

A. de la Cruz (17th april 2023)

D6.1 Project Management Manual



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101093806. The publication reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained therein.

D6.1: Project Management Manual

Deliverable number	Work package	
D6.1	WP6	
Deliverable lead beneficiary	Deliverable author(s)	Contributor(s)
Aquatec (AQUA)	Alex de la Cruz (AQUA)	Angel Villanueva (AQUA) Rita Brito (LNEC) Marianne Bügelmayer (AIT) Dennis Havlik (AIT) David Pacheco (CET) Mattia Leone (UNINA) Barry Evans (UNEXE)
Internal reviewer(s)	External reviewer(s)	
Beniamino Russo (AQUA)	Elosia Vargiu (CET)	
Planned delivery date	Actual delivery date	
28/02/2023	17/04/2023	
Dissemination level	<input checked="" type="checkbox"/> PU = Public <input type="checkbox"/> PP = Restricted to other programme participants <input type="checkbox"/> RE = Restricted to a group specified by the consortium. Please specify: _____ <input type="checkbox"/> CO = Confidential, only for members of the consortium	

Document history

Date	Version	Author	Comments
31/03/2023	1.0	Alex de la Cruz (AQUA)	Completed first draft of the document
05/04/2023	1.1	Beniamino Russo (AQUA)	Revised first draft
14/04/2023	1.2	Elosia Vargiu (CET)	External revision of completed draft
14/04/2023	1.3	Alex de la Cruz (AQUA)	Final version

Table of contents

List of Tables	4
List of Figures	5
List of Acronyms and Abbreviations	6
Executive summary	7
1 Introduction to project ICARIA	8
2 Objectives of the deliverable	10
3 Key documents	11
4 Governance structure	12
4.1 Project Coordination	12
4.2 Project Management Team	13
4.3 Strategic Managers (SM)	14
4.4 Project Steering Board	14
4.5 Project Advisor Board	16
5 Internal communications	18
5.1 Project meetings	18
5.2 Platform	19
5.3 Contacts	19
6 Rules for implementing Horizon Europe projects	21
6.1 Reporting	21
6.1.1 Procedure for the Reporting Periods	22
6.1.2 Procedure for the Internal Progress Reports	23
6.1.3 Final Report	23
6.2 Financial aspects	23
6.2.1 General eligibility conditions	24
6.2.2 Ineligible costs	26
6.3 Review meetings and audits	27
7 Quality assurance	28
7.1 Procedure for elaboration and submission of deliverables	28
7.2 Deliverables review system	28
7.3 List of deliverables, responsibilities and reviewers	29
7.4 Key performance indicators and milestones	32

List of Tables

Table 1. Member institutions of the PMT.	13
Table 2. Member institutions of the PSB.	15
Table 3. ICARIA official meetings.	18
Table 4. ICARIA main contacts.	20
Table 5. ICARIA reporting periods.	21
Table 6. ICARIA reporting periods.	30

List of Figures

Figure 1. ICARIA EU funding logo.	11
Figure 2. Governance structure for ICARIA project.	12
Figure 3. Structure of ICARIA's deliverables review system.	29

List of Acronyms and Abbreviations

CA	Consortium Agreement
CSF	Case Study Facilitator
DoA	Description of Action
DR	Deliverable Responsible
EC	European Commission
EU	European Union
GA	Gran Agreement
PAB	Project Advisory Board
PC	Project Coordinator
PMM	Project Management Manual
PMT	Project Management Team
PSB	Project Steering Board
RP	Reporting Period
SSO	Specific Subobjective
WP	Work Package

Executive summary

The Project Management Manual has been developed by AQUATEC within WP6 (Project Coordination and Management). It is the document that presents to the whole ICARIA consortium the main guidelines that will be followed in terms of project management and organizations to ensure a satisfactory implementation of the project and the fulfillment of all objectives within the given budget and time frame.

The following are the main topics covered in this document:

- Key documents of the project definition
- Governance structure
- Internal communications
- Rules for implementing a Horizon Europe project
- Quality assurance system

Note that the information presented in the Project Management Manual reflects previous agreements that have been validated by all consortium members by their adhesion to the project Grant Agreement and Consortium Agreement.

1 Introduction to project ICARIA

The number of climate-related disasters has been progressively increasing in the last two decades and this trend could be drastically exacerbated in the medium- and long-term horizons according to climate change projections. It is estimated that, between 2000 and 2019, 7,348 natural hazard-related disasters have occurred worldwide, causing 2.97 trillion US\$ losses and affecting 4 billion people. These numbers represent a sharp increase of the number of recorded disaster events by comparison with the previous twenty years. Much of this increase is due to a significant rise in the number of climate-related disasters (heatwaves, droughts, flooding, etc.), including compound events, whose frequency is dramatically increasing because of the effects of climate change and the related global warming. For the future, by mid-century, the world stands to lose around 10% of total economic value from climate change if temperature increase stays on the current trajectory, and both the Paris Agreement and 2050 net-zero emissions targets are not met.

In this framework, **Project ICARIA** has the overall objective to promote the definition and the use of a comprehensive asset level modeling framework to achieve a better understanding about climate related impacts produced by complex, compound and cascading disasters and the possible risk reduction provided by suitable, sustainable and cost-effective adaptation solutions.

This project will be especially devoted to critical assets and infrastructures that are susceptible to climate change, in a sense that its local effects can result in significant increases in cost of potential losses for unplanned outages and failures, as well as maintenance – unless an effort is undertaken in making these assets more resilient. ICARIA aims to understand how future climate might affect life-cycle costs of these assets in the coming decades and to ensure that, where possible, investments in terms of adaptation measures are made up front to face these changes.

To achieve this aim, ICARIA has identified 7 Strategic Subobjectives (SSO), each one related to one or several work packages. They have been classified according to different categories: scientific, corresponding to research activities for advances beyond the state of the art (SSO1, SSO2, SSO3, SSO4, SSO5); technological, suggesting and/or developing novel solutions, integrating state-of-the art and digital advances (SSO6); societal, contributing to improved dialogue, awareness, cooperation and community engagement as highlighted by the European Climate Pact (SSO7); and related to dissemination and exploitation, aimed at sharing ICARIA results to a broader audience and number of regions and communities to maximize project impact (SSO7).

- SSO1.- Achievement of a comprehensive methodology to assess climate related risk produced by complex, cascading and compound disasters
- SSO2.- Obtaining tailored scenarios for the case studies regions
- SSO3.- Quantify uncertainty and manage data gaps through model input requirements and innovative methods

- SS04.- Increase the knowledge on climate related disasters (including interactions between compound events and cascading effects) by developing and implementing advanced modeling for multi-hazard assessment
- SS05.- Better assessment of holistic resilience and climate-related impacts for current and future scenarios
- SS06.- Better decision taking for cost-efficient adaptation solutions by developing a DSS to compare adaptation solutions
- SS07.- Ensure the use and impact of the ICARIA outputs

2 Objectives of the deliverable

The present document corresponds to the Project Management Manual (PMM) of project ICARIA (Improving Climate Resilience of critical Assets), which has received funding from the European Union's Horizon Europe Research and Innovation program, under the Grant Agreement number 101093806.

The document corresponds to Deliverable 6.1 of Work Package 6 (WP6) - Project Coordination and Management. The overall aim of WP6 is to guarantee a targeted and efficient implementation of the project towards the objectives and cover the overall administration and management aspects of the project. The specific objectives of this WP are as follows:

- Quality assessment of project progress, results and impact
- Timely submission of deliverables and reports to the European Commission
- Keep the project within budget and schedule while achieving the objectives
- Risk mitigation and management
- Establish effective communication channels Consortium – Commission

The objective of this PMM is to present to the consortium members the main guidelines, procedures and rules that will be followed to ensure an optimal project implementation. All the organizational rules presented in this document reflect previous agreements that have been validated by all consortium members by their adhesion to the project Grant Agreement and Consortium Agreement. Furthermore, the project contents will be updated according to the project evolution and/or specific requirements that might appear along the project lifecycle.

This document is to be used by all partners to efficiently develop their individual and collective activities and contribute to the global objective of the project.

3 Key documents

In this section, the binding document that specify the internal regulation of ICARIA are presented:

- **Grant Agreement** (No. 101093806): this document is the binding contract between the European Commission (EC), who represents the European Union (EU) and the beneficiaries of the project grant. It states the rights and obligations of all parts involved in the project (e.g. the right of the Union's financial contribution and the obligation to carry out the research and development work). The Grant Agreement consists of the basic text and annexes, including Annex 1– Description of the action (DoA) - part A and part B.

The DoA (Annex 1 – Part A) is also a key document to be taken into account given that it compiles a specific description of the tasks that will be carried out along the project and the expected results, deliverables and milestones to be obtained.

- **Consortium Agreement:** the internal agreement signed between the members of the consortium establishing their rights and obligations with respect to the implementation of the action in compliance with the grant agreement.

All members of the consortium have been provided with a copy of both documents. Furthermore, they are available on the Google Drive shared folder that serves as document management platform in ICARIA.

Remarkably, that visibility of EU funding is mandatory while promoting project actions. A tailored logo has been created according to EU rules and showing always:

- a. The EU emblem - High-resolution emblems can be found here:

https://european-union.europa.eu/principles-countries-history/symbols/european-flag_en

- b. The following text: *This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101093806. The publication reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained therein.*



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101093806. The publication reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained therein.

Figure 1. ICARIA EU funding logo.

4 Governance structure

The governance scheme of ICARIA is illustrated in Figure 2. The following sections describe the composition, roles and responsibilities of each case. A detailed description of the operational procedures of the Consortium Bodies can be found in section 6.2 of the Consortium Agreement.

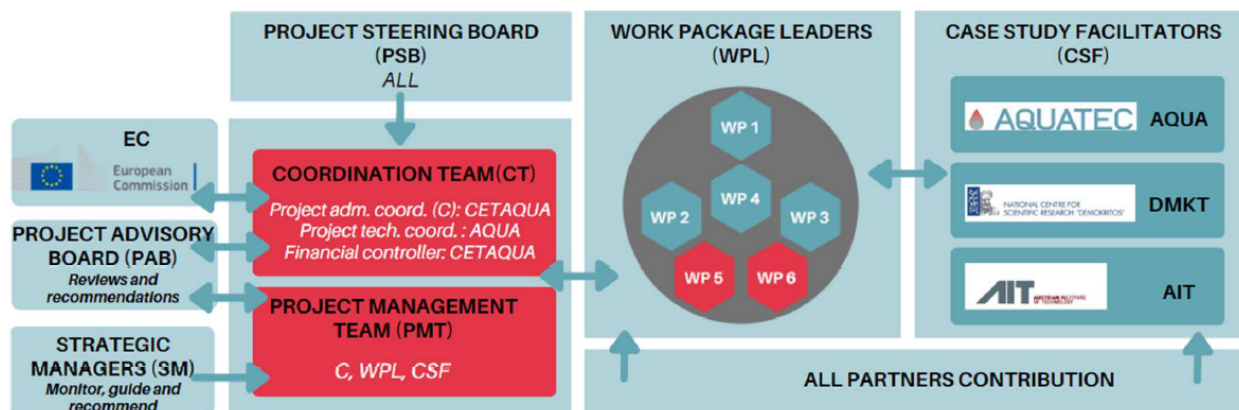


Figure 2. Governance structure for ICARIA project.

4.1 Project Coordination

CETAQUA and AQUATEC share the role of project coordination (PC) of ICARIA. CETAQUA is the administrative and legal coordinator while AQUATEC is the scientific and technical leader. As a whole, the PC is the legal entity acting as the intermediary between the Parties and the Granting Authority. Furthermore, in addition to its responsibilities as a Party, the PC will perform the tasks assigned to it as described in the Grant Agreement and this Consortium Agreement.

- Monitoring compliance by the Parties with their obligations under this Consortium Agreement and the Grant Agreement (responsibility: CETAQUA).
- Keeping the address list of the Members and other contact persons updated and available (responsibility: CETAQUA).
- Collecting, reviewing to verify consistency and submitting reports, including financial statements and related certifications and specific requested documents to the Granting Authority (responsibility: AQUATEC and CETAQUA).
- Transmitting documents and information connected with the Project to any other Parties concerned (responsibility: CETAQUA).
- Administering the financial contribution of the Granting Authority and fulfilling the financial tasks described in Section 7.2 (responsibility: CETAQUA).
- Providing, upon request, the Parties with official copies or originals of documents that are in the sole possession of the Coordinator when such copies or originals are necessary for the Parties to present claims. (responsibility: CETAQUA).

- Providing a copy of the Grant Agreement and its Annexes to the Associated Partners (responsibility: CETAQUA).
- The supporting the Scientific and Technical leader in preparing the meetings, proposing decisions and preparing the agenda of General Assembly meetings, chairing the meetings, preparing the minutes of the meetings and monitoring the implementation of decisions taken at meetings (responsibility: AQUATEC).

4.2 Project Management Team

The Project Management Team (PMT) is the central executive board and is in charge of supervising the execution of the project in all its dimensions. Hence, it will assess both the technical and non-technical development of ICARIA. The PMT is composed of the project coordinator, representatives of the institution leading a WP and representatives of the Case Study Facilitators (CSF). Hence, the following institutions will be members of the PMT:

Table 1. Member institutions of the PMT.

Partner institution	Role in ICARIA
AQUATEC	Project technical coordinator, WP 6 leader and CSF (Barcelona Region)
PLINIVS	WP 1 leader
UNEXE	WP 2 leader
LNEC	WP 3 leader
AIT	WP 4 leader and CSF (Salzburg Region)
CETAQUA	WP 5 leader
DEMOKRITOS	CSF (South Aegean Region)

The PMT will have virtual executive meetings on a monthly basis, unless a member of this body requires additional extraordinary meetings. Furthermore, face-to-face meetings will be held every six months during the Project Coordination Meetings. All these meetings will be chaired by the PC.

The main responsibilities of the PMT are as follows (more detail can be found in section 6.3.2 of the Consortium Agreement).

- The Executive Board shall prepare the meetings, propose decisions and prepare the agenda of the General Assembly
- The Executive Board shall seek a consensus among the Parties

- The Executive Board shall be responsible for the proper execution and implementation of the decisions of the General Assembly
- The Executive Board shall monitor the effective and efficient implementation of the Project
- Executive Board shall collect information at least every 6 months on the progress of the Project, examine that information to assess the compliance of the Project with the Consortium Plan and, if necessary, propose modifications of the Consortium Plan to the General Assembly
- Support the Coordinator in preparing meetings with the Granting Authority and in preparing related data and deliverables
- Prepare the content and timing of press releases and joint publications by the consortium or proposed by the Granting Authority in respect of the procedures of the Grant Agreement Article 17 and Annex 5 Section “Communication, Dissemination, Open Science and Visibility” and of Section 8 of this Consortium Agreement
- In the case of abolished tasks as a result of a decision of the General Assembly, the Executive Board shall advise the General Assembly on ways to rearrange tasks and budgets of the Parties concerned. Such rearrangement shall take into consideration any prior legitimate commitments which cannot be canceled.

4.3 Strategic Managers (SM)

The strategic manager (SM) are members of the consortium who, through their action in the project as it has been established in the work plan, are responsible for management strategies transversal to the whole project:

- Managers for Innovation (AQUA),
- Intellectual Property Rights (IPR) and Exploitation (AQUA)
- Data management (DRAXIS)
- Communication and dissemination (CETAQUA)

4.4 Project Steering Board

The Project Steering Board (PSB) is the project supervision and decision making general assembly of ICARIA. It consists of one representative of each member of the consortium and is chaired by the PC. This body shall celebrate an ordinary meeting at least once a year. These meetings will coincide with ICARIA annual plenary meetings in order to enable a face-to-face meeting. Additionally, extraordinary plenary meetings can be held at any given time upon request of the Executive Board or 1/3 of the Members of the PSB. Extraordinary meetings will be virtual.

The PSB is composed of the following 15 organizations, as shown in Table 2, ordered as in the Consortium Agreement and with the short names that should be used.

Table 2. Member institutions of the PSB.

Participant No	Participant organization name (short name)	Country
1	CETAQUA, Centro Tecnológico del Agua, fundación privada (CET)	Spain
1.1	Aigües de Barcelona (AB)	Spain
2	Aquatec, Proyectos para el sector del Agua, S.A.U. (AQUA)	Spain
3	Fundación para la Investigación del Clima (FIC)	Spain
4	Fundació Institut de Recerca de l'Energia de Catalunya (IREC)	Spain
5	National Center for Scientific Research "Demokritos" (DMKT)	Greece
6	Laboratorio Nacional de Engenharia Civil (LNEC)	Portugal
7	DRAXIS Environmental SA (DRAXIS)	Greece
8	Ethniko Kentro Erevnas Kai Technologikis Anaptyxis (CERTH)	Greece
9	Università Degli Studi di Napoli Federico Ii (UNINA)	Italy
10	AIT Austrian Institute of Technology GMBH (AIT)	Austria
11	Àrea Metropolitana de Barcelona (AMB)	Spain
12	Perifereia Notiou Aigaiou (SAR)	Greece
13	VERBUND ENERGY4BUSINESS GMBH (VEB)	Austria
14	University of Exeter (UNEXE)	United Kingdom

The PSB will gather Project results from the PMT and the Project Advisory Board (PAB), in order to fulfill the following tasks:

Content, finances and intellectual property rights

- Proposals for changes to Annexes 1 and 2 of the Grant Agreement to be agreed by the Granting Authority
- Changes to the Consortium Plan
- Modifications or withdrawal of Background in Attachment 1 (Background Included)
- Additions to Attachment 3 (List of Third Parties for simplified transfer according to Section 8.3.2)
- Additions to Attachment 4 (Identified entities under the same control)

Evolution of the consortium

- Entry of a new Party to the Project and approval of the settlement on the conditions of the accession of such a new Party
- Withdrawal of a Party from the Project and the approval of the settlement on the conditions of the withdrawal
- Identification of a breach by a Party of its obligations under this Consortium Agreement or the Grant Agreement
- Declaration of a Party to be a Defaulting Party
- Remedies to be performed by a Defaulting Party
- Termination of a Defaulting Party's participation in the Project and measures relating thereto
- Proposal to the Granting Authority for a change of the Coordinator
- Proposal to the Granting Authority for suspension of all or part of the Project
- Proposal to the Granting Authority for termination of the Project and the Consortium Agreement

Breach, defaulting party status and litigation

- Identification of a breach by a Party of its obligations under this Consortium Agreement or the Grant Agreement
- Declaration of a Party to be a Defaulting Party
- Remedies to be performed by a Defaulting Party
- Termination of a Defaulting Party's participation in the consortium and measures relating thereto
- Steps to be taken for litigation purposes and the coverage of litigation costs in case of joint claims of the parties of the consortium against a Party

4.5 Project Advisor Board

The Project Advisory Board (PAB) is a group of external experts that ensure the scientific and technical quality of the project. It will provide an additional process of quality control, advice, and validation of the vision, global impact and outreach of the project. It is appointed and steered by the PMT. The ICARIA PAB is composed of the following members. Note that a 6th member has been appointed to this body in order to comply with the Ethics Management WP (WP7).

- **Catalina Balseiro (Aigües de Barcelona, Spain):** Director of Innovation and Knowledge at Aigües de Barcelona, mixed company managing main water sector infrastructures in the Metropolitan Area of Barcelona. Chemical Engineering, MSc in Environmental Engineering and MBA in Digital Transformation. Previously, she held the position of Director of Innovation at Suez Spain and worked at the AGBAR Water Technology Center (CETaqua) participating and leading several research projects

- **Fausto Guzzetti (Consiglio Nazionale delle Ricerche, Italy):** A senior researcher at the CNR, he was head of the Office of Technical and Scientific Activities for Risk Assessment and Prevention at the Italian National Department of Civil Protection. His areas of expertise include risk assessment and impact scenario analysis for natural and technological hazards; evaluation of sectoral contributions from the scientific community and research institutions; national warning systems and monitoring networks.
- **Rebecca Powell (Transport for London, United Kingdom):** Principal City Planner at Transport for London (TfL), working on climate change adaptation within the Transport Strategy and Policy team. She is the pan-TfL lead for climate change adaptation research projects. Ms. Powell has a bachelor's degree in mathematics from the University of Edinburgh.
- **Sandra Ulrich (ASFINAG, Austria):** Responsible for the Infrastructure Asset Management Strategy within the Austrian Highway Operator ASFINAG. This includes the strategic guidelines dealing with resilience and natural hazards. Extensive experience in consultancy and R&D projects related to lifecycle management of infrastructure and future-proof infrastructure. Ms. Ulrich studied construction management and engineering at the university of applied sciences Joanneum Graz and the university of South Australia.
- **Panagiotis Katsikopoulos (Ministry for Climate Crisis & Civil Protection, Greece):** Chemical Engineer PhD, Senior Staff Officer at the Office of the General Secretariat for Civil Protection (GSCP), Greece. Has more than 20 years' experience in disaster & crisis management (especially planning, training, exercises, operations in Greece, and EU). Main author of the Greek Civil Protection system manuals for interagency emergency planning and for design, planning, conduct & evaluation of civil protection exercises.
- **María Luisa González Tapia (Ramón y Cajal Abogados):** Senior Lawyer specialized in IT law to provide advice and audit services regarding data protection management and security of information. She has over 15 years of experience on Data Protection audits; compliance projects; review and negotiation of IT contracts Intellectual Property e-commerce, legal advice related to Social Networks, etc. Furthermore, she is a member of the International Association of Privacy Professionals.

The PAB will join annual meetings with the PSB for discussion and evaluation of project results and evolution. In these meetings the PAB will provide feedback to the consortium regarding the quality and impact of the project outputs. Also, Progress reports will be sent to the PAB so as to obtain feedback about project results during the implementation.

The PAB will also be asked to review key project deliverables, and assess difficulties and priorities identified by the PSB. In addition, the PAB will also participate in tasks of promotion and dissemination of ICARIA results by promoting the link between the consortium and regions with potential interest in the project's results.

5 Internal communications

This section covers the main aspects to keep in mind regarding the communication system within the ICARIA consortium.

5.1 Project meetings

Table 3 summarizes the main ordinary meetings that are planned for ICARIA. Besides that, extraordinary meetings can be scheduled upon request of the consortium members according to the rules defined in the CA. Note that internal and bilateral WP meetings are not included in this table.

Table 3. ICARIA official meetings.

Meeting name	Ordinary meeting	Extraordinary meeting
Project Steering Board meeting	Once a year (face-to-face meeting)	At any time upon request of the Executive Board or 1/3 of the Members of the General Assembly (virtual)
Project Management Team meeting	Twice a year (face-to-face meeting) Once a month (virtual)	At any time upon request of any Member of the Executive Board (virtual)
Project Advisory Board meeting	Once a year (face-to-face meeting)	Not foreseen

Additional virtual meetings will be held to address issue such as:

- Day-to-day decisions
- WP management
- Define responsibilities and actions to take;
- Agree on any potential amendments to the work plan;
- Other issues not foreseen

Google Meet will be the official platform for project official meetings. However, other similar platforms (e.g. Microsoft Teams, Skype) could be used too. The general rules for the project meetings are the following:

- The partners will receive an invitation to the meeting (if necessary a Google Forms will be launched in advance to find the most optimal date to everyone).
- The invitation will include the agenda for the call and preparatory work for each participant in case that is needed.
- The meeting minutes will be shared via Google Drive (see platform description below).

- The follow up actions/next steps defined in each conference call will be listed in the meeting minutes to allow for a clear understanding of responsibilities and to better track the progress of the project.

5.2 Platform

Google Drive has been selected as the platform for document management and information sharing in ICARIA. It is an access free and user-friendly platform where all members of the consortium are able to access. The structure of the Google Drive shared folder has been structured according to the work organization of the project. Specific folders can be found for the following aspects:

- Official documentation (e.g. GA, CO, project proposal)
- Specific work package,
- Financial management
- Meeting minutes
- Relevant literature
- Contact information
- Reporting
- Planning

Internal communication between the members of the consortium will be preferentially done via email. No need for an additional platform for internal communication, such as a chat surface, has been found.

5.3 Contacts

The ICARIA contacts list and mailing list for each work package are available in Google Drive. They are continuously updated along the project. It includes a detailed description of the roles of each participant together with their contact information. The following table compiles the main contacts of the ICARIA project.

Table 4. ICARIA main contacts.

Role	Name	Partner	email
Project coordinator	Beniamino Russo	AQUA	beniamino.russo.ext@aquatec.es
Financial Issues	Alex de la Cruz / Nathaly Garcia	AQUA	alex.cruz@aquatec.es / nathaly.garcia.ext@cetaqua.com
WP1 leader	Mattia Leone	UNINA	mattia.leone@unina.it
WP2 leader	Barry Evans	UNEXE	B.Evans@exeter.ac.uk
WP3 leader	Rita Salgado Brito	LNEC	rsbrito@lnec.pt
WP4 leader	Denis Havlik / Marianne Buegelmayer-Blaschek	AIT	Denis.Havlik@ait.ac.at / Marianne.Buegelmayer-Blaschek@ait.ac.at
WP5 leader	David Pacheco	CET	david.pacheco.ext@cetaqua.com
WP6 leader	Beniamino Russo / Alex de la Cruz	AQUA	beniamino.russo.ext@aquatec.es / alex.cruz@aquatec.es
WP7 leader & Ethics advisor	María Luisa González	PAB	To be contacted via PC
CSF Barcelona Region	Beniamino Russo / Alex de la Cruz	AQUA	beniamino.russo.ext@aquatec.es / alex.cruz@aquatec.es
CSF Salzburg Region	Denis Havlik / Marianne Buegelmayer-Blaschek	AIT	Denis.Havlik@ait.ac.at / Marianne.Buegelmayer-Blaschek@ait.ac.at
CSF South Aegean Sea	Thanasis Sfetsos	NSCR "D"	ts@ipta.demokritos.gr
Project Officer	Marko Adamovich	EC - CINEA	To be contacted via PC

6 Rules for implementing Horizon Europe projects

The implementation of project ICARIA is meant to follow the rules defined for Horizon Europe projects. The GA is the document that sets out these rules, the rights and obligations and the terms and conditions applicable to the grant awarded to the ICARIA partners for the project implementation. The following sections highlight the main rules to be considered.

6.1 Reporting

The aim of the continuous reporting is to enable the EC to assess the adequate development of the project and its compliance with what has been defined in the GA, both in technical and financial aspects.

In this context, the 36 months lifespan of ICARIA has been organized in 2 different Reporting Periods (RP). For each RP the PC will submit a progress report to the PO in order to enable the granting authority to assess the progress of the project both in technical and financial terms.

- RP1: from beginning of month 1 (01/01/2023) to end of month 18 (31/06/2024)
- RP2: from beginning of month 19 (01/07/2024) to end of month 18 (31/12/2025)

Additionally, in order to keep a more accurate internal control of the project financial evolution and avoid major deviations, internal progress reports will be requested every 6 months. These will focus on the progress of the activities and on the financial reporting (expenses). The Internal Progress Reports will not be sent to the EC, but only to the PC who will assess them with respect to the project budget and schedule. According to that, the following table summarizes the reporting periods and deadlines:

Table 5. ICARIA reporting periods.

Reporting period and kind	Beginning	End	Reporting documents and evaluating body
1st Internal Progress Reports	M1 (01/01/23)	M6 (30/06/23)	Budget expenses sheet sent to PC
2nd Internal Progress Reports	M7 (01/07/23)	M12 (31/12/23)	Budget expenses sheet sent to PC
1st Reporting Period	M1 (01/01/23)	M18 (30/06/24)	Progress report submitted to the PO
3rd Internal Progress Reports	M19 (01/07/24)	M24 (31/12/24)	Budget expenses sheet sent to PC
4th Internal Progress Reports	M25	M30	Budget expenses sheet sent to PC

Reporting period and kind	Beginning	End	Reporting documents and evaluating body
	(01/01/25)	(30/06/25)	
2nd Reporting Period	M31 (01/07/25)	M36 (31/12/25)	Progress report submitted to the PO
Final report	M1 (01/01/23)	M36 (31/12/25)	Final report submitted to the PO

6.1.1 Procedure for the Reporting Periods

A periodic report needs to be compiled and submitted to the EC at the end of each reporting period (within 60 days following the end of the reporting period). It involves the presentation of the following documentation to the EC:

- A periodic technical report done by the PC (explanation of the work carried out; overview of the progress; publishable summary; answers to questionnaire)
- A periodic financial report done by all members (individual financial statement; explanation of the use of resources; periodic summary financial statement)

This is the specific procedure for the periodic report (all steps in 60 days):

1. All beneficiaries receive a notification and log on to the Participant Portal (day 0)
2. All beneficiaries share with PC all costs they have to claim and PC checks and reviews them (day 0 – 30)
3. All beneficiaries complete their own Financial Statement (see example in Figure 5) and their contribution to the Technical Part of the Periodic Report. Beneficiaries e-sign and submit their Financial Statements to the PC (day 31 – 35)
4. The PC approves the elements of the Periodic Report & submits to the EU Services (day 35-60)
5. The EU Services review the submitted Periodic Report and accept or reject it.
6. Interim Payment (90 days from reception of periodic reports)

Partners should refer to the guidelines on the Participant Portal to understand what exactly is expected from them (login to ECAS needed):

<https://webgate.ec.europa.eu/fpfis/wikis/display/ECResearchGMS/Periodic+Reporting>

6.1.2 Procedure for the Internal Progress Reports

An internal progress report needs to be compiled during the 30 days following the end of the internal reporting period. It involves the presentation of the following documentation to the PC:

- A periodic financial report (individual financial statement; explanation of the use of resources; periodic summary financial statement)

This is the specific procedure for the periodic report (all steps in 30 days):

1. All beneficiaries receive a notification of the need to prepare the documentation of the Internal Progress Reports (day 0)
2. All beneficiaries share with PC all costs they have to claim for that internal reporting period (day 0 – 10)
3. The PC evaluates the costs presented by the partners and, if needed, adresse potential deviations with the partners involved (day 10 – 30)
4. The internal reporting period is finished (day 30)

6.1.3 Final Report

At the end of ICARIA, the consortium is expected to submit a final report to the EC within 60 days after the official end of the project (December the 31st 2025). This report consists of the following documents:

- A final technical report:
 - Overview of the results and their exploitation and dissemination
 - The conclusions of the action
 - The socio-economic impact.
- A final financial report:
 - Final summary financial statement – created automatically by the electronic exchange system
 - A certificate on the financial statements if needed

6.2 Financial aspects¹

The 'maximum grant amount' is EUR 2,294,146.00 (two million two hundred and ninety four thousand one hundred and forty six EURO).

The funding rate for costs is 100% of the action's eligible costs according to Article 5 of the GA. In order to be eligible, costs and contributions must meet the eligibility conditions set out in Article 6 of the GA. Partners should refer to the Estimated Budget for the project in Annex 2 of the Grant Agreement, where there is a specific breakdown of costs by beneficiary and by category. The following list summarized all budget categories considered in ICARIA's budget.

¹ Do note that the rules stated in this section do not apply to the Associated Partner UNEXE

- A. Personnel costs
 - A.1 Employees, A.2 Natural persons under direct contract, A.3 Seconded persons
 - A.4 SME owners and natural person beneficiaries
- B. Subcontracting costs
- C. Purchase costs
 - C.1 Travel and subsistence
 - C.2 Equipment
 - C.3 Other goods, works and services
- D. Other cost categories
 - D.2 Internally invoiced goods and services
- E. Indirect costs

The following sections provide a description of the most relevant aspects to be considered regarding cost's eligibility.

6.2.1 General eligibility conditions

The general eligibility conditions are the following:

(a) for actual costs:

- (i) they must be actually incurred by the beneficiary
- (ii) they must be incurred in the period set out in Article 4 of the GA (with the exception of costs relating to the submission of the final periodic report, which may be incurred afterwards; see Article 21 of the GA)
- (iii) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2 of the GA.
- (iv) they must be incurred in connection with the action as described in Annex 1 of the GA and necessary for its implementation
- (v) they must be identifiable and verifiable, in particular recorded in the beneficiary's accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary's usual cost accounting practices
- (vi) they must comply with the applicable national law on taxes, labor and social security and
- (vii) they must be reasonable, justified and must comply with the principle of sound financial management, in particular regarding economy and efficiency

(b) for unit costs or contributions (if any):

- (i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2 of the GA

(ii) the units must:

- be actually used or produced by the beneficiary in the period set out in Article 4 of the GA (with the exception of units relating to the submission of the final periodic report, which may be used or produced afterwards; see Article 21 of the GA)
- be necessary for the implementation of the action and

(iii) the number of units must be identifiable and verifiable, in particular supported by records and documentation (see Article 20 of the GA)

(c) for flat-rate costs or contributions (if any):

(i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2 of the GA

(ii) the costs or contributions to which the flat-rate is applied must:

- be eligible
- relate to the period set out in Article 4 (with the exception of costs or contributions relating to the submission of the final periodic report, which may be incurred afterwards; see Article 21 of the GA)

(d) for lump sum costs or contributions (if any):

(i) they must be declared under one of the budget categories set out in Article 6.2 and Annex 2 of the GA

(ii) the work must be properly implemented by the beneficiary in accordance with Annex 1 of the GA

(iii) the deliverables/outputs must be achieved in the period set out in Article 4 of the GA (with the exception of deliverables/outputs relating to the submission of the final periodic report, which may be achieved afterwards; see Article 21 of the GA)

(e) for unit, flat-rate or lump sum costs or contributions according to usual cost accounting practices (if any):

(i) they must fulfill the general eligibility conditions for the type of cost concerned

(ii) the cost accounting practices must be applied in a consistent manner, based on objective criteria, regardless of the source of funding

(f) for financing not linked to costs (if any): the results must be achieved or the conditions must be fulfilled as described in Annex 1 of the GA

Section 6.2 of the Grant Agreement defines the specific eligibility conditions for each budget category as they are defined in the project budget.

6.2.2 Ineligible costs

The following costs or contributions are ineligible:

(a) costs or contributions that do not comply with the conditions set out in Article 6.1 and 6.2 of the GA

(i) costs related to return on capital and dividends paid by a beneficiary

(ii) debt and debt service charges

(iii) provisions for future losses or debts

(iv) interest owed

(v) currency exchange losses

(vi) bank costs charged by the beneficiary's bank for transfers from the granting authority

(vii) excessive or reckless expenditure

(viii) deductible or refundable VAT (including VAT paid by public bodies acting as public authority)

(ix) costs incurred or contributions for activities implemented during grant agreement suspension (see Article 31 of the GA)

(b) costs or contributions declared under other EU grants (or grants awarded by an EU Member State, non-EU country or other body implementing the EU budget), except for the following cases:

(ii) if the action grant is combined with an operating grant running during the same period and the beneficiary can demonstrate that the operating grant does not cover any (direct or indirect) costs of the action grant

(c) costs or contributions for staff of a national (or regional/local) administration, for activities that are part of the administration's normal activities (i.e. not undertaken only because of the grant)

(d) costs or contributions (especially travel and subsistence) for staff or representatives of EU institutions, bodies or agencies

(e) other :

(ii) costs or contributions declared specifically ineligible in the call conditions.

6.3 Review meetings and audits

According to the GA DoA, two Review Meetings are scheduled for months 19 (July 2024) and 36 (December 2025).

According to Section 4.2 of the CA, all members of the ICARIA Consortium agree to collaborate in audit processes ordered by the granting authorities according to the regulation defined in Article 25 of the GA.

7 Quality assurance

This section presents the quality assurance procedure that will be applied in ICARIA in order to ensure an adequate degree of quality in all deliverables and results presented.

7.1 Procedure for elaboration and submission of deliverables

The following points indicate the main guidelines to follow during the elaboration of deliverables and their delivery to the EC.

- The partners responsible for each deliverable and its contributors are defined in the DoA of the GA (reflected in Table 6).
- The deliverable responsible (DR) should agree upon a Table of Contents at least one month before the submission deadline and share it with the PC to assess its adequacy with the corresponding objectives.
- The DR and contributors should agree upon the tasks and contribution of each member and define a calendar for the deliverable development and review processes.
- The DR and the PC will define a review plan and calendar for the deliverable according to Sections 7.2 and 7.3.
- The DR will coordinate and supervise the contributions done by all contributors.
- The DR will share the final first draft of the deliverable with all contributors before its submission to the review process for agreement and internal review. The DR will incorporate any change that may arise from this process.
- The DR will integrate the remarks and suggestions provided by the reviewers. If needed, contributors will collaborate with the DR on incorporating changes to the sections where they have participated.
- The DR will distribute the revised deliverable to all contributors for their final agreement at least 1 week before the deadline.
- The DR must send to the PC the final version of the deliverable in a PDF format for submission to the EC at least 24 hours before the deadline.

7.2 Deliverables review system

The review system of ICARIA's deliverables have been structured in a two step process of revision before any document is submitted to the EC. The following points detail each step and Figure 3 illustrates this process.

1. A first complete draft of the deliverable is developed by the DR together with other contributors

2. A second complete draft is developed by the DR where the corrections and suggestions made by the reviewers are incorporated. Two different reviewers are incorporated in this process:
 - a. Internal reviewer: this person has been not directly involved in the composition of the deliverable but has supervised the work developed (e.g. the leader of the WP corresponding to this deliverable).
 - b. External review: this person has not been involved in any step of the development of the deliverable (e.g. a member of the PAB)
3. The PC does a final revision the second draft resulting from the reviewer’s feedback
4. A final version of the deliverables is generated for its submission to the EC



Figure 3. Structure of ICARIA’s deliverables review system.

7.3 List of deliverables, responsibilities and reviewers

The following table summarizes the deliverables that will be developed throughout the project, the entity with main responsibility to develop it, the internal reviewer and the external reviewer(s) being defined to ensure such quality. Note that the organization reflected in the table might be modified along the project.

According to the quality assurance procedures of ICARIA, in most cases the external reviewer of the deliverables will be a person external to the consortium. However, due to the extensive expertise of the members within the ICARIA consortium, in some cases an internal person of the project, who has not been previously involved in any step of the development of the deliverable, may be appointed as external reviewer. This will ensure that deliverables are reviewed by professionals with a consolidated expertise in the field of the deliverable.

Table 6. ICARIA reporting periods.

Del. N°	Title	Due Month	WP	DR Entity	Internal Reviewer	External Reviewer
D1.1	ICARIA holistic modelling framework	9	1	UNINA	B. Russo	P. Katsikopoulos
D1.2	Climate projections and hazard data	12	1	FIC	T. Sfetsos	Maria del Mar Pla
D1.3	Impact modeling data requirements and methods to treat data gap filling and data uncertainty	18	1	CERTH	J.L. Dominguez	Rafael Gimenez
D1.4	WP1 lab testing results	18	1	CERTH	B. Russo	P. Katsikopoulos
D2.1	Holistic modeling framework for multi hazards and related uncertainty analysis	12	2	AQUA	R. Monjo	Rafael Gimenez
D2.2	Multi-hazard scenario building methods	12	2	UNEXE	G. Zuccaro	F. Guzzetti
D2.3	ICARIA multi-hazards modeling tools and application guidelines – v.1	18	2	UNEXE	B. Russo	C. Balseiro
D2.4	ICARIA multi-hazards modeling tools and application guidelines – v.2	33	2	UNEXE	B. Russo	C. Balseiro
D2.5	WP2 lab testing results	18	2	UNEXE	B. Russo	P. Katsikopoulos
D3.1	Tangible impacts methods	12	3	CET	M. Leone	F. Guzzetti
D3.2	Holistic resilience methods	12	3	LNEC	M. Martinez	P. Katsikopoulos
D3.3	Portfolio of adaptation solutions	18	3	CET	A. Cardoso	R. Powell
D3.4	Decision support system – v.1	18	3	DRAX	R. Salgado	S. Ulrich
D3.5	Decision support system – v.2	33	3	DRAX	R. Salgado	S. Ulrich
D3.6	WP3 testing results	18	3	AQUA	B. Russo	P. Katsikopoulos
D4.1	Trial design	18	4	AIT	B. Russo	F. Guzzetti
D4.2	Trial assessments	30	4	AQUA	B. Russo	F. Guzzetti
D4.3	Replicability recommendations	33	4	NCSR	A. Villanueva	R. Powell
D4.4	Sustainability and exploitation plans - Design and initial expectations	21	4	DRAX	D. Havlik	S. Ulrich

Del. N°	Title	Due Month	WP	DR Entity	Internal Reviewer	External Reviewer
D4.5	Sustainability and exploitation plan - Final version	33	4	DRAX	D. Havlik	S. Ulrich
D5.1	Dissemination and communication Plan - Initial version	6	5	CET	I. Gialampoukidis	C. Balseiro
D5.2	Dissemination and communication Plan - Final version	34	5	CET	I. Gialampoukidis	C. Balseiro
D5.3	Dissemination materials	34	5	CET	A. de la Cruz	R. Powell
D5.4	Stakeholders engagement plan	6	5	UNINA	Russo B.	R. Powell
D5.5	Stakeholders engagement events reports	34	5	UNINA	A. de la Cruz	R. Powell
D6.1	Project Management Manual	2	6	AQUA	B. Russo	E. Vargiu
D6.2	Implementation plan and Risk contingency Plan – v.1	2	6	AQUA	B. Russo	E. Vargiu
D6.3	Implementation plan and Risk contingency Plan – v.2	6	6	CET	B. Russo	E. Vargiu
D6.4	Implementation plan and Risk contingency Plan – v.3	18	6	CET	B. Russo	E. Vargiu
D6.5	Implementation plan and Risk contingency Plan – v.4	30	6	CET	B. Russo	E. Vargiu
D6.6	Innovation Management Plan	6	6	AQUA	J.L. Dominguez	E. Vargiu
D6.7	Innovation Management Report	34	6	AQUA	J.L. Dominguez	E. Vargiu
D6.8	Data Management Plan – Initial version	6	6	DRAX	D. Havlik	M. L. Gonzalez
D6.9	Data Management Plan – Final version	34	6	DRAX	D. Havlik	M. L. Gonzalez
D7.1	OEI - Requirement No. 1	1	7	AQUA	J.L. Dominguez	M. L. Gonzalez
D7.2	OEI - Requirement No. 2	18	7	AQUA	J.L. Dominguez	M. L. Gonzalez
D7.3	OEI - Requirement No. 3	36	7	AQUA	J.L. Dominguez	M. L. Gonzalez

7.4 Key performance indicators and milestones

As an additional system to ensure the fulfillment of the quality objectives of ICARIA along the project development, a total of 22 time-bound measurable KPIs have been defined. Their fulfillment will be clear evidence that project objectives are being reached in all its dimensions. The full list of KPIs and their specific definition can be found in the following documents:

- Deliverable 6.2 Implementation Plan and Contingency Plan v.1
- ICARIA Grant Agreement - Annex A Part B - Table 1 (pg 108)



CETAQUA
WATER TECHNOLOGY CENTRE

 **AQUATEC**

 **Aigües de Barcelona**

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

 **AMB** Àrea Metropolitana de Barcelona

 **iti** CENTRE FOR RESEARCH & TECHNOLOGY - IITELAS
Information Technologies Institute

 **DEMOKRITOS**

 **DRAXIS**
ENVIRONMENTAL TECHNOLOGIES

 **fic**
Centre for Future Infrastructure

IREC Integrating Energy for a Sustainable Future

 **INEC** LABORATÓRIO NACIONAL DE ENGENHARIA CIVIL

 **Oceania Islands**
Region of South Aegean

 **University of Exeter**

 **CENTRO STUDI PLINIUS**

Verbund



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101093806. The publication reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained therein.