with the definition of R&D services, so this means that at least 50% of the total value of the contract must be spent on R&D. Please also refer to answer #50.
60	Can you give some insights in what the solution would be worth / the earning capacity after the PCP WISE project?	We can't provide an exact number. Of course this depends on the quality of the solution. What we can say is that in addition to the 12 public buyers in PCP WISE, there is a large group (150) of potentially interested buyers across Europe (with their own user groups) following from the PROTECT CSA. PCP Call – PROTECT Analysis-of-climate-challenges-in-European-regions.pdf

Category: Use Cases

#	Question	Answer
61	Is it possible to add new use cases that are not already involved in this project?	Our focus is on the needs of the 5 use cases which are mandatory. However, if you think it is useful to add new use cases, it would be possible, but it will be at your own cost.
62	Is PCP WISE planning to shed light on buyers' requirements (must-haves, nice-to-haves) in the RFP, or is this part of the discovery during the solution design phase?	Yes, this will be duly indicated in the RfT.

Category: Technical and Data requirements

#	Question	Answer
63	Who are supplying the data? Is there a fixed set of data available? Is generating own data possible/an opportunity? Who is paying for the data?	The RfT will request providers to indicate the data they want to use. The RfT will also indicate which data is relevant for the public buyers/users and list some data sets that can be used. Please note that during PCP WISE you need to develop and test a solution tackling the 5 use cases with the data that you choose to use (and that can, be the one indicated in the RfT), but after the conclusion of PCP Wise you are mandated to further commercialise the solution. It is important to consider this aspect when selecting the data sets you may want to use. Generating own data may be an opportunity. The technology providers should take into account the cost they may need to pay for the data.
64	Is there any structure on who will provide the data and whether we need to get it ourselves or will it be delivered?	The goal is to make use of openly available data as much as possible. There will also be available certain data sets relevant for specific use cases. In addition, you can use your own datasets or buy your own data sets as well. The information on the available data sets that can be used will be provided in the Tender Documents. Please also refer to answer #63
65	Will relevant data be provided to suppliers to support the design and implementation of the use cases?	Please see answer #63
66	Will the type and structure of available data per use case be described in the tender documentation?	Yes, for the data pinpointed in the Tender Documents.
67	Will the data required for the project be provided by the buyers, or third parties?	Please see answer #63
68	Will there be a predefined dataset available for all suppliers, or will each supplier need to generate or source their own data?	Please see answer #63
69	If suppliers are expected to generate their own data, will there be flexibility or support for doing so?	Please see answer #63

70	Who will be responsible for the cost of data acquisition, if applicable?	The suppliers. The cost of data may however be included in the proposal, but please note answer #59. The proposal must comply with the definition of R&D services.
71	If the purchase of data sets is necessary, it is for the bidder to allocate resources to it (you can indicate it in your budget estimation and in your price)	Yes, the suppliers need to allocate resources and estimate the budget.
72	Will the tender documentation include any specific requirements regarding the resolution, format, or frequency of the data to be used?	Yes, this information will be detailed in the Tender Documents.
73	Are there any requirements or alignment expected with existing data spaces (e.g. related to the Green Deal or sectoral data initiatives)?	Yes, this information will be detailed in the Tender Documents.
74	Will suppliers need to comply with any specific interoperability standards or frameworks?	Yes, this information will be detailed in the Tender Documents.
75	Do you have any specifications on the resolution and frequency of the data?	The output resolution in urban areas is about 5 to 30 meters and in rural areas 100 meters. This means you need to strive in finding higher detailed resolution for your inputs or have creative statistical sound sub resolution solutions.

Category: Project execution and tender procedure

#	Question	Answer
76	Could you indicate when the administrative and technical specifications of the tender are expected to be published?	Our goal is to publish the contract notice on the 5th of September.
77	Will the consortium applying have to present any legal documentation like a consortium agreement in place?	Yes. There are some template/forms that will need to be completed in this regard. The tender documents will include these forms.
78	Will there be direct interaction between suppliers and members of the buyer group during the project execution phases?	Yes. There will be clear milestones, deliverables and formal and informal meetings to provide feedback throughout the project execution. A timeline will be provided in the tender documents.
79	Will the implementation of the use cases be linked to specific locations or pilot sites associated with the individual buyers?	Yes. The details will be indicated in the tender documents.
80	How do you foresee the involvement of stakeholders, particularly end-users, during the development and testing phases?	End-users have provided feedback on the use cases, requirements and test sites. They will participate during the different PCP phases to provide their duly feedback.
81	Could you clarify the expected outcomes and deliverables for Phase 1 and Phase 2? Will it be defined in the tender specifications?	This information will be clearly detailed in the tender documents.

82	Will the evaluation criteria for these phases be detailed in the tender documents?	This information will be clearly detailed in the tender documents.
83	Who will we be dealing with after the bids have been selected and the contracts have been awarded? Who will we be in contract with?	hWh will act as the Lead Procurer representing all PCP WISE Buyers for the purpose of the signature of the Framework Agreements and Phase contracts, and the execution of the contract. The Governance structure of PCP WISE includes technical and financial committees to ensure the quality of the outcomes. Further information can be found in the tender documents.
84	Is there any estimate on how much involvement there is from other countries as well?	There has been involvement from many different European countries in all the PCP WISE events. The OMC report to be published by end-July on the PCP WISE website will provide more insights in this regard.
85	Will it be possible to have contact with the participants of the Use Cases during the PCP WISE project (during the development phase)?	We are writing User Story lines that give elaborate insight into the needs of the buyers. You will find these story lines in the tender documents once they are published. In addition, this kind of contact is possible with the purpose of obtaining a solution that fits the needs of the public buyers. Thus, we deem it important they are involved with the suppliers during the project.
86	How will the availability of those people (public buyers, question refers to question #85) be?	We see huge involvement from all 5 use case leaders already. Their engagement is expected throughout the PCP phases when needed to provide feedback.
87	Do you have an exact date on when you will publish the Call for Tenders?	Please see answer #76
88	When will you expect the bids?	This has for now been set at the beginning of January (approximately on the 7th of January 2026).

Annex III. RFI Questionnaire

PCP WISE - Request for Information (RfI) Questionnaire in the context of the Open Market Consultation for the future Pre-Commercial Procurement of R&D services on the climate adaptation domain

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PCP WISE

PCP WISE in a nutshell

This survey is part of the Open Market Consultation (OMC) of the PCP WISE project. It should provide the PCP WISE Consortium with feedback from the market about the main challenge concerning the development of innovative, beyond state-of-the-art solutions (up to TRL8) to enhance water management. The focus areas include agriculture, nature, urban climate resilience and planning, climate risk management, and resilience to water-related natural disasters. The goal is to provide intelligence and information on rural and urban soil-water-vegetation (SWV) system conditions and related risks for each sector.

PCP-WISE aims to bridge the gap between the existing European (Copernicus) portfolio and operational practices in managing local areas in sectors that depend on meteorology and hydrology. It does so by developing an integrated water intelligence system that harmonizes data from diverse sources—such as Earth Observation (EO) data, in-situ measurements, and Artificial Intelligence (AI) analytics—within the European Union, through innovation procurement.

This unified approach is essential for delivering comprehensive, historical, and real-time insights that support effective decision-making at regional, national, and transnational levels, both in the short term (seasonal/multi-annual) and the long term (decadal). The standardization of data collection and analysis processes under PCP-WISE will improve the ability of public authorities to manage water resources more efficiently. It will also help them respond proactively to climate-related crises, including floods, droughts, heat stress, fires, and infrastructure impacts, thereby increasing long-term climate resilience. The general objective is to enhance climate resilience by improving the availability and use of EO-based information and by aligning regional water management authorities, cities, communities, and crisis organisations across EU Member States and administrative boundaries, particularly within shared river basin systems.

PCP-WISE focuses on five distinct use cases, each addressing specific water-related challenges in different regions of Europe besides the above-mentioned common regular and risk monitoring approach. For interoperability reasons, a common hydrological groundwater model will be mandatory to be used as a reference (for incorporating solutions and comparison with user insights and validation measurement). It is proposed to use MODFLOW (and iMOD suite) as a generic description of the hydrological local status.

Use Case 1: Urban Drought (North Europe)
It focuses on urban drought issues in North-Western Europe, dealing with water distribution problems in city undergrounds due to various human and external factors. This use case aims to mitigate water shortages impacting infrastructure and living conditions.
Use Case 2: Urban Flooding (North-Central Europe)
It addresses urban water excess in Eastern and Northern Europe, where the abundance of water affects city infrastructure. This use case focuses on managing water storage and infiltration issues exacerbated by regional factors like sea-level rise.
Use Case 3: Rural Drought (Northwest-Central Europe)
It tackles rural drought in North-Eastern Europe, where extreme climate variations impact agriculture and nature, leading to issues like wildfires and production losses.
Use Case 4: Rural Drought & Flooding (Southern Europe)
It deals with rural drought and flooding in Southern Europe, where structural drought periods and intense rainfall affect agricultural processes and cause significant production challenges.
Use Case 5: Rural Drought & Flooding (Northern Europe)
It focuses on rural drought and flooding in North-Eastern Europe, addressing problems caused by extreme groundwater conditions that impact land use and infrastructure. This use case aims to manage soil moisture conditions to prevent issues like organic oxidation and underground peat fires.

The OMC document, to which this questionnaire is an annex (I), contains more detailed information and can be found on the project's website.

Technology providers are invited to answer all the questions in this survey (one survey per organisation). The results will be considered when drafting the tender documents for the future PCP.

Please note that taking part in this survey is not a prerequisite for the participation in the future PCP and does not give any advantage to any technology provider. All information provided in the questionnaire will be anonymised, summarised and published online in English on the project's website.

Your personal data will be collected, processed, stored and used by the PCP WISE consortium with the sole purpose of gathering information from the market within the framework of the PCP WISE project. Personal data will be treated as strictly confidential according to the General Data Protection Regulation (Regulation 2016/679 of the European Parliament and of the Council - GDPR).

You may exercise your right to access your personal data and the right to rectify such data by contacting: info-PCP-Wise@group-gac.com

* I consent to the processing of my personal data to receive further information related to PCP WISE.

- ○ Yes
- ○ No

Contact details

* Name of your organisation:
500 character(s) maximum

0 out of 500 characters used.

Website:
500 character(s) maximum

0 out of 500 characters used.

Email address:
500 character(s) maximum

0 out of 500 characters used.

* Country:
500 character(s) maximum

0 out of 500 characters used.

* Type of organisation:
- ☐ Start-up/SME
- ☐ Academic/Research institute
- ☐ Public organisation
- ☐ Private organisation
- ☐ Other

Sector:
500 character(s) maximum

0 out of 500 characters used.

What is the relevant experience of your organisation in relation to the subject matter of the PCP WISE project? Please elaborate (years of experience, practical examples, etc.).
1000 character(s) maximum

0 out of 1000 characters used.

PCP challenge and requirements

1. Do you know any technological developments related to the aforementioned main challenge in the climate adaptation domain that PCP WISE needs to take into account?
- ☐ Yes
- ☐ No

Please indicate which technological developments:
1000 character(s) maximum

0 out of 1000 characters used.

2. Do you foresee any barriers to implementing the potential solution?
- ☐ Yes
- ☐ No
- ☐ I don't know

Please elaborate:

3. Can you identify relevant needs that have not been described in the market consultation document?
- ☐ Yes
- ☐ No

Please elaborate:

4. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 1: Urban Drought (North Europe)?
- ☐ Yes
- ☐ No

Please elaborate:

5. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 2: Urban Flooding (North-Central Europe)?
- ☐ Yes
- ☐ No

Please elaborate:

6. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 3: Rural Drought (Northwest-Central Europe)?
- ☐ Yes
- ☐ No

Please elaborate:

7. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 4: Rural Drought & Flooding (Southern Europe)?
- ☐ Yes
- ☐ No

Please elaborate:

8. Do you have knowledge of any suitable technology or combination of technologies that can address the Use Case 5: Rural Drought & Flooding (Northern Europe)?

- ☐ Yes
- ☐ No

Please elaborate:

9. If you were to develop the solution for all the five PCP WISE use cases, how much time would you need for each of the three phases of the PCP: (1) solution design, (2) prototype development, (3) original development and testing of the solution?

1000 character(s) maximum

0 out of 1000 characters used.

10. If you were to develop the solution for all the five PCP WISE use cases, could you indicate an estimated budget for the development and deployment of the solution? Please justify your answer.

1000 character(s) maximum

0 out of 1000 characters used.

11. Based on your market knowledge, what is the current market value of similar solutions (applcable for all UCs 1-5), and what is your projection for the future market value of the proposed solution(s)? Please justify your answer.

1000 character(s) maximum

0 out of 1000 characters used.

12. Based on your proposed solution(s), what key benefits — both direct and indirect — do you anticipate it/they could deliver to public buyers and stakeholders? Please consider operational, environmental, economic, and societal impacts. Please justify your answer.

2000 character(s) maximum

0 out of 2000 characters used.

13. Are you familiar with the MODFLOW hydrological model as a standard for (operational management) interoperability or do you have suggestions for other standard models or descriptions? Please mention and elaborate with reference/link.

2000 character(s) maximum

0 out of 2000 characters used.

14. Do you have the ambition and the internal (ICT, Human) capacity for future scaling (even at a pan-European level) of the PCP WISE services?

2000 character(s) maximum

0 out of 2000 characters used.

15. Do you have suggestions for developing solutions in areas without existing ancillary information or prior knowledge (worst case)?

2000 character(s) maximum

0 out of 2000 characters used.

16. Can you provide any other recommendations regarding the PCP WISE use cases?

2000 character(s) maximum

0 out of 2000 characters used.

State-of-the-art analysis

17. Do you identify relevant solutions under development or already available in the market beyond the state-of-the-art?

2000 character(s) maximum

0 out of 2000 characters used.

18. Do you know the Technology Readiness Level (TRL) of those solutions / developments?

Minimum 1 selection(s)

- ☐ TRL 1 - Basis principles observed
- ☐ TRL 2 - Technology concept formulated
- ☐ TRL 3 - Experimental proof of concept
- ☐ TRL 4 - Technology validated in lab
- ☐ TRL 5 - Technology validated in relevant environment
- ☐ TRL 6 - Technology demonstrated in a relevant environment
- ☐ TRL 7 - System prototype demonstration in operational environment
- ☐ TRL 8 - System complete and qualified
- ☐ TRL 9 - Actual system proven in operational environment

19. Can you identify any patents, standards or publications that are relevant to the challenge? If yes, please indicate them below:

2000 character(s) maximum

0 out of 2000 characters used.

20. Are you aware of any patents that may constitute a barrier for you to deliver a solution in the envisaged PCP procurement? If yes, please indicate them below:

2000 character(s) maximum

0 out of 2000 characters used.

Miscellaneous

21. What information do you still need in order to make a good plan of action for the development and/or implementation of solutions suitable to address the challenge?

2000 character(s) maximum

0 out of 2000 characters used.

22. Do you have specific requirements to achieve the functionalities that PCP WISE should take into account? If yes, please indicate them below:

2000 character(s) maximum

0 out of 2000 characters used.

23. What are the risks associated with the development and implementation of a solution that tackles the functional needs of PCP WISE?

2000 character(s) maximum

0 out of 2000 characters used.

24. What support do you expect from PCP WISE?

2000 character(s) maximum

0 out of 2000 characters used.

25. Do you have any final suggestions and/or remarks?

1000 character(s) maximum

0 out of 1000 characters used.

Contact

Use the contact form to contact the survey owner or read our FAQs.

Thank you for your feedback!

Submit