



SMARTLAGOON

DELIVERABLE 7.1

Public Participation Plan



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Innovative modelling approaches for predicting Socio-environmental evolution in highly anthropized coastal LAGOONS

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Deliverable 7.1 – Public Participation Plan

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Abstract

SMARTLAGOON has a strong social facet, as the core of the project itself is related to citizen science. Many of the project tasks need the feedback and participation of the public. During the first 6 months, SMARTLAGOON team has carefully considered the aspects related to stakeholders' engagement and has set an approach encompassing a systematic identification and characterization of stakeholders, along with the planning and implementation of actions needed to interact with stakeholders. Some actions have already been pursued in this respect. Nevertheless, in the upcoming months, many other actions are still outstanding. This document aims to delineate all those actions from Month 6 onwards.

One important first step was the stakeholders' definition and mapping. A total number of 10 different stakeholder groups have been identified. The characteristics of each one in terms of degree of involvement, type of actor, relation to water management and water quality issues, legal group and engagement capacity was studied.

To prepare the public participation plan as realistic and useful as possible, we have designed the participatory process checking all possible stakeholders' interactions of all Work Packages (WPs) and tasks. Through an integration matrix, we have pooled the different needs together. This has allowed us to create a non-redundant, ordered list of participatory actions.

As the plan refers to future activities, there are some uncertainties we are aware of. Those are defined in a specific section. Additionally, relations to Communication, Dissemination and Exploitation Plan are also studied.

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1. Introduction

1.1. Purpose of deliverable

The purpose of this deliverable is to present the Public Participation Plan (PPP) that details which stakeholder groups should be addressed, how and when they should be engaged in the SMARTLAGOON activities, as well as what the expected outcome of these activities will be. In this plan, we define which citizen science activities will be employed to capture the attention towards the environmental issues of the Mar Menor.

1.2. Summary of the project

Coastal lagoons are ecosystems with great environmental and socioeconomic value. However, these natural systems are especially vulnerable to climatic and anthropogenic pressures, such as intensive agriculture and extensive urbanization because of the tourism development. Despite the vulnerability and complexity of these ecosystems, there has been limited development of novel techniques which can provide real-time monitoring, analysis and management of these critical resources. Beyond being useful for policy-making procedures at multiple levels of granularity, these tools can increase local and citizen awareness of environmental impacts.

SMARTLAGOON project intends to develop a digital twin to build a systematic understanding of the socio-environmental inter-relationships affecting coastal lagoons and their ecosystem. It will digitally replicate the policy-making processes of these complex socio-environmental systems by combining, analyzing and interpreting data from different sources; including efficient in-situ IoT infrastructure with edge computing capabilities that reduce the overall system's carbon footprint, remote sensing technologies, social media sensing, open-data repositories, and data from human behavior, economics and the social sciences, by making recourse to advance AI, NLP, physically-based and citizen science models.

As a case study, SMARTLAGOON focuses on the Europe's largest salt water coastal lagoon, i.e., Mar Menor (Murcia, Spain), which has suffered serious environmental degradation due to several socio/environmental reasons. The project develops its tools by actively engaging with citizens, stakeholders and policymakers of this area and addressing their needs and requirements; the project does so following an agile methodology to ensure practical and useful results for this scenario in the first instance and extend to other coastal lagoons in the second instance.

1.3. The Aarhus Convention and the Public Participation Directive

The public inclusion in projects, policies, plans and programs of any kind has become a must. As SMARTLAGOON is constructed upon a large remarkable number of stakeholders, citizens, and policymakers, this requires access to decision-making procedures, i.e., public participation.

Since the acceptance of the Aarhus Convention on 25 June 1998 (in the Danish city of the same name), the public participation has spread in many different processes. The convention has a clear objective: to contribute to *“the right of every person of present and future to live in an environment adequate to his or her health and well-being [...]”*. To accomplish that purpose, the Aarhus Convention stated out the next rights in relation with public participation of individuals and associations:

- **Access to environmental information:** The right to receive environmental information that is held by public authorities.
- **Public participation in environmental decision-making:** The right to participate in environmental decision-making. The affected public and organizations should be able to comment and make proposals about projects, plans and programs that could affect the environment and these comments should be considered by decision-makers. Also, the information in relation with the final decisions and the reasons for it should be delivered.
- **Access to justice:** The right to start legal actions against public decisions that have been made without respecting the two aforementioned rights or environmental laws in general.

To comply with the Aarhus Convention, the European Union developed the DIRECTIVE 2003/35/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 May 2003 (the so known **Public Participation Directive**). The effects of the Aarhus Convention and its transposition to the EU regulation in the promoting of good governance are clear, since its entry into force, the convention has increased significantly environmental and participatory laws, linking humans and environmental rights. Furthermore, the implementation of a convention with such statements is leading to the development of an open administrative culture that contributes to governmental accountability, transparency, and efficiency. One of the most remarkable effects of the Aarhus Convention is the **engagement of non-governmental organizations and individuals that are being involved in the decision-making process**.

According to the *Article 10* of the Convention, the parties should implement the agreement in a national level. That led to the development of multitude of new methodologies to comply with the new legal requirements and modifications and adaptations of national legislations.

In the context of H2020 projects, the principles of the Aarhus convention have penetrated in the calls. First of all, by making the open access to the publications derived from projects compulsory

and in a more indirect way, asking for the promotion of public engagement in the research projects of the UE. Regarding H2020, the concept of public engagement could be defined as “*participatory multi-actor dialogues and exchanges to foster mutual understanding, co-create research and innovation outcomes, and provide input to policy agendas*”. This approach is intended to facilitate a two-way process in which researchers and the ongoing project get inputs from the participatory processes.

The public participation can make a huge contribution to the overall quality and usefulness of the project.

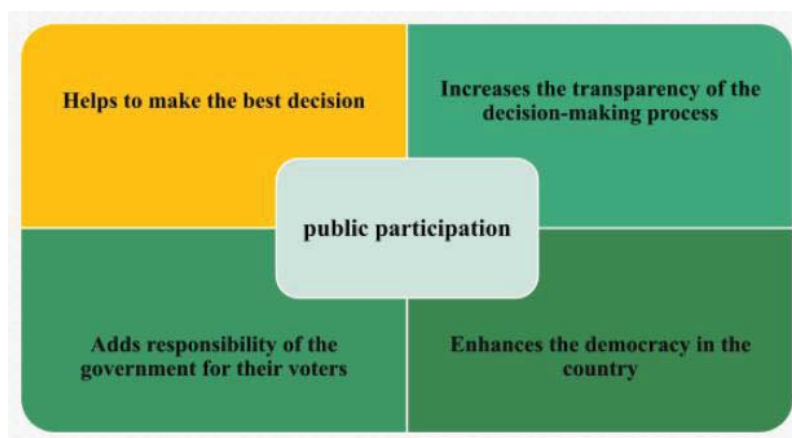


Fig. 1 Importance of public participation. Source: CLEEN.

According to the EU Commission, the most relevant aspects of public participation are the following:

- Engage society more broadly in its research and innovation activities.
- Increase access to scientific results.
- Ensure gender equality, in both the research process and research content.
- Take into account the ethical dimension.
- Promote formal and informal science education.

Despite the importance given to public participation **in the EU framework, there is no official methodology to address it**. The main aspects of public participation, that is, *Who* and *How* should be considered in the process are delegated to the Member States, that should expand it into their legislation and internal protocols. In the case of Spain, it depends in turn on the Regional Governments.

The existing evidence shows, there is no clear pathway to develop a public participation program in the European context despite its compulsory nature. The lack of a common methodology in the European Union in relation with public engagement hinders the creation of a common framework in public participations. On the other hand, it leaves an open way to explore, develop and put into practice the great number of methodologies and levels of public participation, making it easier to

adapt the processes to local realities and needs of each process. This is an opportunity to develop a Public Participation Program adapted to the Mar Menor social environment that could address the peculiarities and the social elements concurring in their basin.

1.4. EU experiences and methodologies in Public Participation

To create a baseline and identify the state of the art of public participation in the context of the EU, a bibliographic review has been carried out. In this analysis some of the main methodologies as well as some cases studies have been scrutinized to map and incorporate the lessons learned from other public participation processes.

In the context of the European Union legislation in environmental issues, the public participation and public engagement have had a particularly relevant impact in the subject of water management, mainly through the implementation of the Water Framework Directive (WFD).

If one is talking about scientific research and innovation, public participation has been developed in very different ways, being notable the Public engagement and Responsible research and Innovation – i.e. **PRI approach in H2020 projects**. PRI is an inclusive approach meant to ensure that societal actors work together during the whole research and innovation process. In practice PRI consists of designing and implementing the following statements:

- Engage society more broadly in these research and innovation activities.
- Increase access to scientific results.
- Ensure gender equality, in both the research process and research content.
- Consider the ethical dimension.
- Promote formal and informal science education.

PRI implies that researchers, citizens, policy makers, businesses, and other stakeholder groups. work together during the whole research and innovation process to better align the process and its outcomes. So, data and publications derived from funding should be open to everyone (communication is a basic way of public participation) and there are also an increasingly number of projects that include in some way public participation processes in their workflows.

In the case of SMARTLAGOON project, working in cooperation with stakeholders of different economic and popular sectors is a logical approach as the Mar Menor Lagoon is a multifunctional territory. The environmental state of the lagoon mainly depends on the interactions between society and nature, it receives positive and negative externalities from those activities, is the main breadwinner for local tourism, acts like a flag space for local environmentalist organizations and has a great ecological importance for regional and national scientists.

Also, as the project revolves around water and the impacts of its management, the study of the experiences of public participation in the WFD context are an interesting starting point. The

European Commission wrote down a report of how the public participation has been developed in the context of WFD. In this text, the public participation is defined as “*allowing people to influence the outcome of plans and working processes. It is a means of improving decision-making, to create awareness of environmental issues and to help increase acceptance and commitment towards intended plans*”. This definition is consistent with the Aarhus convention and the Public Participation Directive.

Traditionally, public participation has been divided in three levels. The levels 1 and 2 shall be ensured, while the third level of public participation shall be encouraged and promoted:

1. Information supply: the flow of information goes from organizer to public.
2. Consultation: the flow of information goes from public to organizer.
3. Active Involvement: the flow of environmental goes in both senses.

A key question about public participation is: **who should be part of the process?** The answer given by the EU Commission is clear:

- For the levels of participation *information supply* and *consultation* the public in general.
- For the *active involvement* level of participation, the stakeholders (understood as someone affected by the issue or with some influence on it).

Regarding stakeholders, EU Commission (as for the Guidance Document number 8, Public Participation in relation to the Water Framework Directive) proposes a methodology of stakeholder analysis that could fit in the current project. Once the **stakeholders have been identified and properly classified**, a **deep planification of the outcomes desired for each group and the methodologies for getting it should be developed**. This is a crucial step for an effective public participation program.

Referring the methods of public participation, the experience of study cases shows that **desirable outputs from the public participation depend mainly on the planification, the classification of the stakeholders and choosing the method of public participation** according to the results of that previous analysis. Still, as mentioned before, there is not a unique methodology proposed for the implementation and selection of methods of public participation at the WFD context or H2020 projects.

Some of the methods commonly employed for public participation in the EU and recommended by the European Commission are:

- **Communication** is a requisite for a successful participation process. Stakeholders should be informed about the process, what is expected from them, which use will have their contribution and how is going the project during the different phases. That could be done in several ways (particular, adapted to each group of stakeholders, open, etc.).

- **Interviews** are a useful tool to gather direct knowledge of the stakeholders' concerns. The method allows project managers to map opinions and gather some contacts that could be passed unnoticed.
- **Workshops** could be very productive if they are well planned and managed. Nevertheless, the method has a greater associated cost and is more difficult to carry out than other approaches.
- **Creative sessions** have their greater potential in the search of solutions, in the phase in which design of the project is taking place. Use stakeholders as co-thinkers is a good way to generate new ideas.
- **Citizens' Jury** is a method employed to strengthen the democratic process including in the process a representation of the citizens affected by a project.
- **Interactive Geographic Information Systems** employing web GIS allows managers of the project to relate opinions and public reactions to locations.
- **Public hearings** provide a forum of answering all questions of the public invited to the session. For an optimal result of the method, the assistants should have been formed or informed properly about the project and have all the relevant information.
- **Monitoring and participatory evaluations** is a good tool for getting inputs from those more affected or related with the project. The evaluation is commonly done over the project itself and over its results.
- Other innovative methods related with the new technologies.

In the context of EU project, some specific cases are referred. It is worth to mention the **HarmoniCOP project**¹. It looks for practical solutions to enhance active involvement of all interested parties in the management of water resources. The project sets up a list of general principles that every public participation process should accomplish, as follows:

- **Openness:** implies that the initiator adopts an open attitude and let the stakeholders involve themselves in the process to influence in some way the agenda and the decisions. The main question is, who should be involved?
 - Stakeholders that possess resources that may improve the quality of the decision (local information, expertise, creativity...).
 - Stakeholders that possess resources required for the implementation of the solution (local administration, money authorities, physical resources...).
 - Stakeholders that can block decisions or the implementation of the solutions (political pressure, stakeholders that could take legal actions...).
 - Stakeholders affected by the project but that do not have political or economic power.
- **Protection of core values:** stakeholders should not feel that their principles or lifestyle could be harmed by the process.
- **Speed:** Deadlines and an appropriate rhythm of the public participation activities is a requirement to make people progress through the process.

¹ <https://www.harmonicop.uni-osnabrueck.de/> [Accessed May 2021]

- **Substance:** Finally, the stakeholders involved in the public participation should receive realistic expectations about the solutions or agreements. For that end, involving technicians and scientist could be positive.

On EC behalf, Ruiz-Villaverde & García-Rubio (2016) led a wide study gathering methodologies of public participation applied along the EU in relation with water. After observing the variety of methodologies and results applied in the public engagement, the authors came up with the conclusion that there is not any clear or standardized methodology for the public participation in the studied context, and the authors, as it was seen in the document of European Commission, emphasize the necessity of communication with the stakeholders, the proper identification of them and the design of the activities as the main factors to success in the public participation.

The authors observed a predominance of discussions as the main methodology to address the public participation process. Ruiz-Villaverde & García-Rubio (2016) studied these experiences of public participation and reported them as follows:

Study	Aim and background	Relevant lessons and contributions	Type of action
Jonsson (2005)	Investigations of PP in water management by forming <i>catchment committees</i> .	Participation is more likely to appear if local environment is the focus.	Discussion
Page and Bakker (2005)	Review of the evolution of PP in water management in England.	Participants of the PP process demand for transformation of institutions and improve mechanisms of participations.	Consultation
Messner et al. (2006)	Applies and integrated participatory multicriteria decision support approach called IMA.	IMA improves decision processes by broadening knowledge through stakeholder participation, processing of complex data and through consideration of certain uncertainties.	Discussion
Andersson et al (2008)	Participatory methodology based on dialogues between stakeholders and experts working together.	Use the action of local potential for action to an environmental problem. Could be time demanding and depend on local willingness to participate.	Discussion
Garmendia and Stagl (2010)	Study of the <i>Social learning</i> during pp in energy and environmental issues.	<i>Social learning</i> occurs un participatory workshops, but it depends on the design, time given and type or participant.	Discussion, Co-Designing

Table 1. Study cases of methodologies and their outcomes in public participation processes. Source: Ruiz-Villaverde & García-Rubio (2016).

Furthermore, the European Institute for Public Participation **remarks the lack of standardization in the selection of the methodology** and evaluation of the process or participation for the Member States as one of the main problems to maximize the benefits of public participation.

To give a response to the problem raised of not having a standardized method to public participation in the European context, some projects have been developed. An interesting one for this case is the **Engage2020**². The project was co-founded by the European Union and offers a decision support tool that is intended to enable researchers, policymakers and others wanting to include public participation in the process of research and projects definition to select the methods that best suited with the nature of the activity.

As conclusion, **there is not a centralized or predominant way or affording the public participation process along the EU**, but there are some **general principles, good practices, and methodologies** (mainly for identifying and classifying stakeholders) that can be considered like a standard. The main characteristic of the process of public participation in the EU H2020 projects seems to be the variety in the methods employed. Depending on the scale, the nature of the project, the number of stakeholders, the budget, etc. different approaches are applied. All the guidelines that have been checked point out the importance of proper identification and planification of what is expected of each stakeholder, the schedule, and the importance of communication. The absence of guidance or legal constraints to the methodologies to be used in public participation demands a more detailed and accurate planification of the process but leaves an open door to act in a more imaginative and creative way within this H2020 project.

² <https://cordis.europa.eu/project/id/612281/es> [Accessed May 2020]

2. Objectives of the PPP

The **general objective** of the PPP is to put forward a realistic and practical planification of participatory actions throughout the project duration.

The **specific objectives** of the PPP are the following:

- To define and map relevant stakeholder groups within the Mar Menor basin.
- To engage those stakeholders relevant in the different activities of the project.
- To organize the participatory actions along the project.
- To allow stakeholders to share with project team their priorities and concerns.
- To allow stakeholders to comment on proposed tools of SMARTLAGOON.
- To use knowledge and experience from stakeholders to improve both the tools developed as well as the final results of the project.

3. Actions developed during M01 - M06

4.1. Stakeholders' definition

Within a participatory process it is of special and unavoidable relevance to consider who will be participating. To get an overview of all the relevant stakeholders (or actors) in the field of interest, a so called “stakeholder definition” must be performed. This analysis reduces the risk of forgetting an important actor and give an idea of its relative importance within the group of stakeholders.

The stakeholders' definition agrees with the following criteria:

- Degree of involvement:
 - Co-operating/co-working: the stakeholder that will actually participate in and contribute actively to the process (i.e., active involvement). **O**
 - Co-thinking: the stakeholder of which you want input with respect to content, it is a source of knowledge like experts (i.e., consultation). **T**
 - Co-knowing: the stakeholder which does not play an active role in the process but should be informed of its progress (i.e., information supply). **K**
- Type of actor:
 - Decision maker: stakeholders which decide about the project. **D**
 - User: stakeholders which use the result or are affected by it. **U**
 - Implementer/executive: the stakeholders that must implement the results or new policy. **I**
 - Expert/supplier: stakeholders which put information, expertise or means at the disposal of the project. **E**
- Relation to water management / water quality issues:
 - Strongly related. **S**
 - Related (Medium). **M**
 - Weakly related. **W**
- Legal group:
 - Public Administration. Local. **PAL**
 - Public Administration. Regional. **PAR**
 - Public Administration. National. **PAN**
 - Private. Association. **PrA**
 - Private. Professional groups. **PrP**
 - Private. Citizenship. **PrC**
- Engagement capacity:
 - High. **H**
 - Medium. **M**
 - Low. **L**

The abbreviation letter in blue in used in the following Section to characterize each stakeholder.

4.2. Stakeholders' mapping

In the following table we present the result of the characterization of the different stakeholders:

Name	Sector	Degree of involvement	Type of actor	Relation to WM/WQ issues	Legal group	Engagement capacity
ASAJA-MURCIA	Agriculture	K	U	S	PrA	L
COAG- IR MURCIA (COORDINADORA DE ORGANIZACIONES DE AGRICULTORES Y GANADEROS - INICIATIVA RURAL, REGIÓN DE MURCIA)	Agriculture	K	U	S	PrA	L
UPA-MURCIA (UNIÓN DE PEQUEÑOS AGRICULTORES Y GANADEROS DE MURCIA)	Agriculture	K	U	S	PrA	L
FEDERACIÓN DE COOPERATIVAS AGRARIAS DE MURCIA (FECOAM)	Agriculture	K	U	S	PrA	L
APOEXPA. ASOCIACION DE PRODUCTORES EXPORTADORES DE FRUTAS Y OTROS PRODUCTOS AGRARIOS	Agriculture	K	U	S	PrA	L
PROEXPORT. ASOCIACIÓN DE PRODUCTORES-EXPORTADORES DE FRUTAS Y HORTALIZAS DE LA REGIÓN DE MURCIA	Agriculture	K	U	S	PrA	L
CEPESCA (CONFEDERACIÓN ESPAÑOLA DE PESCA)	Fishing	K	U	M	PrA	L
COFRADÍA DE PESCADORES DE SAN PEDRO DEL PINATAR	Fishing	O	U	M	PrP	M
FEDERACIÓN REGIONAL DE COFRADÍAS DE PESCADORES DE MURCIA	Fishing	K	U	M	PrA	L
PACTO POR EL MAR MENOR	Environmentalist	O	U	S	PrC	H
FUNDACIÓN INGENIO	Agriculture	O	U	S	PrP	H
CONFEDERACIÓN REGIONAL DE ORGANIZACIONES EMPRESARIALES DE MURCIA (CROEM)	Tourism	O	U	W	PrA	H
ASOCIACIÓN DE PROMOTORES INMOBILIARIOS DE LA REGIÓN DE MURCIA	Tourism	K	U	W	PrA	L
ASOCIACIÓN DE EMPRESAS DEL VALLE DE ESCOMBREAS (AEVE)	Tourism	K	U	W	PrA	L
FEDERACIÓN DE PESCA DE LA REGIÓN DE MURCIA	Fishing	K	U	M	PrA	L
FEDERACIÓN REGIONAL DE EMPRESARIOS DE LA CONSTRUCCIÓN DE MURCIA (FRECOM)	Tourism	K	U	W	PrA	L
ASOCIACIÓN DE CONSUMIDORES Y USUARIOS - CONSUMUR	Tourism	K	U	W	PrA	L
FEDERACION DE ASOCIACIONES DE VECINOS DE LA REGION DE MURCIA	Tourism	K	U	W	PrA	L
FEDERACIÓN DE ASOCIACIONES DE VECINOS, CONSUMIDORES Y USUARIOS DE CARTAGENA Y COMARCA "FERNANDO GARRIDO" (FAVCAC)	Tourism	O	U	W	PrA	M
ASOCIACIÓN INICIATIVA CIUDADANA Y PROFESIONAL PARA LA DEFENSA JURÍDICA DEL LITORAL/ASOCIACIÓN DE NATURALISTAS DEL SURESTE (ANSE)	Environmentalist	T	U	M	PrA	M
ACPES (ASOCIACIÓN CONSERVACIÓN PISCÍCOLA Y ECOSISTEMAS ACUÁTICOS DEL SUR) MURCIA	Environmentalist	K	U	M	PrA	L
FEDERACIÓN DE ACUICULTORES DE LA REGIÓN DE MURCIA (FARM)	Environmentalist	K	U	M	PrA	L
ASOCIACIÓN AMIGOS DEL MAR MENOR	Environmentalist	T	U	S	PrC	M
ASOCIACIÓN SOS MAR MENOR	Environmentalist	O	U	S	PrC	H
ASOCIACIÓN EN DEFENSA DEL MAR MENOR (EDMM)	Environmentalist	T	U	S	PrC	M
ASOCIACIÓN POR UN MAR VIVO	Environmentalist	T	U	S	PrC	M
ASOCIACIÓN HIPPOCAMPUS	Environmentalist	O	U	S	PrC	M
HOSTEMUR (FEDERACION REGIONAL DE EMPRESARIOS DE HOSTELERIA Y TURISMO)	Tourism	O	U	W	PrA	M
HOSTETUR (ASOCIACIÓN DE HOTELES Y ALOJAMIENTOS DE LA COSTA CÁLIDA)	Tourism	K	U	W	PrA	M

Name	Sector	Degree of involvement	Type of actor	Relation to WM/WQ issues	Legal group	Engagement capacity
ASOCIACIÓN MURCIANA DE CAMPINGS	Tourism	K	U	W	PrA	L
COSTA CÁLIDA CARES	Tourism	K	U	W	PrA	L
ASOCIACIÓN DE TURISMO ACTIVO DE LA REGIÓN DE MURCIA	Tourism	K	U	W	PrA	M
ASOCIACIÓN AGENCIAS DE VIAJE REGIÓN DE MURCIA	Tourism	K	U	W	PrA	M
MESA DEL TURISMO RESIDENCIAL DE LA REGIÓN DE MURCIA (ASOCIACIÓN PROMOTORES INMOBILIARIOS DE LA REGIÓN DE MURCIA)	Tourism	K	U	W	PrA	L
AGRUPACIÓN DE HOTELES Y ALOJAMIENTOS TURÍSTICOS DE CARTAGENA	Tourism	K	U	W	PrA	L
HOSTECAR ASOCIACIÓN DE EMPRESARIOS DE LA HOSTELERÍA Y ALOJAMIENTOS TURÍSTICOS DE CARTAGENA Y COMARCA	Tourism	K	U	W	PrA	L
WWF ESPAÑA	Environmentalist	K	U	M	PrC	M
ECOLOGISTAS EN ACCIÓN REGIÓN MURCIANA	Environmentalist	K	U	M	PrC	M
ASOCIACIÓN PARA LA CONSERVACIÓN DE LA HUERTA Y EL PATRIMONIO DE MURCIA(HUERMUR)	Environmentalist	K	U	M	PrA	M
GREENPEACE MURCIA	Environmentalist	K	U	M	PrC	M
SEO/BIRDLIFE (SOCIEDAD ESPAÑOLA DE ORNITOLÓGICA)	Environmentalist	K	U	M	PrC	M
AMIGOS DE LA TIERRA	Environmentalist	K	U	M	PrC	M
DIRECCIÓN GENERAL DE DESARROLLO SOSTENIBLE DEL MEDIO RURAL DEL MINISTERIO DE MEDIO AMBIENTE Y MEDIO RURAL Y MARINO	Spanish Government	K	D	S	PAN	M
SUBDIRECCIÓN GENERAL DE REGADÍOS Y ECONOMÍA DEL AGUA DEL MINISTERIO DE AGRICULTURA, PESCA Y ALIMENTACIÓN	Spanish Government	K	D	S	PAN	M
DEMARCACIÓN DE COSTAS EN MURCIA. DIRECCION GENERAL DE COSTAS, MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO	Spanish Government	O	D	S	PAN	M
SUBDIRECCIÓN GENERAL DE BIODIVERSIDAD DE LA DIRECCIÓN GENERAL DE MEDIO NATURAL DIRECCIÓN GENERAL DE BIODIVERSIDAD Y CALIDAD AMBIENTAL	Spanish Government	K	D	S	PAN	M
DELEGACIÓN DEL GOBIERNO DE MURCIA. MINISTERIO DE POLÍTICA TERRITORIAL Y FUNCIÓN PÚBLICA	Spanish Government	K	D	W	PAN	L
AUTORIDAD PORTUARIA DE CARTAGENA. MINISTERIO DE FOMENTO	Spanish Government	K	D	M	PAN	M
DIRECCIÓN GENERAL DE PROTECCIÓN CIVIL Y EMERGENCIAS. MINISTERIO DEL INTERIOR.	Spanish Government	T	D	M	PAN	H
CAPITANÍA MARÍTIMA DE CARTAGENA. DIRECCION GENERAL DE LA MARINA MERCANTE, MINISTERIO DE TRANSPORTE,MOVILIDAD Y AGENDA URBANA	Spanish Government	O	D	S	PAN	M
MANCOMUNIDAD DE LOS CANALES DEL TAIBILLA MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO	Spanish Government	K	D	S	PAN	M
CONFEDERACIÓN HIDROGRÁFICA DEL SEGURA	Spanish Government	O	D	S	PAN	H
AYUNTAMIENTO DE ALCÁZARES (LOS)	Municipality	O	I	M	PAL	H
AYUNTAMIENTO DE CARTAGENA	Municipality	O	I	M	PAL	H
AYUNTAMIENTO DE FUENTE ÁLAMO	Municipality	O	I	M	PAL	H
AYUNTAMIENTO DE SAN JAVIER	Municipality	O	I	M	PAL	H
AYUNTAMIENTO DE SAN PEDRO DEL PINATAR	Municipality	O	I	M	PAL	H
AYUNTAMIENTO DE TORRE-PACHECO	Municipality	O	I	M	PAL	H
AYUNTAMIENTO DE LA UNIÓN	Municipality	O	I	M	PAL	H
FEDERACIÓN DE MUNICIPIOS DE LA REGIÓN DE MURCIA	Municipality	K	U	W	PrA	L

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Name	Sector	Degree of involvement	Type of actor	Relation to WM/WQ issues	Legal group	Engagement capacity
DIRECCIÓN GENERAL DEL AGUA DE LA CONSEJERIA DE AGRICULTURA Y AGUA DE LA COMUNIDAD AUTÓNOMA DE LA REGIÓN DE MURCIA	Regional Government	T	D	S	PAR	M
SERVICIO DE PESCA Y ACUICULTURA. DIRECCION GENERAL DE GANADERIA Y PESCA, CONSEJERIA DE AGRICULTURA Y AGUA DE LA CARM	Regional Government	K	D	M	PAR	M
DIRECCIÓN GENERAL DE PUERTOS Y COSTAS DE LA CONSEJERIA DE OBRAS PÚBLICAS Y ORDENACION DEL TERRITORIO DE LA COMUNIDAD AUTÓNOMA DE LA REGIÓN DE MURCIA	Regional Government	K	D	M	PAR	M
DIRECCIÓN GENERAL DE MEDIO AMBIENTE DE LA CONSEJERIA DE AGRICULTURA Y AGUA DE LA COMUNIDAD AUTÓNOMA DE LA REGIÓN DE MURCIA	Regional Government	K	D	S	PAR	M
DIRECCIÓN GENERAL DE INFRAESTRUCTURAS DE TURISMO DE LA REGIÓN DE MURCIA	Regional Government	K	D	W	PAR	M
DIRECCIÓN GENERAL DEL MAR MENOR. CARM	Regional Government	O	D	S	PAR	H
DIRECCIÓN GENERAL DE AGRICULTURA DE LA CONSEJERIA DE AGRICULTURA Y AGUA DE LA REGIÓN DE MURCIA	Regional Government	K	D	S	PAR	M
CÁMARA OFICIAL DE COMERCIO, INDUSTRIA Y NAVEGACIÓN MURCIA	Professional Institutions	K	U	W	PrP	L
CÁMARA OFICIAL DE COMERCIO, INDUSTRIA, SERVICIOS Y NAVEGACIÓN DE CARTAGENA	Professional Institutions	K	U	W	PrP	L
COLEGIO DE INGENIEROS DE CAMINOS CANALES Y PUERTOS DE LA REGIÓN DE MURCIA	Professional Institutions	K	U	M	PrP	M
COLEGIO OFICIAL DE BIÓLOGOS DE LA REGIÓN DE MURCIA	Professional Institutions	T	U	M	PrP	H
COLEGIO OFICIAL DE ECONOMISTAS DE LA REGIÓN DE MURCIA	Professional Institutions	K	U	W	PrP	L
COLEGIO OFICIAL DE INGENIEROS AGRÓNOMOS DE LA REGIÓN DE MURCIA	Professional Institutions	K	U	M	PrP	M
COLEGIO OFICIAL DE INGENIEROS DE MINAS DE LEVANTE	Professional Institutions	K	U	W	PrP	L
COLEGIO OFICIAL DE INGENIEROS DE MONTES	Professional Institutions	K	U	M	PrP	M
COLEGIO OFICIAL DE INGENIEROS INDUSTRIALES DE LA REGIÓN DE MURCIA	Professional Institutions	K	U	W	PrP	L
COLEGIO DE GEÓGRAFOS	Professional Institutions	K	U	W	PrP	M
COLEGIO DE INGENIEROS TECNICOS DE OBRAS PUBLICAS DE MURCIA	Professional Institutions	K	U	M	PrP	M
COLEGIO OFICIAL DE INGENIEROS TÉCNICOS AGRÍCOLAS DE LA REGIÓN DE MURCIA	Professional Institutions	T	U	M	PrP	H
SINDICATO CENTRAL DE REGANTES DEL ACUEDUCTO TAJO-SEGURA (SCRATS)	Agriculture	T	U	S	PrP	M
COMUNIDAD DE REGANTES DEL CAMPO DE CARTAGENA	Agriculture	O	U	S	PrP	M
JUNTA CENTRAL DE USUARIOS REGANTES DEL SEGURA	Agriculture	K	U	S	PrP	L
FEDERACIÓN NACIONAL DE COMUNIDADES DE REGANTES DE ESPAÑA (FENACORE)	Agriculture	K	U	S	PrA	L
HIDROGEA (AQUAGEST)	Water utilities	T	U	S	PrP	L
AQUALIA (MURCIA)	Water utilities	T	U	S	PrP	L
ESTACIÓN NÁUTICA MAR MENOR - CABO DE PALOS (ENMMCP)	Tourism	T	U	S	PrP	M
CEBAS-CSIC	Science & Universities	O	E	S	PAN	M
INSTITUTO DE ECOLOGIA LITORAL	Science & Universities	T	E	S	PrP	M
INSTITUTO UNIVERSITARIO DEL AGUA Y DEL MEDIO AMBIENTE (INUAMA)	Science & Universities	T	E	S	PrP	M
INSTITUTO ESPAÑOL DE OCEANOGRAFÍA (IEO)	Science & Universities	O	E	S	PAN	M
INSTITUTO MURCIANO DE INVESTIGACIÓN Y DESARROLLO AGRARIO Y ALIMENTARIO DE LA CONSEJERÍA DE AGRICULTURA Y AGUA DE LA	Science & Universities	T	E	S	PAR	M

Name	Sector	Degree of involvement	Type of actor	Relation to WM/WQ issues	Legal group	Engagement capacity
COMUNIDAD AUTÓNOMA DE LA REGIÓN DE MURCIA (IMIDA)						
AGENCIA ESTATAL DE METEOROLOGÍA. DELEGACIÓN MURCIA.	Science & Universities	K	E	S	PAN	M
INSTITUTO GEOLÓGICO Y MINERO DE ESPAÑA (IGME-MURCIA)	Science & Universities	T	E	S	PAN	M
ACUAMED.	Water utilities	K	U	S	PAN	M
ESAMUR. CONSEJERIA DE AGRICULTURA Y AGUA REGION DE MURCIA	Water utilities	O	U	S	PAR	M
UNIVERSIDAD CATÓLICA SAN ANTONIO (UCAM)	Science & Universities	O	E	S	PrP	H
UNIVERSIDAD DE MURCIA	Science & Universities	T	E	S	PrP	M
UNIVERSIDAD POLITÉCNICA DE CARTAGENA	Science & Universities	T	E	S	PrP	M
DEPARTAMENTO DE ECOLOGÍA E HIDROLOGÍA. UNIVERSIDAD DE MURCIA	Science & Universities	T	E	S	PrP	M

Table 2. SMARTLAGOON – Stakeholder’s overview

4. Design of the participatory process.

Methodology

In the context of this PPP, **public participation** means the deliberative process by which stakeholders related to the Mar Menor are involved as key parties that may help determine the results of the project. This means **stakeholders have an active role**. They do not only receive information from the project, but there is a process of thoughtful discussion and exchange based on the giving and taking, on discussing underlying reasons for the choices, and going forwards with the decisions.

The challenge of this PPP is to **facilitate a smooth and effective stakeholders' engagement throughout the project duration**. The information of the project needs to be exchanged between the members of the Consortium and the stakeholders' representatives. Rather than sharing information, the methodology aims to create a collaborative environment where both parties get a shared understanding of issues and solutions that can improve the decision-making processes and the development of more practical tools.

In general terms, the present PPP foresees a **hybrid process** (both formal and informal). It is formal in the sense that the process is structured and must be included to comply with H2020 projects requirements. It is informal because it can be developed in various ways, depending on the circumstances and stakeholders' availability at the time various project's activities will be implemented. The call for stakeholders to participate is not mandatory for some SMARTLAGOON tasks but it is extremely useful.

Every participatory process begins, once the objectives have been stated, with the stakeholder definition. As mentioned in Section

Stakeholders' definition, there are 99 stakeholders organized in 10 groups, clearly differentiated from each other, as outlined below:

- **Agriculture**, represented by the 11.1% of the actors and with a strong relation to water management and water quality issues. Between them *Fundación Ingenio* is positioned as key actor with high engagement capacity and the role of a co-working actor. In addition, *Comunidad de Regantes del Campo de Cartagena* and *Sindicato Central de Regantes del Acueducto Tajo-Segura* must be taken into consideration for their engagement and participation capacity.
- **Environment**, represented by the 15.2% of the stakeholders and with a strong and medium relation to water management and water quality issues. Between them *Pactor por el Mar Menor* and *SOS Mar Menor* are positioned as key actors with high engagement capacity and the role of co-working actors. In terms of engagement capacity most of them are considered relevant.

- **Fishing**, represented by the 4% of the stakeholders and with a medium relation to water management and water quality issues. *Cofradía de Pescadores de San Pedro del Pinatar* has been pointed out as the main actor.
- **Municipalities**, represented by the 8% of the actors and with a medium relation to water management and water quality issues. There are 7 municipalities in the catchment and all of them are considered at the same level, in terms of involvement and engagement capacity are key actors for the project.
- **Professional Institutions**, represented by the 12.1% of the stakeholders and with a medium-weak relation to water management and water quality issues. Since the first-round contact, *Colegio Oficial de Ingenieros Técnicos Agrícolas de la Región de Murcia* and *Colegio oficial de Biólogos de la Región de Murcia* showed the highest interest in the Project and high engagement capacity. Additionally, the increasing involvement of *Colegio de Ingenieros de Caminos, Canales y Puertos de la Región de Murcia* is expected along the project.
- **Regional Government**, represented by the 7.1% of the actors and with a medium-strong relation to water management and water quality issues. *Dirección General del Mar Menor* is clearly identified as the main stakeholder of the group.
- **Science and Universities**, represented by the 11.1% of the stakeholders and with a medium engagement capacity. All of them have a strong relation to water management and water quality issues and *UCAM* has been pointed out as the most important institution for the project intentions as they are the Coordinators of the Project, but also *IEO* and *CEBAS-CSIC* must be considered as major actors.
- **Spanish Government**, represented by the 10.1% of the actors and with a medium-strong relation to water management and water quality issues. *Confederación Hidrográfica del Segura* is the main actor of the group, and its importance is of major interest along the watershed, but also *Demarcación de Costas en Murcia* and *Capitanía Marítima de Cartagena* are going to be crucial for the interests of the Project in the lake – their implication is mandatory to define the conditions of the buoy and get the administrative permissions. Moreover, in terms of environmental hazards and risk management, *Dirección General de Protección Civil y Emergencias* is identified as the main reference.
- **Tourism**, represented by the 17.2% of the stakeholders and with a weak relation to water management and water quality issues, it is the sector with more representatives. *Confederación Regional de Organizaciones Empresariales de Murcia (CROEM)* is the main actor within it and has shown its engagement capacity and special interest of collaboration since the beginning of the Project.
- **Water utilities**, represented by the 4% of the actors and with a strong relation to water management and water quality issues. *ESAMUR* is identified as the main stakeholder of the group, but also *Hidrogea* and *Aqualia* may lead an important role facilitating information to the Project. In any case, the water utilities sector has a limited engagement capacity for the Project purposes.

At this step we know who the major stakeholders are. During the Project, in other deliverables, in particular tasks (specially in WP4) we will define what are their relationships with each other, the

major conflicts, how do they see the Mar Menor problems and what are their major concerns. **The in-depth analysis of stakeholders' interactions is related to the socio-environmental modelling and therefore outside the scope of the PPP.**

Before the explanation of the methodology, it is worth to mention that there are some previous **principles, requirements and general criteria** that must be fulfilled before the PPP is applied:

- The process has a **spearhead** that is **stable during all the process**. This person is responsible to contact the stakeholders and keep them informed during the project. This responsibility rests upon Mr. Pablo Blanco (Vielca Ingenieros SA). He must play a role of a competent, impartial facilitator that will steer the process.
- In the same fashion, **each member of a stakeholder's group has a responsible person**. The personal data must follow the General Data Protection Regulation and legal European rules concerning the protection of personal data. As all stakeholders have been already contacted (on line), we already have a list of responsible persons.
- It must be **clear to everyone involved** what the **aim of the participation process** is and where we are in that process.
- For preventing disappointments among the stakeholders, it is crucial to **manage expectations**. For that, stakeholders should be informed since the beginning of the process about their implication level and what is expected from each of them.
- The stakeholders must know that **the outcome is not a foregone conclusion**.
- The process must be **organized in an efficient way**, avoiding annoying the participants convening them only when necessary.
- Independently from the participatory action, to succeed, **rules of participation need to be clear**. The facilitator and the participants will agree the rules in advance.
- There must be a **tie between the process and the tasks** within the project.
- To ensure that the participation **process proceeds constructively and even-handedly**, all relevant information will be provided in a way that can be easily understood by the target audience.
- Stakeholders must be invited with enough time to allow them to organize themselves. Coupled with the invitation, a **summary or short explanation of the action will be attached**.
- The **intensity of the participation** of each stakeholder must be proportional to their involvement in the Mar Menor context.
- The **kind of participatory action** is related to the kind of information that is needed from that particular stakeholder's group.
- Participatory actions will have a safety margin to be sure to have an **adequate timescale** for them. All participants must have time to express their point of view in a proper way.
- All the **necessary equipment** to succeed must be defined in each action.
- Once the participatory action is finished, there must be a **communication channel opened** to share the results and next steps of the project.

All these elements should be guaranteed during the implementation of the project.

The main steps of the methodology used in the PPP of SMARTLAGOON are:

1. Definition of objectives of the PPP. General and specific objectives are referred in Section ***Objectives of the PPP.***
2. Definition and mapping of stakeholders. See Section
- 3.
- 4.
5. Stakeholders' definition and
6. ***Stakeholders'*** mapping.
7. The principal premise to organize the PPP is that **different stakeholders' participatory strategies are connected to different activities** within the project. The decision of including a specific stakeholder in a participatory action depends on the leader of the task. The reasons for including or excluding a stakeholder group are various (connection to the topic of interest, expected willingness to cooperate, etc.) Thus, the logical step is to **split the tasks of each Work Package (WP) in actions**. The result of this analysis and the number of actions per WP are depicted in Table 3:

Work Package	Task	# of actions
WP2	2.1. Definition of parameters and sensors for water monitoring in a river basin and a lake/lagoon	3
WP2	2.2. Developing novel AI-based sensing technologies through video-based monitoring	3
WP2	2.3. Efficient IoT infrastructure design with edge computing	2
WP2	2.4. Acquisition of public data sources for socio/environmental	1
WP2	2.5. Design of a citizen science and social sensing tool for tracking socio/environmental evolution and obtaining knowledge during citizen science actions.	4
WP3	3.1. Development of physically based catchment models.	1
WP3	3.2. Development of physically based lake and lagoon models.	1
WP3	3.3. Development of machine learning approaches for enhancing predictions of flood, algal bloom and hypoxia.	1
WP3	3.4. Enhance physically based models and machine learning approaches for scenario testing.	1
WP4	4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	4
WP4	4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	4
WP4	4.3. Set-up and validate a system dynamics model and couple it to the environmental modelling.	3
WP4	4.4. Parametrization of the system dynamics model.	2
WP5	5.1. End-user workshops targeting forecast portal.	1
WP5	5.2. Develop real-time data capturing and visualization	2
WP5	5.3. Short-term forecasting of catchment hydrology and water quality	1
WP5	5.4. Tailor short-term forecast portal to identified stakeholder needs.	1
WP5	5.5. Simulate long-term scenarios to predict the socio-environmental impacts of BMPs and flood mitigation measures	2
WP5	5.6. Develop a digital twin web app.	1

Work Package	Task	# of actions
WP7	7.1. CoDNOC appointment, formulate communication and dissemination strategy, define brand identity.	1
WP7	7.2. Implementing Public participation and engagement CS activities and volunteer participation.	3
WP7	7.3. Implementing communication strategies.	5
WP7	7.4. Implementing dissemination and exploitation activities	1
WP7	7.5. Design and development of interactive data visualization for results exploitation.	1
WP7	7.6. Joint Collaborative Tasks	3

Table 3. Number of actions within each task

There is a total amount of **52 actions tentatively subject to participatory actions.**

Work Package 6 is not included in the table as it only contains the Project Management tasks.

8. **Narrowing down the timeline included in the proposal to a more realistic and concise timing.** For each action, the WP/task leader indicates the exact month when a specific action is expected to be executed. This step is important, as it will determine the timing of all activities and allows to identify possible overlaps, gaps, etc.
9. Indication of the necessity to **apply public participation to the action.** The responsible of the task decides whether the public participation is needed or not for that particular action.
10. Indication of the **key and additional stakeholders related to that action.** When public participation is decided to be needed, then the responsible of the task indicate the key stakeholder to whom the participation action is addressed. When more than one important stakeholder is involved, then it is included as additional stakeholder.
11. Indication of the required **information to be gathered from the stakeholder.** As each task has its requirements, the information needed from a stakeholder is different, too. The responsible of the task is prompted to describe, briefly, the information that the stakeholder should provide.
12. A **participatory tool/method** is proposed for each action. Different possibilities are:
 - a. **Face to face meetings with one specific group.** This method is focused on getting a deep knowledge of the stakeholder’s opinion about a particular topic, with an in-depth analysis. It is usually organized through open questions and the possibility of extensive answers.
 - b. **Workshops / Focus groups.** Within this method, interactions between different stakeholder groups are key. Groups of 5-10 people are present at the same time.
 - c. **Surveys / Guided survey.** This method can be useful to get information about the usability of an app or a particular set of elements about a topic.
 - d. **Seminars with field visits.** Some of the components of the project are field based.

- e. **Online meetings / interviews.**
- f. **Conferences.**
- g. **A combination.**

The decision of the participatory tool/method is up to the task's responsible too. It depends on factors like effectiveness, ease to implement, feedback needs, etc.

13. Creation of the **integration matrix**. Once all actions for all tasks in each work package have been analyzed from the public participation perspective, results are checked against each other to determine through a matrix to determine:
 - a. The list of participatory tools and methods by stakeholder.
 - b. The overlapping and gaps in the participatory actions.
14. Depending on the results of (9) a **proposal of the implementation for the participatory actions** is raised, including a calendar for the upcoming months. There is a list of actions by year also.

5. Tasks that require public involvement and intended audience

5.1. List of tasks and their actions by Work Package, including timeline.

According to the presented methodology, each task of the project has been disentangled in a set of actions. Each action is suited to have participation. Table 4 shows the results of this analysis.

Work Package	WP Name	Task	Action	Lead of the Task	Timeline
WP2	Efficient data collection and sensing	2.1. Definition of parameters and sensors for water monitoring in a river basin and a lake/lagoon	Definition of the environmental variables.	UU	M01-M09
WP2	Efficient data collection and sensing	2.1. Definition of parameters and sensors for water monitoring in a river basin and a lake/lagoon	Creation of a new automated monitoring system.	UU	M01-M09
WP2	Efficient data collection and sensing	2.1. Definition of parameters and sensors for water monitoring in a river basin and a lake/lagoon	Obtaining proxy variables and methodology definition to incorporate these data into modeling.	UU	M01-M09
WP2	Efficient data collection and sensing	2.2. Developing novel AI-based sensing technologies through video-based monitoring	Design SSIV methodology to measure the surface flow velocity.	PHO	M03-M18
WP2	Efficient data collection and sensing	2.2. Developing novel AI-based sensing technologies through video-based monitoring	Optical measurement of water level using the images taken by cameras.	PHO	M03-M18
WP2	Efficient data collection and sensing	2.2. Developing novel AI-based sensing technologies through video-based monitoring	Design of algorithms to measure and predict fish kill in the Mar Menor.	PHO	M03-M18
WP2	Efficient data collection and sensing	2.3. Efficient IoT infrastructure design with edge computing capabilities	Design and deployment of two different efficient IoT infrastructures.	UPV	M01-M48
WP2	Efficient data collection and sensing	2.3. Efficient IoT infrastructure design with edge computing capabilities	Computing capabilities in the IoT for video processing.	UPV	M01-M48
WP2	Efficient data collection and sensing	2.4. Acquisition of public data sources for socio/environmental modelling	Examination and acquirement of remote sensing and other public data sources.	VIELCA	M01-M18
WP2	Efficient data collection and sensing	2.5. Design of a citizen science and social sensing tool for tracking socio/environmental evolution and obtaining knowledge during citizen science actions.	Develop a citizen science and social sensing platform.	UPV	M01-M48
WP2	Efficient data collection and sensing	2.5. Design of a citizen science and social sensing tool for tracking socio/environmental evolution and obtaining knowledge during citizen science actions.	Compute a problem-relatedness perception index for decision makers.	UPV	M01-M48
WP2	Efficient data collection and sensing	2.5. Design of a citizen science and social sensing tool for tracking socio/environmental	Design a knowledge-based model for multi-label classification to detect environmentally	UPV	M01-M48

Work Package	WP Name	Task	Action	Lead of the Task	Timeline
		evolution and obtaining knowledge during citizen science actions.	related problems or concerns from the citizens' point of view.		
WP2	Efficient data collection and sensing	2.5. Design of a citizen science and social sensing tool for tracking socio/environmental evolution and obtaining knowledge during citizen science actions.	Use of the app DischargeApp to engage users in citizen science activities.	UPV	M01-M48
WP3	Innovative modelling and environmental processes	3.1. Development of physically based catchment models.	Application of the semi-distributed SWAT+ model to the catchment of the Mar Menor and Lake Erken.	UU	M01-M36
WP3	Innovative modelling and environmental processes	3.2. Development of physically based lake and lagoon models.	Application of the GOTM-WET hydrodynamic-ecosystem model to the Mar Menor and Lake Erken.	WIT	M01-M36
WP3	Innovative modelling and environmental processes	3.3. Development of machine learning approaches for enhancing predictions of flood, algal bloom and hypoxia.	Development of machine learning approaches for enhancing predictions of flood, algal bloom and hypoxia.	UCAM	M01-M36
WP3	Innovative modelling and environmental processes	3.4. Enhance physically based models and machine learning approaches for scenario testing.	Identification of model scenarios through stakeholder-interactions (connected to WP4).	UCAM	M24-M36
WP4	Socio-environmental dynamics modelling	4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Recopilation of background information (environmental, economic, social and legislative).	VIELCA	M01-M12
WP4	Socio-environmental dynamics modelling	4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Mapping of stakeholders and sectors.	VIELCA	M01-M12
WP4	Socio-environmental dynamics modelling	4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Review of current legislation and analysis of local and regional strategies.	VIELCA	M01-M12
WP4	Socio-environmental dynamics modelling	4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Assembly of historic statistical socio-environmental data going back to the last decade.	VIELCA	M01-M12
WP4	Socio-environmental dynamics modelling	4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Mapping of the coupled socio-economic and environmental dynamics.	VIELCA	M04-M22
WP4	Socio-environmental dynamics modelling	4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Identification of potential actions to counteract negative dynamics.	VIELCA	M04-M22
WP4	Socio-environmental dynamics modelling	4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Drafting a conceptual model, adapting eDPSEEA framework in a series of 3-4 workshops.	VIELCA	M04-M22
WP4	Socio-environmental dynamics modelling	4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Discussion with stakeholders about topics like environmental and socio-economic drivers of water quality and quantity problems, conflicting interests, enforcement	VIELCA	M04-M22

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Work Package	WP Name	Task	Action	Lead of the Task	Timeline
		economic dynamics in the Mar Menor.	or refinements of policies, location and type of pluvial flooding mitigation infrastructure and potential changes of these dynamics in the future.		
WP4	Socio-environmental dynamics modelling	4.3. Set-up and validate a system dynamics model and couple it to the environmental modelling.	Set-up a system dynamics (draft) model using Vesim software based on previous studies.	NIVA	M20-M34
WP4	Socio-environmental dynamics modelling	4.3. Set-up and validate a system dynamics model and couple it to the environmental modelling.	Engage with stakeholders and discuss the processes, policies, dynamics in the Mar Menor. Refinement of model based on this information.	NIVA	M20-M34
WP4	Socio-environmental dynamics modelling	4.3. Set-up and validate a system dynamics model and couple it to the environmental modelling.	Discussion with stakeholders about the "realism" of the dynamics.	NIVA	M20-M34
WP4	Socio-environmental dynamics modelling	4.4. Parametrization of the system dynamics model.	Parametrization of the model, with the possibility to gain additional information in follow-up interviews with key stakeholders.	NIVA	M32-M48
WP4	Socio-environmental dynamics modelling	4.4. Parametrization of the system dynamics model.	Models' presentation to the stakeholders in a final workshop.	NIVA	M32-M48
WP5	Digital twin development	5.1. End-user workshops targeting forecast portal.	Conduction of two end-user workshops to identify stakeholder expectations, wishes and needs connected to the forecast portal.	WIT	M01-M48
WP5	Digital twin development	5.2. Develop real-time data capturing and visualization	Integration of methods developed in WP2 in a mobile application.	PHO	M21-M36
WP5	Digital twin development	5.2. Develop real-time data capturing and visualization	Creation of a web-based portal.	PHO	M21-M36
WP5	Digital twin development	5.3. Short-term forecasting of catchment hydrology and water quality	Adaptation of the catchment and the lake and lagoon models for Lake Erken and Mar Menor to the ASAP portal, including a weather forecast product and forecast of water quality.	WIT	M06-M42
WP5	Digital twin development	5.4. Tailor short-term forecast portal to identified stakeholder needs.	Further development of the ASAP forecast portal to target the needs of users and stakeholders and new ML approaches. This includes integration of real-time sensor data into the portal.	WIT	M06-M42
WP5	Digital twin development	5.5. Simulate long-term scenarios to predict the socio-environmental impacts of BMPs and flood mitigation measures	Simulation of scenarios of socio-environmental dynamics.	UCAM	M06-M44
WP5	Digital twin development	5.5. Simulate long-term scenarios to predict the socio-environmental impacts of BMPs and flood mitigation measures	Seek of the factor in and link to the ISIMIP initiative, with several project members participating in.		M06-M44
WP5	Digital twin development	5.6. Develop a digital twin web app.	Creation of the web app.	UPV	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.1. CoDNOC appointment, formulate communication and dissemination strategy, define brand identity.	Formulation of the communication and dissemination strategy (website, documents, logo, etc.).	UNIBO	M01-M06
WP7	Citizens' engagement, collaboration,	7.2. Implementing Public participation and engagement CS	Definition of a Public Participation Plan.	UNIBO	M01-M48

Work Package	WP Name	Task	Action	Lead of the Task	Timeline
	communication, dissemination and exploitation	activities and volunteer participation.			
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.2. Implementing Public participation and engagement CS activities and volunteer participation.	Implementation of eight citizen science actions (four one day in situ events and four online).	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.2. Implementing Public participation and engagement CS activities and volunteer participation.	Exploitation of partners' knowledge of local NGOs, environmental associations and social media campaigns, including newsletters and news. Also, gamification strategies.	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.3. Implementing communication strategies.	Creation of a project website.	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.3. Implementing communication strategies.	Creation of social media campaigns.	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.3. Implementing communication strategies.	Creation of blogs.	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.3. Implementing communication strategies.	Creation of communication and press releases.	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.3. Implementing communication strategies.	Communication during academic initiatives, open days, science cafes, night events...	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.4. Implementing dissemination and exploitation activities	Plenary conference (50 - 100 participants).	UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.5. Design and development of interactive data visualization for results exploitation.	Organization of participatory activities to engage citizens in co-design data visualization interactive explorations.	UNIBO	M18-M48
WP7	Citizens' engagement, collaboration, communication,	7.6. Joint Collaborative Tasks	Coordination with the running projects from the Environmental Intelligence Topic.	UCAM / UNIBO	M01-M48

Work Package	WP Name	Task	Action	Lead of the Task	Timeline
	dissemination and exploitation				
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.6. Joint Collaborative Tasks	Improvement of the visibility for all the key stakeholders.	UCAM / UNIBO	M01-M48
WP7	Citizens' engagement, collaboration, communication, dissemination and exploitation	7.6. Joint Collaborative Tasks	Development of the collaboration plan, including a summer school, scientific workshop and a special issue in a multi-disciplinary journal.	UCAM / UNIBO	M01-M48

Table 4. List of tasks and their actions by WP

5.2. Connection between actions and stakeholders

Not all the actions outlined in the previous Section need public participation. Table 5, presents the selection of tasks in which it is expected to develop any public participation action.

From the total amount of actions (52), there are 21 with public participation (40 %). Splitting those 21 actions by stakeholders, we obtained the following results:

Stakeholder group	Number of actions	%
All stakeholders	16	76,2 %
Educational centers	2	9,5 %
Environmentalists	1	4,8 %
Citizens in general	2	9,5 %
Total	21	100 %

Table 5. Intensity of actions by stakeholder

All stakeholders

16 actions are addressed to all stakeholders, as reported in Table 6.

Task	Action
2.5. Design of a citizen science and social sensing tool for tracking socio/environmental evolution and obtaining knowledge during citizen science actions.	Develop a citizen science and social sensing platform
3.4. Enhance physically based models and machine learning approaches for scenario testing.	Identification of model scenarios through stakeholder-interactions (connected to WP4)
4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Recompilation of background information (environmental, economic, social and legislative)
4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Mapping of stakeholders and sectors
4.1. Outline environmental, economic, social and legislative conditions and constraints of the Mar Menor case.	Review of current legislation and analysis of local and regional strategies

Task	Action
4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Mapping of the coupled socio-economic and environmental dynamics
4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Identification of potential actions to counteract negative dynamics
4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Drafting a conceptual model, adapting eDPSEEA framework in a series of 3-4 workshops. Discussion with stakeholders about topics like environmental and socio-economic drivers of water quality and quantity problems, conflicting interests, enforcement or refinements of policies, location and type of pluvial flooding mitigation infrastructure and potential changes of these dynamics in the future.
4.2. Participatory multi-perspective mapping of environmental, social and economic dynamics in the Mar Menor.	Engage with stakeholders and discuss the processes, policies, dynamics in the Mar Menor. Refinement of model based on this information.
4.3. Set-up and validate a system dynamics model and couple it to the environmental modelling.	Discussion with stakeholders about the "realism" of the dynamics.
4.3. Set-up and validate a system dynamics model and couple it to the environmental modelling.	Parametrization of the model, with the possibility to gain additional information in follow-up interviews with key stakeholders.
4.4. Parametrization of the system dynamics model.	Models' presentation to the stakeholders in a final workshop.
4.4. Parametrization of the system dynamics model.	Conduction of two end-user workshops to identify stakeholder expectations, wishes and needs connected to the forecast portal.
5.1. End-user workshops targeting forecast portal.	Further development of the ASAP forecast portal to target the needs of users and stakeholders and new ML approaches. This includes integration of real-time sensor data into the portal.
5.4. Tailor short-term forecast portal to identified stakeholder needs.	
7.4. Implementing dissemination and exploitation activities	Plenary conference (50 - 100 participants)

Table 6. Actions addressed to all stakeholders.

Educational centers

Two actions are addressed to educational centers (see Table 7).

Task	Action
2.5. Design of a citizen science and social sensing tool for tracking socio/environmental evolution and obtaining knowledge during citizen science actions.	Use of the app DischargeApp to engage users in citizen science activities.
5.2. Develop real-time data capturing and visualization	Integration of methods developed in WP2 in a mobile application.

Table 7. Actions addressed to educational centers.

Environmentalists

One action is addressed to environmentalists (see Table 8).

Task	Action
7.5. Design and development of interactive data visualization for results exploitation.	Organization of participatory activities to engage citizens in co-design data visualization interactive explorations.

Table 8. Actions addressed to environmentalists.

Citizens in general

There are two actions that are address to citizens in general, not to specific stakeholders' groups (see Table 9).

Task	Action
7.2. Implementing Public participation and engagement CS activities and volunteer participation.	Implementation of eight citizen science actions (four one day in situ events and four online)
7.3. Implementing communication strategies.	Communication during academic initiatives, open days, science cafes, night events...

Table 9. Actions addressed to citizens in general.

Conclusion

Most of the participatory actions are addressed to all stakeholders (76,2 %).

When educational centers are the main stakeholders, then the agriculture is included to be as additional stakeholder.

The remaining actions are addressed to specific stakeholder groups.

6. Integration matrix

The results of putting together all participatory actions for all tasks are depicted in Table 10:

Task	Action	Lead	Time-line	Due date	Main sk	Additional sk	Info	Method	Comments
2.5.	Develop a citizen science and social sensing platform	UPV	M01-M48	12;24;36;48	All of them		Requirements and needs of potential users of the social sensing platform e.g., definition of topics of interest, application to generate knowledge...	Face to face meetings; workshop + survey (during the meeting)	Select one leading stakeholder from each defined group
2.5.	Use of the app DischargeApp to engage users in citizen science activities.	UPV	M01-M48	24	Educational Centers	Agricult.	Videos uploaded by citizens	Seminars with field visits	Schools and agricultural associations
3.4.	Identification of model scenarios through stakeholder-interactions (connected to WP4)	UCAM	M24-M36	M30	All of them	eventually split up in groups	Overall questions: Who (which sector(s)) has a role to play in the sustainability of the Mar Menor lagoon/region? What types of measures can enable the sustainable development of the Mar Menor region? For more detailed information, please see the Word document shared via email.	Workshop	
4.1..	Recopilation of background information (environmental , economic, social and legislative)	VIELCA	M01-M12	M3	All of them		List of possible data sources, studies, general info, etc.		All stakeholders. During the different activities (e.g. workshops) we can ask them if they know specific information to be used.
4.1.	Mapping of stakeholders and sectors	VIELCA	M01-M12	M3	All of them		Validation of the mapping.	Workshop	All stakeholders.
4.1.	Review of current legislation and analysis of local and regional strategies	VIELCA	M01-M12	M3	All of them		List of additional legislation or regulation that affects to the stakeholders		All stakeholders. During the different activities, we can ask them specific regulatory aspects they

Deliverable 7.1 – Public Participation Plan

Task	Action	Lead	Time-line	Due date	Main sk	Additional sk	Info	Method	Comments
									are affected by.
4.2.	Mapping of the coupled socio-economic and environmental dynamics	VIELCA	M04-M22		All of them		Validation of the mapping.	Workshop	All (selected) stakeholders.
4.2.	Identification of potential actions to counteract negative dynamics	VIELCA	M04-M22		All of them		Validation of actions.	Workshop	All (selected) stakeholders.
4.2.	Drafting a conceptual model, adapting eDPSEEA	VIELCA	M04-M22		All of them		Validation of model	Workshop	All (selected) stakeholders.
	framework in a series of 3-4 workshops.								
4.2.	Discussion with stakeholders about topics like environmental and socio-economic drivers of water quality and quantity problems, conflicting interests, enforcement or refinements of policies, location and type of pluvial flooding mitigation infrastructure and potential changes of these dynamics in the future.	VIELCA	M04-M22		All of them		Discussion and feedback about the problems and how to solve them.	Workshop	All (selected) stakeholders.
4.3.	Engage with stakeholders and discuss the processes, policies, dynamics in the Mar Menor. Refinement of model based on this information.	NIVA	M20-M34	M30	All of them	eventually split up in groups	Overall questions: Who (which sector(s)) has a role to play in the sustainability of the Mar Menor lagoon/region? What types of measures can enable the sustainable development of the Mar Menor region? For more detailed information, please see the Word	Workshop	

Task	Action	Lead	Time-line	Due date	Main sk	Additional sk	Info	Method	Comments
4.3.	Discussion with stakeholders about the "realism" of the dynamics.	NIVA	M20-M34	M34	All of them		document shared via email. How realistic are the policies embedded in the model? How realistic are the dynamics processes displayed? How an "optimal" policy instruments mix for enabling the sustainable development of the Mar Menor region may look like?	Workshop	
4.4.	Parametrization of the model, with the possibility to gain additional information in follow-up interviews with key stakeholders.	NIVA	M32-M48	M40	All of them	eventually split up in groups	What variables are missing? Do stakeholders have data/information, which we can include in the model?	Workshop & Interviews	
4.4.	Models' presentation to the stakeholders in a final workshop.	NIVA	M32-M48	M48	All of them		Feedback from stakeholders on the model and the results. Discussion on how to translate model-based insights into implementable policies	workshop	
5.1.	Conduction of two end-user workshops to identify stakeholder expectations, wishes and needs connected to the forecast portal.	WIT	M01-M48		All of them			workshop	
5.2.	Integration of methods developed in WP2 in a mobile application. Further development of the ASAP forecast portal to target the needs of users and stakeholders and new ML approaches. This includes	PHO	M21-M36	24;30;36	Educational Centers	Agricult.	Videos	Seminars with field visits	
5.4.		WIT	M06-M42		All of them			workshop	

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Task	Action	Lead	Time-line	Due date	Main sk	Additional sk	Info	Method	Comments
7.2.	integration of real-time sensor data into the portal. Implementation of eight citizen science actions (four one day in situ events and four online) Communication during academic initiatives, open days, science cafes, night events...	UNIBO	M01-M48	(9;12;18;24;30;36;42;48) *	Other	Citizens in general. Moreover specific actions will target: Farmers; Children (engaging local schools); NGOs		Photrack discharge app; focus groups; workshops; surveys	* The 8 activities will be spread across the 4 years project.
7.3.	Plenary conference (50 - 100 participants)	UNIBO	M01-M48	*	Other	Citizens in general	not mandatory, just for dissemination purpose	not required	* Activities will be carried out during the 4 years project
7.4.	Organization of participatory activities to engage citizens in co-design data visualization interactive explorations.	UNIBO	M18-M48	(36) by the end of the third year	Environmentalist	Citizens in general; NGOs	system requirements and co-design	focus groups	

Table 10. Integration matrix of actions, timing, stakeholders, and methods

7. Implementation of the PPP

Timeline

The general timeline for the PPP (see Table 11) is aligned with the deadlines indicated by the leaders of the tasks. In a next step (in the By Year lists), these dates will be slightly adjusted to make a more coherent plan.

To make a more logical schedule for future participatory actions, some adjustments are needed. These small changes allow an easier implementation. Next, **the final organization of the PPP** is presented, after these adjustments have been done:

YEAR 1. 2021.

As the project started by Jan 2021, all these are past activities.

- **In month 3:**
 - Online meetings were held in Task 4.1, in actions: *Recompilation of background information; Mapping of stakeholders and sectors; Review of current legislation and analysis of local and regional strategies*. All stakeholders were involved.
 - Online meetings were held in Task 5.1, *Conduction of two end-user workshops to identify stakeholder expectations*. All stakeholders were involved.

Due to COVID-19 restrictions, all previously expected actions (workshops) were substituted by online meetings.
- **In month 9:**
 - 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action*. The action is addressed to citizens in general, through workshops/focus groups and surveys.
- **In month 12:**
 - Face-to-face meetings and workshops/focus groups, in *Task 2.5. Develop a citizen science and social sensing platform*. All stakeholders will be involved.
 - 1 workshop in Task 4.2. Drafting a conceptual socioeconomic and environmental dynamic model, adapting eDPSEEA. All stakeholders will be involved.
 - 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action*. The action is addressed to citizens in general, through workshops/focus groups and surveys.

YEAR 2. 2022.

- **In month 18:**
 - 1 workshop in Task 4.2. Drafting a conceptual socioeconomic and environmental dynamic model, adapting eDPSEEA. All stakeholders will be involved.
 - 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action*. The action is addressed to citizens in general, through workshops/focus groups and surveys.
- **In month 24:**
 - Face-to-face meetings and workshops/focus groups, in *Task 2.5. Develop a citizen science and social sensing platform*. All stakeholders will be involved.

- 1 Seminar with field visit, in Task 2.5. Use of the app DischargeApp to engage user in citizen science activities. The key stakeholders involved are educational centers. Additionally, also agriculture could be involved.
- 1 workshop in Task 4.2. Drafting a conceptual socioeconomic and environmental dynamic model, adapting eDPSEEA. All stakeholders will be involved.
- 1 Seminar with field visit, in Task 5.2. Integration of methods developed in WP2 in a mobile application. The key stakeholders involved are educational centers. Additionally, also agriculture could be involved.
- 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action*. The action is addressed to citizens in general, through workshops/focus groups and surveys.

YEAR 3. 2023.

- **In month 30.**

- Workshop / focus group, in *Task 3.4. Identification of model scenarios through stakeholder interactions (connected to WP4)*. All stakeholders are involved.
- Workshop / focus group, in *Task 4.3. Engage with stakeholders and discuss the processes, policies, dynamics in the Mar Menor*. All stakeholders are involved.
- 1 Seminar with field visit, in Task 5.2. Integration of methods developed in WP2 in a mobile application. The key stakeholders involved are educational centers. Additionally, also agriculture could be involved.
- 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action*. The action is addressed to citizens in general, through workshops/focus groups and surveys.

- **In month 36.**

- Face-to-face meetings and workshops/focus groups, in *Task 2.5. Develop a citizen science and social sensing platform*. All stakeholders will be involved.
- Workshop / Focus group, in *Task 4.3. Discussion with stakeholders about the “realism” of the dynamics*. All stakeholders are involved.
- Workshop / Focus group in Task 5.1, *Conduction of two end-user workshops to identify stakeholder expectations*. All stakeholders will be involved.
- 1 Seminar with field visit, in Task 5.2. Integration of methods developed in WP2 in a mobile application. The key stakeholders involved are educational centers. Additionally, also agriculture could be involved.
- Workshop / Focus group in Task 5.4. Further development of the ASAP forecast portal to target the needs of users and stakeholders. All
- 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action*. The action is addressed to citizens in general, through workshops/focus groups and surveys.

- Workshop / Focus group in *Task 7.5. Organization of participatory activities to engage citizens in co-design data visualization interactive explorations.* Environmentalists' stakeholder group is involved.

YEAR 4. 2024.

- In **month 40**:
 - Interview in *Task 4.4. Parametrization of the model, with the possibility to gain additional information in follow-up interviews.* All stakeholders will be involved.
- In **month 42**:
 - 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action.* The action is addressed to citizens in general, through workshops/focus groups and surveys.
- In **month 48**:
 - Face-to-face meetings and workshops/focus groups, in *Task 2.5. Develop a citizen science and social sensing platform.* All stakeholders will be involved.
 - 1 final workshop in *Task 4.4. Models' presentation to the stakeholders in a final workshop.* All stakeholders are involved.
 - 1 citizen science action, in *Task 7.2. Implementation of eight citizen science action.* The action is addressed to citizens in general, through workshops/focus groups and surveys.
 - 1 Conference, in *Task 7.4. Plenary conference (50-100 participants).* All stakeholders will be involved.

7.1. Description of methods

These are the methods that will be performed:

- **Face-to-face meetings with 1 group.** This activity is aimed to get specific information of a particular topic.
- **Workshops:** this activity allows participant to explore in detail different topics from a practical perspective and lets the project manager to get useful information.
- **Surveys or Guided surveys.** Driven process that allows to get information from some pre-defined options.
- **Seminars with field visits.** Similar to workshops but including the field visit.
- **Online meeting / Interviews.** This activity allows to generate discussions, usually with open questions and possibility of extensive answers, freely.
- **Conferences.** Event with all the stakeholders.

7.2. Drawbacks, limitations, uncertainties and risks

There are some general problems that could hinder the development of the PPP. Other problems are quite particular and depend on the specific actions.

In general, there is the normal uncertainty associated to future activities, when unexpected situations can occur.

General possible problems

General problem that can difficult the activities are:

- **Lack of confidence, fear of the unknown and backfire unrealistic expectations of the stakeholders.** People become active if they feel that the consequences of their decisions will affect their lives or that they will benefit from the solution of the problem. During the participatory activities, there should be a clear communication of what they can expect of the process. That is why engagement is the key concept.
- **Lack of trust of the success of the project.** Stakeholders are reluctant to take part because of their previous experience in other processes or they believe that they can achieve their aims in other ways. To prevent this situation, the activities must indicate the outcomes of the process and there should be a follow-up approach.
- **Access to information.** In advance, stakeholders must receive previously some kind of information about the process. It will help to “prepare” the activity and get better feedback from it.
- **Insufficient knowledge about the project, the rights and obligations, or participation experience.** In a similar fashion, the activity must focus on the knowledge of the person who participates. Materials must be carefully prepared. The technical level of the content must be adapted to the audience.
- **Lack of attention to local problems.** The technical solutions of SMARTLAGOON must be adapted to the local conditions and stakeholders must clearly identify this connection: success is connected to usefulness.

Particular possible problems

There could be future possible problems in accomplishing this PPP:

- **Accumulation of activities.** Due to the organization of the project, some activities accumulate at the end of the year. This can generate some overwhelming situations.
- **Local celebrations, holidays, and stakeholders’ availability.** Connected to the previous problem, maybe the end of the year (particularly December) maybe is not the best month

to set up participatory workshops. A recommendation is to try to move some of the activities at the end of November, if possible.

- **Change in the way some parts of the project are afforded technically.** As the project moves forward, there are adjustments on the technical approach. This can generate changes in the way the participatory activities are performed.
- **Political internal conflicts.** There could be some possible dysfunctions between Local, Regional and National Administration stakeholders that could create unexpected situations.

8. Connection to the Communication, Dissemination and Exploitation Plan

SMARTLAGOON must submit in month 6 a Communication, Dissemination and Exploitation Plan. This Plan outlines and details the strategies that the project will put in place for communicating, disseminating, and exploiting the results and the progress of the project. A main difference between this plan and the PPP is that, in the PPP, the interaction between project and society in general is more explicit (it needs a clear and active way to exchange information between them). In the Communication, Dissemination and Exploitation Plan, the main objective is to inform, promote and communicate the activity and results.

In any case, the content is related in some respects to the PPP, as follows:

- This Plan can benefit from the stakeholder’s definition included in the PPP. Some actions are focused on the general audience, but others target specific groups. The list of stakeholders and their characteristics can help to make a better approach of those actions.
- The Plan proposes different communication tools, that are also monitored through indicators. Those indicators can be accomplished with the help of the promotion of the different activities included in the PPP. For example:
 - Every action in the PPP might generate different social media activities (e.g., followers increase, mentions, likes, etc.)
 - Every action in the PPP might generate media releases.
 - The newsletter planned in the Communication, Dissemination and Exploitation Plan can include news about the actions of the PPP.
 - The website should include a specific Section where the PPP can be accessed.
- There are communication tools that can be also participatory actions. That is why they are also included in the timeline included in the PPP. The Communication, Dissemination and Exploitation Plan includes a specific Section about them:
 - Citizen science activities.
 - Stakeholders’ workshops and interviews.
 - Public events.
 - Researchers, scientists, and experts’ meetings and workshops.

Each of these actions are detailed in the corresponding Section within the Communication, Dissemination and Exploitation Plan.

- All content generated by the PPP must follow the visual identify of SMARTLAGOON. The visual identity is defined in the Communication, Dissemination and Exploitation Plan.

There will be a continuous and direct coordination between Vielca (responsible of the PPP) and UNIBO (responsible of the Communication, Dissemination and Exploitation Plan), with regular meetings.

9. Conclusions

The key findings and conclusions of the PPP are:

- There is a framework for public participation in which Aarhus Convention and the Public Participation Directive are their main components. Nevertheless, there is not an official methodology to address public participation within this framework.
- The analysis of previous experiences in water management (whose analysis is included in this PPP) gives some insights into the way the PPP can be organized, as general principles, good practices and approaches.
- The PPP has been conceived to be useful as a tool to organize future participatory actions, but it is a live document that will be adapted to the evolution of the project.
- The PPP includes the identification of 99 different stakeholders, organized in 10 groups: agriculture, environment, fishing, Municipalities, professional institutions, Regional Government, Science and Universities, Spanish Government, tourism and water utilities. The PPP makes the characterization and mapping of each one, which will be useful for the rest of the project.
- The proposed methodology faces each of these groups with possible participatory actions through an integration matrix. The PPP has queried each participant of the SMARLAGOON's consortium to study these interactions one by one.
- The analysis of the integration matrix has generated the timeline for the project, including all future actions until month 48.
- The PPP includes a list of drawbacks, uncertainties and risks to be aware of.
- Finally, a brief analysis of connection points with the Communication, Dissemination and Exploitation Plan is included.



End of Deliverable 7.1



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