



LocAll4Flood

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## REPORT ON THE TESTING OUTCOMES OF THE ADAPTATION SOLUTIONS IN THE PILOT SITES

<https://locall4flood.interreg-euro-med.eu>



## Deliverable 2.3.1

<b>Project acronym</b>	LocAll4Flood
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# Executive summary

## EXECUTIVE SUMMARY

The LocAll4Flood project addresses the increasing frequency and intensity of flash floods in the Mediterranean by promoting a shift from reactive to proactive, participatory governance. It integrates technical, institutional, and societal dimensions through a Quadruple Helix framework, supported by stakeholder workshops, training, and tailored educational materials to improve risk perception and preparedness.

The training programme is structured into three interconnected modules covering flood risk management, governance, and Nature-Based Solutions. These modules strengthen technical capacity, foster stakeholder coordination, and promote sustainable mitigation strategies. Co-creation workshops follow participatory methodologies, enabling stakeholders to jointly identify vulnerabilities, analyse flood risk scenarios, and develop locally adapted adaptation and mitigation measures. This approach ensures both knowledge exchange and shared ownership of flood risk management strategies across pilot regions.

Educational materials developed within the project include a set of eight tools designed for different audiences, such as the general public, schools, and flood risk professionals. Their design was strongly informed by the results of baseline surveys conducted across the pilot regions. These surveys allowed the project to identify key gaps in flood risk awareness, understanding of flood processes, and preparedness levels among different target groups. They also provided insights into misconceptions about flooding, the perceived role of individuals and institutions, and the level of familiarity with Early Warning Systems and mitigation strategies. Based on these findings, the materials were tailored to address specific needs, focusing on improving risk perception, promoting safe behaviours, and encouraging the adoption of Nature-Based Solutions, while also supporting systems thinking and decision-making through interactive and engaging formats.



The implementation of these materials across six pilot regions combined direct distribution, exhibitions, digital dissemination, and stakeholder engagement. More than 18,000 printed materials were distributed, alongside exhibitions that attracted over 5,000 visitors. In addition, 33 institutions were directly engaged and 263 stakeholders were reached through targeted communication campaigns, while several external websites republished the materials, extending their visibility. These activities ensured broad outreach while maintaining local relevance and contextual adaptation.

Monitoring results confirm the effectiveness of the approach, with high satisfaction rates and clear improvements in participants' knowledge, awareness, and understanding of flood risk, governance, and mitigation measures. Stakeholders reported better ability to interpret flood scenarios, greater familiarity with Early Warning Systems, and increased awareness of preventive and adaptive strategies, while the educational materials showed strong usability and supported engagement and learning across target groups.

Based on these results, several recommendations emerge. Strengthening institutional integration would ensure long-term use of the materials in schools and civil protection frameworks. Enhancing monitoring mechanisms would allow better tracking of learning outcomes and digital engagement. Further integration of the materials into structured learning pathways would improve their educational impact. Expanding dissemination through regional and European networks would support scalability, while sustained stakeholder collaboration would reinforce the Quadruple Helix approach beyond the project's duration.

Overall, the LocAll4Flood project shows that effective flood risk management requires an integrated, participatory, and knowledge-based approach. By combining governance, stakeholder engagement, and educational tools, it enhances awareness, preparedness, and resilience. The results highlight the importance of adapting materials to local contexts, fostering collaboration, and using multiple dissemination channels to maximise impact and sustainability.



## 1. Introduction

Climate change is intensifying the frequency and magnitude of flood events across the Mediterranean region, increasing territorial vulnerability and exposing structural gaps in risk governance systems. While structural and technical measures remain essential, European policy frameworks increasingly emphasise the importance of participatory governance, societal preparedness and community engagement as key pillars of climate adaptation. Within this context, the LocalL4Flood project adopts a territorial and participatory approach to flood risk adaptation, embedding awareness-raising actions within its Integrated Multilevel Governance Model (IMGGM) and Territorial Engagement Model (TEM). The project recognises that effective adaptation requires not only technical solutions, but also informed stakeholders, coordinated institutions and empowered communities.

Participatory actions implemented in the pilot regions were designed to strengthen risk awareness, foster co-responsibility and support the co-creation of locally adapted solutions. These actions combined institutional capacity-building with community-oriented education in order to address both short-term governance needs and long-term cultural change.

Awareness-raising activities were structured around two complementary topics:

- a) **Stakeholder co-creation workshops and training programmes**, organised following a Quadruple Helix (4-Helix) approach, engaging actors from: (1) public authorities (local and regional administrations) and civil protection bodies and technical services, (2) knowledge institutions and research organisations, (3) private sector, and (4) civil society organisations, NGOs and community representatives. The 4-Helix configuration ensured cross-sectoral dialogue and multi-level coordination, integrating institutional, scientific, operational and societal perspectives. This approach enabled collective problem framing, identification of local vulnerabilities, clarification of roles and responsibilities, and joint exploration of adaptation pathways, including Nature-Based Solutions (NBS).



**b) Educational activities and tailored awareness materials**, targeting differentiated stakeholder groups — including citizens living and/or working in high-risk areas, the general public, schools (teachers and students), and flood risk managers — to enhance community resilience and preparedness for flash floods. These materials were developed following the analysis of baseline survey results (A1.3), which identified gaps in risk perception, preparedness levels and knowledge of local flood dynamics. Based on these findings, the educational resources were specifically designed to respond to identified needs and vulnerabilities. They were structured to be modular, adaptable and transferable across different territorial contexts, ensuring flexibility in implementation while maintaining coherence with the project's overall adaptation objectives.

The participatory strategy was guided by the following principles:

- **Inclusiveness**, ensuring representation across governance levels and stakeholder categories.
- **Co-creation**, moving beyond consultation towards collaborative design of solutions.
- **Contextualisation**, adapting methodologies and content to each pilot region's socio-environmental characteristics.
- **Capacity-building**, reinforcing both institutional competencies and citizens' understanding of flood Dynamics.
- **Evidence-based testing**, integrating monitoring mechanisms to assess changes in awareness, engagement and coordination.

**Workshops** were conceived not merely as information sessions, but as structured collaborative environments combining facilitated dialogue, participatory mapping, scenario analysis and group reflection. This methodology allowed the project to gather qualitative insights while simultaneously strengthening local ownership of adaptation strategies.

The testing phase pursued a dual objective: (i) to validate the relevance, usability and effectiveness of the developed training and educational tools;



and (ii) to assess their contribution to improved risk awareness, stakeholder coordination and alignment with broader climate adaptation objectives.

Monitoring mechanisms—including participation metrics, structured feedback collection and post-activity surveys—enabled the assessment of changes in knowledge, perception, engagement and perceived institutional readiness. The results presented in the following sections highlight both pilot-specific dynamics and transversal patterns across regions.

Overall, the participatory actions implemented under this activity represent a shift from reactive flood management towards proactive, collaborative and knowledge-based adaptation governance. By operationalising a Quadruple Helix framework and integrating institutional training with community education, the project contributes to strengthening the social and governance foundations required for sustainable and scalable flood risk adaptation in the Mediterranean area.



## 2. Training program and stakeholders co-creation workshops

### 2.1. Overview of training content

The LocAll4Flood training program is a structured educational initiative designed to empower local and regional stakeholders in the management of flash flood risks across small Mediterranean catchments. The program is built around the Integrated Multi-stakeholder Governance Model (IMGGM), which seeks to move beyond traditional, top-down, state-led decision-making processes toward a more collaborative and proactive approach. The training content is strategically divided into three main sessions (Figure 1), each pairing two technical modules to cover the entire Disaster Risk Management (DRM) cycle: prevention, preparedness, response, and recovery.



Figure 1. Training sessions and stakeholder co-creation workshops conducted across all locall4flood pilot regions.

### **Training 1: Policy foundations and technical preparedness**

This first training session establishes the legal and technological baseline for flood management:

- **Principles of Flood Risk Management and the EU Floods Directive:** Participants explore the requirements of Directive 2007/60/EC, which mandates that all EU Member States assess and map areas at significant risk of flooding. The module provides technical details on the three-step process: Preliminary Flood Risk Assessments (PFRA), Flood



Hazard and Risk Mapping (FHRM), and Flood Risk Management Plans (FRMP). It introduces essential concepts such as Return Periods, where floods are classified by their probability of occurrence (High/T5, Medium/T50, and Low/T200), and the use of 2D model simulations like HEC-RAS to predict runoff depth. The focus is on identifying five key receptors at risk: human health, economic activity, environment, and cultural heritage.

- **Early Warning Systems:** This module shifts the focus to proactive preparedness by introducing Early Warning Systems (EWS) as a critical tool for minimizing losses. It focuses on the Argos platform, a modular cloud-based solution that integrates sensors, algorithms, and official warnings into a single interface. Participants learn the differences between versions like Argos City, designed for municipal emergency managers, and how these systems utilize logical rules to provide hyperlocal impact warnings. The integration of real-time data from 112 calls and crowdsourcing is highlighted as a method to save time in emergency response.

### **Training 2: Governance, perception, and social engagement**

The second session focuses on the "human factor," emphasizing that technical tools are only effective when supported by robust governance and community trust:

- **Multi-level stakeholder engagement:** This module addresses the challenge of shifting from hierarchical governance to a bottom-up approach. It details the five pillars of IMG: National Government (strategies), Regional/Local Government (execution), Private Sector (investment/insurance), Academia (scientific knowledge), and the Local Community (local experience). Participants are trained on the guiding principles of LocAll4Flood, which include aligning identified risks with those perceived by stakeholders and using "smart tools" to facilitate cross-sectoral coordination.
- **Risk perception and community resilience:** Understanding that risk perception is shaped by prior experience, trust in authorities, and educational factors, this module provides strategies for effective



communication. It introduces participants to survey methodologies used in the project to gather input from citizens on their relationship with local rivers. Furthermore, it provides hands-on educational tools—such as giant puzzles and printable card games—designed to strengthen community resilience by engaging the general public and younger populations (aged 16 and above) in flood preparedness.

### **Training 3: Sustainable mitigation and Nature-Based Solutions**

The final session explores physical interventions that align flood protection with environmental sustainability:

- **Shifting from grey to green approaches:** This module contrasts traditional grey infrastructure (engineered structures like levees and stormwater pipes) with green infrastructure (Nature-Based Solutions). While grey approaches provide immediate protection, they often transfer risk downstream and lack adaptive capacity. Participants study a catalogue of NBS tailored to four topographical areas: Natural (reforestation), Urban (rain gardens, green roofs), Industrial (constructed wetlands), and Coastal (dune restoration). The module emphasizes the "Sponge City" design and the use of Hybrid Solutions that combine grey and green engineering for optimal resilience.
- **Nature-Based Solutions (NBS) for Flood Management:** Standardizing NBS as an "umbrella concept," this module aligns these actions with major EU frameworks, including the European Green Deal, the Biodiversity Strategy for 2030, and the Climate Adaptation Strategy. It explains how NBS provide multiple co-benefits, such as carbon sequestration, habitat restoration, and improved quality of life, while contributing directly to the goals of the Nature Restoration Law. Participants learn how to integrate these systems into long-term territorial planning.

### **Facilitation and interactive methodology**

The facilitation of the program follows a co-creation and interactive methodology to ensure the content is applicable to specific local contexts:



- **Multidisciplinary expertise:** Sessions are facilitated by a consortium of project partners, including technical specialists from HYDS, academic experts from AUTH and UIB, and regional coordinators from organizations like EWA, CNR and BDCA.
- **Collaborative co-design:** The training materials, such as the perception surveys, were co-designed using digital tools like Miro boards to capture the diverse expertise of all project partners.
- **Pilot-centric adaptation:** Each training session is customized to the specific conditions of the pilot catchments (e.g., the Anthemountas river basin or Malta). This involves using local topography and geological data to run simulations and identify specific vulnerable points in the area.
- **Direct engagement:** Facilitators use participatory workshops (see section 3.3) to align scientific risk mapping with stakeholder perception, ensuring that local knowledge and experience integrated into the final management plans.



## 2.2. Calendar of events and participation by pilot region

The co-creation workshops and training sessions were organised across all pilot regions, ensuring participation of stakeholders representing the Quadruple Helix — public authorities, civil protection and technical actors, research institutions, civil society organisations, and the private sector.

Each pilot adapted the schedule and participation to local contexts, ensuring broad representation and engagement in the prevention, adaptation, and mitigation stages of the project (Table 1).

Table 1. Trainings and co-creation workshops conducted within the framework of the LocAll4Flood project. Source: Own elaboration.

Training	Pilot region	Dates	Number of stakeholders
<b>Training and CW1 Prevention</b>	1 Vic-Gurb (Catalonia, Spain)	14th March 2025	18
	- Mallorca (Balearic Islands, Spain)	27th March 2025	24
	Varna & Dalgopol (Bulgaria)	5th March 2025	20
	Malta	24th March 2025	24
	Bari (Italy)	7th March 2025	26
	Thessaloniki & Central Macedonia (Greece)	14th March 2025	17
<b>Training and CW2 Adaptation</b>	2 Vic-Gurb (Catalonia, Spain)	20th May 2025	29
	- Mallorca (Balearic Islands, Spain)	4th June 2025	7
	Varna & Dalgopol (Bulgaria)	June 2025	20
	Malta	16th June 2025	27
	Bari (Italy)	4th July 2025	24
	Thessaloniki & Central Macedonia (Greece)	30th June 2025	21
<b>Training and CW3 Mitigation</b>	3 Vic-Gurb (Catalonia, Spain)	7th November 2025	24
	- Mallorca (Balearic Islands, Spain)	24th November 2025	23
	Varna & Dalgopol (Bulgaria)	November 2025	20
	Malta	21st November 2025	21
	Bari (Italy)	November 2025	20
	Thessaloniki & Central Macedonia (Greece)	21st November 2025	29



### 2.3. Workshop outcomes: information and insights collected

For detailed information on the workshops, stakeholder participation, and the collected insights, see also **Deliverables D2.2, D2.5.1 and D2.6**

#### **Prevention-stage co-creation workshop (CW1) – Planning, mapping, and EWS operational insights**

The first co-creation workshop (CW1) was conducted in each pilot region and brought together representatives from the Quadruple Helix — public authorities, civil protection and technical actors, research institutions, civil society organisations, and the private sector — to discuss flood risk management and measures related to the **prevention stage** of the project.

The workshop generated structured insights in the following areas:

##### **a) Governance and planning perspectives**

- Collective assessment of existing Flood Risk Management Plans (FRMPs) and associated measures.
- Reflections on strengths, implementation gaps, and opportunities in prevention, adaptation, mitigation, and preparedness.
- Clarification of roles and responsibilities within multi-level governance.

##### **b) Spatial and vulnerability mapping**

- Identification of vulnerable elements and critical infrastructure.
- Recognition of historically affected areas and past flood events.
- Prioritisation of zones requiring intervention.

##### **c) Early Warning System (EWS) operational considerations**

- Integration of EWS within existing emergency response chains.
- Identification of potential users and responsible entities.
- Data requirements, real-time information needs, and technical challenges.
- Opportunities to improve coordination and communication flows.



#### **d) Post-workshop testing feedback**

Following CW1, complete EWS versions were implemented in early 2025 across all pilot regions (Catalonia, Balearic Islands, Varna, Malta, Puglia, Central Macedonia). A structured testing phase was conducted from September to December 2025 with specific stakeholders and pilot leaders, producing:

- Performance assessment during real or simulated events.
- Feedback on usability, functionality, and operational effectiveness.
- Identification of additional user groups and institutional embedding opportunities.
- Recommendations for improvement and integration.

These post-workshop activities provided a formalised evidence base that complemented the participatory insights generated during CW1, ensuring both practical and operational relevance (see Deliverable 2.2 for further information).

#### **Adaptation-stage co-creation workshop (CW2) – Stakeholder roles, synergies, and educational attributes and implementation plan**

The second co-creation workshop (CW2) was conducted in each pilot region, involving representatives from the Quadruple Helix — public authorities, civil protection and technical actors, research institutions, civil society organisations, and the private sector — and was directly linked to the **adaptation stage** of the project.

CW2 expanded the insights generated in CW1 by focusing on adaptation-related governance, stakeholder engagement, and operationalisation of educational and awareness-raising resources. The workshop structured the stakeholder ecosystem, clarified roles, mapped synergies, and provided input for the practical implementation of educational materials. These workshops produced actionable knowledge supporting:

- Institutional anchoring of adaptation activities
- Cross-sectoral coordination and stakeholder engagement
- Effective targeting and delivery of educational resources
- Scalability and sustainability of awareness-raising measures beyond the project lifetime.



The main types of information collected during CW2 included:

- a) Stakeholder identification and validation:** Participants reviewed the proposed stakeholder map, identified missing actors, and validated the relevance of all stakeholders for adaptation-stage activities. Sectoral representation across public, private, research, and civil society actors was explicitly considered.
- b) Role definition:** Participants indicated their current and potential roles in adaptation-stage activities, including awareness-raising, capacity building, communication, and evaluation. This provided a structured overview of functional responsibilities and engagement levels across stakeholder groups.
- c) Synergies and collaboration dynamics:** Participants mapped current interactions and potential future collaborations among stakeholders, highlighting existing networks, communication flows, and opportunities for strengthening cross-sectoral coordination. This produced a relational map showing both established and desired connections.
- d) Educational materials attributes and implementation planning:** Participants reviewed educational and awareness resources and provided structured feedback on attributes such as accessibility, cultural relevance, clarity, and alignment with target audiences. They identified specific target audiences for each resource (e.g., citizens in risk zones, schools, NGOs, flood risk managers) and linked them to the stakeholders responsible for delivery. Practical information was collected regarding the timing, location, and methods of delivering educational and awareness activities, including suggested communication channels and dissemination strategies. Participants also highlighted opportunities to improve effectiveness, reach, and inclusivity, such as cultural sensitivity, accessibility, and adaptability to local conditions.



## **Mitigation-stage co-creation workshop (CW3) – Participatory System Dynamics Modelling (PSDM) and NBS co-design**

The third co-creation workshop (CW3) was conducted in each pilot region and involved representatives from the Quadruple Helix — public authorities, civil protection and technical actors, research institutions, civil society organisations, and the private sector. This workshop was directly linked to the **mitigation stage** of the project, supporting Task 2.4: *“Mitigation: Lay the foundations for implementation of Nature-Based Solutions (NBS) through a participatory-based approach.”*

The main objective of CW3 was to co-design and co-implement NBS for flash flood adaptation and risk mitigation in the nine pilot catchments, using a Participatory System Dynamics Modelling (PSDM) approach. The workshop combined scientific and local knowledge, qualitative perceptions, and quantitative data to support stakeholders in understanding system dynamics and designing effective mitigation measures.

The outcomes supported:

- Participatory development of NBS intervention scenarios.
- Identification of resistance mechanisms and strategies to overcome barriers in NBS implementation.
- Enhanced stakeholder understanding of system dynamics and potential policy levers.
- Integration of qualitative and quantitative knowledge into mitigation planning.

This process laid the foundations for the co-implementation of NBS in each pilot catchment, strengthening the mitigation capacity of local stakeholders and supporting the overall project goal of enhancing flash flood resilience through nature-based interventions. The participatory exercise was structured in two phases:

### **a) Identification of benefits, trade-offs, and barriers of NBS**

- Stakeholders analysed candidate NBS in their pilot catchment using geographical maps and NBS cards.



- Each group filled worksheets to describe:
  - Co-benefits (e.g., biodiversity, water quality, recreational services)
  - Trade-offs (e.g., reduction of agricultural land, initial costs)
  - Barriers (institutional, economic, social)
- Using a Causal Loop Diagram (CLD), stakeholders annotated co-benefits (green marker) and trade-offs/barriers, highlighting balancing and reinforcing loops to simulate system behavior and identify leverage points or policy resistance scenarios.

### **b) Scenario building based on CLD**

- The CLD was used to develop plausible intervention scenarios, integrating stakeholder insights with scientific and local knowledge.
- Participants explored how different NBS could influence system dynamics and generate co-benefits, while identifying mechanisms to overcome barriers and resistance.
- The participatory approach ensured that qualitative assumptions, local knowledge, and social/institutional constraints were explicitly incorporated into scenario modelling.



## 2.4. General results from the monitoring

The training programmes and workshops successfully enhanced stakeholders' knowledge, practical skills, and engagement in flood risk management. Satisfaction increased steadily from Session 1 to Session 3, reflecting the quality of content and the effectiveness of combining theoretical learning with practical exercises. Across all pilot regions, participants consistently highlighted the relevance of the sessions for improving preparedness, strengthening collaboration, and supporting the implementation of local flood risk management strategies (see **Deliverable 2.5.2** for further details).

### a) Session 1 – Flood Risk Management and Early Warning Systems

The first session focused on EWS and flood risk management. Across all pilot sites, 87 evaluations were collected. Overall satisfaction levels were high, with more than 80% of participants expressing positive evaluations. Specifically, training participants reported approximately 80% positive feedback, while workshop participants reached 90% satisfaction, and the general session evaluation achieved 95% positive responses. Key priorities identified by participants included:

- Implementation of non-structural measures such as EWS and Nature-Based Solutions.
- Strengthening public awareness, active prevention, and emergency planning.
- Adaptation of measures to local specificities.

Participants emphasized the need for adequate funding, qualified human resources, access to up-to-date scientific knowledge, and improved inter-institutional communication. Suggestions for future sessions highlighted allocating more time to practical activities, facilitating active participation, and ensuring engagement of actors responsible for implementing local strategies.



## **b) Session 2 – Improving public awareness and preparedness**

The second session focused on raising awareness and improving preparedness. A total of 89 evaluations were collected. Satisfaction levels increased slightly compared to Session 1: 89.7% positive for Training, 94% for Workshops, and 96.6% overall. Participants highlighted:

- Importance of community engagement through information campaigns, educational modules, interactive activities, and school-based programs.
- Necessity to enhance coordination among administrations and local organizations.

Improvements suggested included longer practical exercises, optimized educational materials targeted to local needs, clearer communication during sessions, and engagement of volunteers and online participants.

## **c) Session 3 – Nature-Based Solutions (NBS)**

The third session focused on NBS. Ninety-five evaluations were collected, reflecting exceptionally high satisfaction levels: 94.3% positive for Training, 96.2% for Workshops, and 97.3% overall. Feedback indicated that participants appreciated the practical integration of NBS concepts and their applicability to local contexts. Main obstacles identified for NBS implementation included economic constraints, social awareness gaps, regulatory and governance challenges, and urban planning limitations. Participants nonetheless valued the workshops, materials, and group discussions, confirming strong engagement and relevance.



### 3. Educational Materials

To inform the development of educational actions and tools, a face-to-face survey was conducted to assess social awareness and risk perception regarding flash floods in each pilot site. The final survey included seven sections: informed consent; context (living and working in the area); relationship with the river; knowledge and prior experiences; open questions on flood behaviors and risk reduction solutions; a battery of 20 Likert-scale questions covering hazard, vulnerability, exposure, response, and solutions; and socio-demographic information.

Surveys were conducted in local languages from July 24th to November 4th, 2024, across seven pilot sites, with a minimum sample of 385 respondents per site to ensure statistical accuracy. Analyses included frequency calculations for closed questions, coding of open responses (13 categories for Q8, 12 for Q9), and polarization assessment for Likert-scale questions.

Results revealed varying levels of flood risk awareness, connection to rivers, and knowledge of flood-related concepts among respondents across the seven pilot sites, highlighting differences in perceived vulnerability, trust in authorities, and support for flood mitigation measures. Key findings included:

- High flood experience in Birkirkara–Msida (62.3%) and lower levels elsewhere.
- Strong Human-Nature Connection overall, but weaker Human-River Connection in most pilot areas, which may reduce engagement with river conservation and adaptive flood behaviors.
- General lack of familiarity with key flood risk concepts (EU Flood Directive, Flood Risk Maps, Early Warning Systems, Nature-Based Solutions), with variation between sites.
- Misconceptions about effective flood risk reduction, such as overestimating the benefit of clearing river vegetation.



- Variable awareness and preparedness behaviors, with Mallorca sites showing both high concern and high polarization in responses regarding river interventions.

These survey results directly informed the design of the educational resources produced in the LocAll4Flood project, aiming to strengthen public understanding of flood risks and promote adaptive behaviors. The following materials were developed: Awareness-Raising Brochure, Travelling Exhibition “Before the Water Arrives”, Flut Island Board Game, Large-Format Emergency Infographic, Household Preparedness Magnet, Giant River Basin Puzzle.

Survey insights were directly linked to these educational actions. Low Human-River Connection highlighted the need to strengthen engagement with rivers, addressed through the **Giant River Basin Puzzle** and the **Flut Island board game**, enabling participants to explore river ecosystems, ecological functions, and nature-based solutions interactively. Limited awareness of flood risk and key concepts led to the **Awareness-Raising Brochure, Travelling Exhibition,** and **Large-Format Emergency Infographic**, providing accessible explanations of flood causes, early warning mechanisms, and preparedness strategies.

Misconceptions about risk reduction, such as overestimating vegetation clearing, were addressed in both the **Travelling Exhibition** and the **board game**, emphasizing sustainable interventions. Safe behavior knowledge gaps informed the inclusion of practical guidance across all materials, reinforced daily through the **Household Preparedness Magnet**. Finally, differences in audience familiarity and engagement prompted the use of participatory, playful, and age-appropriate formats, ensuring materials were inclusive, locally relevant, and adapted to diverse levels of prior knowledge and risk perception.



### 3.1. Description of the Education Materials and its target audience

Within the framework of the European project LocAll4Flood, a variety of educational resources have been developed to enhance resilience to flash floods in the Mediterranean basin. These resources are designed for audiences aged 16 and over, except for the board game (recommended for ages 11+) and the giant river basin puzzle (targeted at primary and lower secondary education). Moreover, these materials have been tailored to meet the needs of civic protection officers, NGOs, teachers and overall citizens, either living and/or working in the risk zone or outside it. As a result, four main target groups have been identified to ensure that the materials reach the appropriate audiences and maximize their impact:

- **TARGET RISK ZONE:** Materials should be distributed to all citizens who live and/or work in high-risk areas (e.g., hospitals, industries, offices), including teachers and students. These resources will focus on safety behaviors specific to flash flood-prone zones, helping individuals understand risks and take appropriate precautions.
- **TARGET GENERAL PUBLIC:** Materials should be made available to the all citizens to ensure widespread awareness and preparedness. These resources will provide essential knowledge on flash flood risks, safety measures, and emergency response actions, catering to diverse audiences such as NGOs, families, and schools.
- **TARGET SCHOOLS:** Materials specifically designed for educational institutions should be provided to teachers and students, with a focus on age-appropriate learning and emergency preparedness. These resources will incorporate interactive and engaging activities to enhance students' understanding of flash flood risks and safety behaviors, while also fostering a deeper knowledge of freshwater ecosystems, including their services and ecological functions.



- **FLOOD RISK MANAGERS:** Materials should be tailored for professionals responsible for flood risk management, including policymakers, emergency responders, urban planners, and environmental agencies. These resources will focus on risk assessment, mitigation strategies, and coordinated emergency response efforts. They will provide technical insights, best practices, and decision-making tools to enhance preparedness and resilience in flash flood-prone areas.

In addition, **all materials have been translated** into **English** to ensure broader dissemination and use in Malta, into **Italian** for Bari, into **Catalan** for Catalonia, into **Mallorquín** for Mallorca, into **Bulgarian** for Bulgaria, and into **Greek** for Greece. Furthermore, given the interest from several regions in Spain and Andorra, the materials will also be translated into **Spanish** in April. All materials are available on the project website: <https://locall4flood.interreg-euro-med.eu/what-we-achieve/>

The following section presents a set of communication and educational materials designed to enhance flood risk awareness, preparedness, and participatory governance across different target audiences:

### **M1. Large-format emergency infographic**

- **Target audience:** General públic
- **Format:** Large-format infographic for public display
- **Description:** Designed for public display in buildings, businesses, and educational spaces for quick reference in flood-prone areas.
- **Content:** Visual alerts including the slogan “Hey, you are in a flood-prone area!”; safety instructions presented through icon-based reminders highlighting key prohibitions; connectivity elements such as QR codes linking to additional resources and civil protection applications.
- **Purpose:** Enable rapid access to essential safety information and reinforce awareness in exposed areas.



# Ep, estàs en zona inundable!

Descarrega't els diversos materials i jocs de taula que hem fet!



## Què fer i què evitar abans, durant i després de pluges intenses o avis d'inundació?

Abans d'una inundació sobtada	
<p><b>Coneix les zones de risc</b> Identifica àrees propenses a inundacions (rius, rieres, zones baixes).</p>	<p><b>No ignoris avisos d'inundació ni recomanacions d'evacuació</b> Segueix les alertes meteorològiques i les indicacions de les autoritats.</p>
<p><b>Planifica les rutes d'evacuació</b> Coneix les rutes disponibles, especialment si vius en zona de risc.</p>	
Durant una inundació sobtada	
<p><b>Si pots, puja als pisos superiors</b> Si no, surt de l'edifici i dirigeix-te a un refugi segur, lluny de les zones propenses a acumulacions d'aigua.</p>	<p><b>No travessis el llit del riu ni passos soterranis</b> Ni a peu ni amb vehicle: no travessis rius, rieres, torrents, passos soterranis ni zones inundables. No subestimis la força de l'aigua.</p>
<p><b>Prepara't</b> Desconnecta l'interruptor general de l'electricitat i tanca portes i finestres.</p>	<p><b>No salvis objectes materials</b> Evita intentar salvar objectes de casa ni baixar al garatge o soterrani a buscar el cotxe.</p>
<p><b>Escolta les autoritats</b> Segueix les instruccions de Protecció Civil i serveis d'emergència per ràdio, mòbil (p.ex. EU_ALERT) o megafonia.</p>	<p><b>No facis servir el cotxe</b> Surt del vehicle i busca un lloc elevat i segur. No intentis creuar ponts, carrers o carreteres inundades.</p>
<p><b>Avisa i ajuda els altres</b> Ajuda persones vulnerables, però prioritza sempre la teva pròpia seguretat.</p>	<p><b>No saturis les línies d'emergència</b> Fes un ús responsable del telèfon.</p>
Després d'una inundació sobtada	
<p><b>No tornis a casa fins a rebre avis</b> Les autoritats t'informaran quan sigui segur.</p>	<p><b>No entris a casa sense revisar abans els danys</b> Comprova l'estructura i possibles cables elèctrics caiguts.</p>

En cas d'emergència, truca al 112

Per a més informació consulta:



Estigues al cas App Seguretat Ciutadana - Vic, Guàrdia Urbana



Figure 2. Large-Format Emergency Infographic from Vic



## **M2. Household preparedness magnet**

- **Target audience:** Households in flood-prone areas
- **Format:** Daily-use magnet
- **Description:** A practical, everyday reminder designed for use in homes located in flood-prone areas.
- **Content:** Key information includes four critical actions to be taken during a flood event and the emergency number 112.
- **Purpose:** Maintain constant awareness, preparedness, and vigilance in high-risk environments.



Figure 3. Household Preparedness Magnet of the Consell Comarcal d'Osona

## **M3. Awareness-raising informational brochure**

- **Target audience:** General public (16+)
- **Format:** Informational brochure
- **Description:** A communication tool designed to explain the origin of floods and the influence of climate change on their increasing frequency.
- **Content:** Includes technical and visual content such as a comparison of urbanisation in the Vic Plain between 1956 and 2023, illustrating how the





alert systems); flood risk management in Europe (including the European Floods Directive 2007/60/EC and Flood Risk Management Plans); hazard maps based on return periods (T10, T100, T500) identifying vulnerable areas and critical infrastructure; risk perception studies (citizen perception, trust in authorities, and evaluation of measures such as river renaturalisation); emergency protocols for all flood phases; urbanisation impacts (increasing impermeable surfaces and drainage challenges); Nature-Based Solutions (such as rain gardens, green roofs, permeable pavements, and riverbank restoration); and governance through the Quadruple Helix model involving public administration, academia, private sector, and civil society.

- **Purpose:** Promote community preparedness and provide a comprehensive understanding of flood risk and governance.



Figure 5. Travelling Exhibition “Before the Water Arrives” from Vic and Gurb

**M5. Flut Island online decision-making game**

- **Target audience:** Secondary students and general public (11+)
- **Format:** Interactive web-based educational resource
- **Description:** A browser-accessible interactive game in which players assume the role of decision-makers responsible for managing flood risk on a fictional island under increasing climate pressures and extreme weather conditions.
- **Content:** Incorporates scenario-based decision-making where players select prevention, preparedness, and mitigation measures; trade-off



analysis balancing environmental, social, and economic impacts; risk interpretation involving hazard levels, vulnerable zones, and infrastructure exposure; consequence feedback illustrating the effects of decisions on community safety, ecosystem health, and long-term resilience; and adaptive strategy building; learning objectives include understanding flood risk drivers and cascading impacts, recognising the importance of Early Warning Systems and preparedness planning, evaluating the role of Nature-Based Solutions alongside grey infrastructure, and strengthening critical thinking under uncertainty; scenarios are inspired by LocAll4Flood pilot regions and Mediterranean flood dynamics.

- **Purpose:** Enhance decision-making capacity and systems thinking in complex flood risk scenarios.

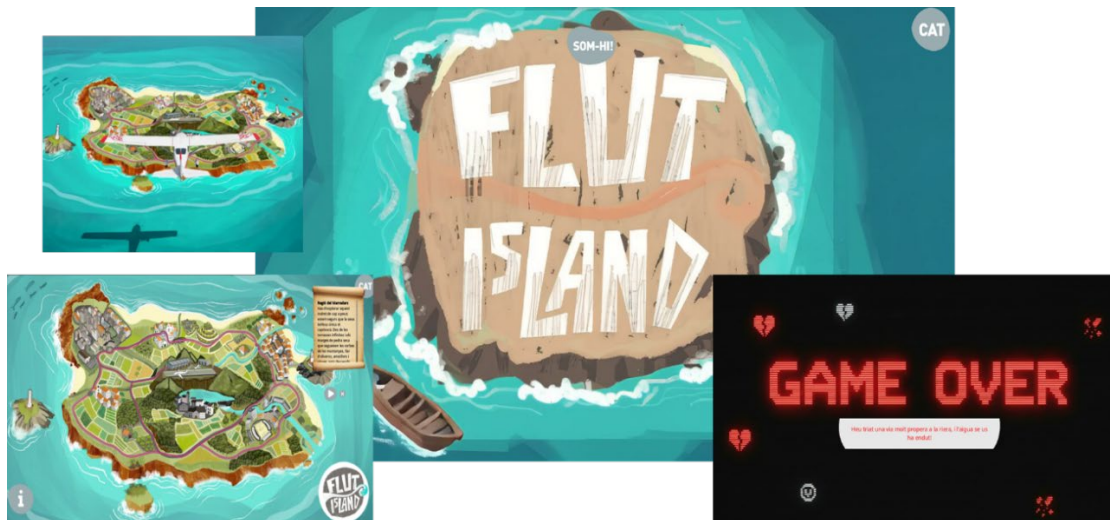


Figure 6. Some examples of the *Flut Island* online decision-making game

### **M6. Flut Island Print & Play board game (including a teaching guide)**

- **Target audience:** Secondary students and general public (11+)
- **Format:** Educational Print & Play resource
- **Description:** An educational resource available in two versions (for secondary students and general public) in which players act as environmental investigators analysing flood causes on a fictional island following a catastrophic storm event.
- **Content:** Includes multiple challenges such as “Put in Order” (organising emergency plan phases), “Valid Claim?” (distinguishing unavoidable accidents from human negligence), “Risk in Coordinates” (interpreting



maps and orthophotos), “Escaping Time” (calculating water velocity based on land type), and “NBS Secret” (identifying effective Nature-Based Solutions); the island and its zones are inspired by pilot regions including Malta, Italy, Bulgaria, Greece, the Balearic Islands, and the Vic Plain.

- **Purpose:** Support experiential learning and improve understanding of flood causes, impacts, and solutions.



Figure 7. Some examples of the Flut Island Game and Teaching Guide

### **M7. Giant river basin puzzle (including a teaching guide)**

- **Target audience:** Primary and secondary students
- **Format:** Hands-on educational puzzle with supporting dossier
- **Description:** A tactile learning tool that enables users to explore river basin dynamics and human–environment interactions through guided activities.
- **Content:** Addresses ecological functions and biodiversity (from macroinvertebrates to mammals, including water cycle and soil processes); ecosystem services (recreation, agricultural and livestock provisioning, and flood regulation); and human interaction and Nature-Based Solutions (illustrating impacts of urbanisation and infrastructure while highlighting solutions such as riverbank restoration); it also facilitates the analysis of cause–effect relationships between geography, land use, and environmental function.



- **Purpose:** Foster understanding of ecosystem functioning and resilience to flood risk through interactive and systems-based learning.



Figure 8. Giant River Basin Puzzle

### **M8. Flood Risk Management Plan card game**

- **Target audience:** Diverse stakeholders (education, workshops, training contexts)
- **Format:** Interactive card-based educational resource
- **Description:** A participatory tool in which participants assume the role of local decision-makers tasked with developing a comprehensive Flood Risk Management Plan in response to increasing flash flood risks.
- **Content:** Includes gameplay dynamics such as measure selection (covering prevention, adaptation, and mitigation), strategic planning under limited resources and contextual constraints, stakeholder collaboration through negotiation among actors with different roles and interests, impact evaluation of short- and long-term effectiveness, and an integrated approach combining structural, non-structural, and Nature-Based Solutions; learning objectives focus on understanding FRMP structure and components, recognising interdependencies between



strategies, enhancing strategic thinking and coordination skills, and promoting evidence-based decision-making; measures are based on real applications in Mediterranean pilot regions, reflecting governance challenges and trade-offs.

- **Purpose:** Strengthen multi-actor governance skills and strategic planning in flood risk management.



Figure 9. Flood Risk Management Plan card game

The description of the eight materials is also presented below in a summary table (Appendix 1).



### 3.2. Implementation at each pilot region

This section presents the implementation of the project activities across each pilot region, highlighting the specific approaches, actions, and outcomes achieved in the different contexts.

#### 3.2.1. Local attributes

A stakeholder engagement workshop was conducted to collaboratively review and refine the attributes of each educational and communication material, ensuring that they respond to the needs and expectations of the different pilot contexts. This participatory approach is important because it integrates local knowledge, enhances the relevance and usability of the resources, and strengthens ownership among stakeholders, thereby increasing the effectiveness and long-term impact of the materials. This summary table includes the proposed characteristics for all working tables in the participatory session:

Table 2. Summary of the key attributes of the communication and educational materials (M1–M8), as defined through a participatory workshop with stakeholders from the pilot regions.

Code	Name	Resource attributes
M1	Large-Format Emergency Infographic	<b>Inclusive:</b> designed with universal pictograms, regardless of age or abilities. <b>Visual and direct:</b> large graphics for quick and intuitive reading. <b>Large and durable:</b> wide format and resistant material for everyday use. <b>Essential information:</b> only the key message, without distractions.
M2	Household Preparedness Magnet	<b>Inclusive:</b> designed with universal pictograms, regardless of age or abilities. <b>Visual and direct:</b> large graphics for quick and intuitive reading. <b>Large and durable:</b> wide format and resistant material for everyday use. <b>Essential information:</b> only the key message, without distractions.
M3	Awareness- Raising Informational Brochure	<b>Complementary resource:</b> for training sessions. <b>Content:</b> practical and theoretical information and recommendations. <b>Clarity:</b> written in easy-to-read language.
M4	Travelling Exhibition	<b>Logistics:</b> easy to assemble and transport. <b>Flexibility:</b> adaptable for indoor and outdoor use.



Code	Name	Resource attributes
	"Before the Water Arrives"	<b>Engagement:</b> interactive and designed to encourage participation through social media.
M5	Flut Island Online Decision-Making Game	<p><b>Adaptability:</b> suitable for different age groups (adolescents and adults).</p> <p><b>Accessibility:</b> inclusive language and easy access via municipal and institutional websites.</p> <p><b>Multimedia:</b> highly visual and includes audio support.</p> <p><b>Feedback:</b> provides responses to errors.</p> <p><b>Engagement:</b> includes a scoring system to increase competitiveness and attractiveness, especially for younger users.</p>
M6	Flut Island Print & Play board game (including a teaching guide)	<p><b>Contextualisation:</b> option to incorporate the local environment to increase realism and pedagogical value.</p> <p><b>Accessibility:</b> easy-to-read resource for all users.</p> <p><b>Difficulty:</b> includes different levels of complexity.</p> <p><b>Roles and structure:</b> promotes defined player roles with a clear common objective.</p> <p><b>Clarity:</b> clearly explains the functioning, objectives, and narrative of the game.</p>
M7	Giant River Basin Puzzle (including a teaching guide)	<p><b>Material:</b> made with resistant materials.</p> <p><b>Adaptability:</b> adjustable to different participant age groups.</p> <p><b>Design:</b> illustrated with drawings and highly colourful.</p>
M8	Flood Risk Management Plan Card Game	<p><b>Realism:</b> uses real images to facilitate identification of resources.</p> <p><b>Contextualisation:</b> based on real, local measures.</p>

Overall, the materials developed incorporate most of the attributes identified during the participatory workshop. However, a few attributes were not fully integrated due to the specific nature and constraints of each resource. The travelling exhibition "Before the Water Arrives" does not include a strong focus on social media-driven engagement, as its primary aim is in-person, experiential learning and direct interaction with visitors rather than digital interaction. The Flut Island Game and Teaching Guide (board game) does not explicitly include multiple levels of difficulty, as it is designed with a structured narrative and gameplay progression that already balances accessibility and learning objectives. Similarly, the Flut Island Online Decision-Making Game does not incorporate a scoring system to emphasise competitiveness, since its



main focus is on reflective decision-making and learning through feedback rather than competition. Finally, the Giant River Basin Puzzle does not strictly meet the requirement of being made with highly resistant materials, as its production depended on each pilot (e.g., in the Vic–Gurb pilot, it was printed on durable materials).

### 3.2.2. Stakeholders’ map for promoting awareness at each pilot

From the workshop conducted during the second session (see Section 2.3), participants reviewed the stakeholder map and reflected on whether any key actors may have been overlooked in the initial identification, particularly those who could play a relevant role in the prevention, adaptation, or mitigation of flash flood risk. This exercise contributed to enriching the initial mapping by incorporating local knowledge and diverse perspectives, while also helping to identify potential gaps in stakeholder representation. The contributions collected were organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—thereby enabling a more structured understanding of the stakeholder ecosystem and highlighting the need for coordination across different levels and sectors. The following table presents the number of stakeholders identified in each pilot case, disaggregated by the four main categories: Academia and Research, Private Sector, Civil Society and Local Community, and Administration and Policymakers. It allows for a comparative overview of stakeholder distribution across the different study areas.

Table 3. Number of stakeholders identified per category across the different pilot cases

Pilot case	Academia & Research	Private Sector	Civil Society & Local Community	Administration & Policymakers
Malta	7	13	20	23
Palma de Mallorca (Balearic Islands, Spain)	1	13	20	19
Varna & Dalgopol (Bulgaria)	4	6	6	13
Thessaloniki & Central Macedonia (Greece)	4	5	3	18
Bari (Italy)	1	2	3	8
Vic–Gurb (Catalonia, Spain)	7	12	30	14



### **Malta stakeholders' map**

In the case of Malta, the results reveal a broad and diverse stakeholder landscape (**Annex 2**). A total of 7 stakeholders were identified under *Academia and Research*, mainly comprising universities and research centres that contribute to knowledge generation and innovation. The *Private Sector* accounts for 13 stakeholders, bringing together professional associations and healthcare organisations and reflecting the diversity of economic and professional actors involved.

With 20 stakeholders, *Civil Society and Local Community* encompasses educational institutions, environmental NGOs, volunteer groups, and community organisations, highlighting the breadth of grassroots engagement. Finally, *Administration and Policymakers* is the largest group, with 23 stakeholders, including national authorities responsible for water management, environmental protection, spatial planning, and civil protection, alongside local councils and regional authorities that play a key role in territorial implementation.

### **Palma de Mallorca stakeholders' map**

In the case of the Palma de Mallorca (Balearic Islands), the results reveal a broad and diverse stakeholder landscape (**Annex 3**). A total of 1 stakeholder was identified under *Academia and Research*, represented by a university research group contributing scientific knowledge and technical expertise. The *Private Sector* accounts for 13 stakeholders, including educational institutions, businesses, industrial actors, agricultural entities, and private healthcare providers, reflecting a heterogeneous set of actors involved in economic activity and service provision.

With 20 stakeholders, *Civil Society and Local Community* encompasses environmental NGOs, youth and neighbourhood organisations, cultural and religious centres, healthcare facilities, media, libraries, and sports entities, highlighting strong community engagement and social diversity.

Finally, *Administration and Policymakers* comprises 19 stakeholders, including local and regional authorities, water and emergency management



bodies, meteorological services, and park rangers, all of which play a key role in governance, coordination, and territorial implementation.

### **Varna and Dalgopol region stakeholders' map**

In the case of the Varna and Dalgopol region (Bulgaria), the results reveal a broad and diverse stakeholder landscape (**Annex 4**). A total of 4 stakeholders were identified under *Academia and Research*, including universities and public research institutes that provide scientific knowledge and technical support. The *Private Sector* accounts for 6 stakeholders, comprising businesses operating in risk zones as well as media and risk communication actors, reflecting a mix of economic activity and information-related roles.

With 6 stakeholders, *Civil Society and Local Community* includes educational institutions, environmental associations, nature-related clubs, and volunteer groups, highlighting the role of local engagement and community-based initiatives. Finally, *Administration and Policymakers* represents the largest group, with 13 stakeholders, including regional and local administrations, basin authorities, emergency services, police, and other public institutions involved in water management, civil protection, and territorial governance.

### **Thessaloniki and Central Macedonia region stakeholders' map**

In the case of the Thessaloniki and Central Macedonia region (Greece), the results reveal a broad and diverse stakeholder landscape (**Annex 5**). A total of 4 stakeholders were identified under *Academia and Research*, including public research centres, universities, and think tanks that contribute to scientific knowledge and policy-relevant expertise. The *Private Sector* accounts for 5 stakeholders, encompassing engineering consultancies, professional associations, and organisations operating in risk-prone areas, reflecting their involvement in technical development and advisory roles.

With 3 stakeholders, *Civil Society and Local Community* includes environmental NGOs and civil protection volunteers, highlighting the role of community-based engagement and environmental awareness. Finally, *Administration and Policymakers* represents the largest group, with 18 stakeholders. This category includes municipalities, regional and decentralized authorities, water management agencies, meteorological services, and civil protection and security services, all of which play a central



role in governance, coordination, and territorial implementation of water and risk management policies.

### **Bari region stakeholders' map**

In the case of the Bari region (Italy), the results reveal a diverse stakeholder landscape (**Annex 6**). A total of 1 stakeholder was identified under *Academia and Research*, represented by a university that contributes to education, scientific knowledge, and technical expertise.

The *Private Sector* is represented by 2 stakeholders, including media and other actors involved in risk communication and dissemination of information. With 3 stakeholders, *Civil Society and Local Community* includes environmental and cultural organisations as well as civil protection volunteers, highlighting the role of community engagement, awareness, and local participation. Finally, *Administration and Policymakers* represents the largest group, with 8 stakeholders. This category includes local and regional authorities, water management bodies, basin authorities, and civil protection and emergency services, reflecting a strong institutional presence in territorial planning, environmental management, and risk governance.

### **Vic-Gurb stakeholders' map**

In the case of the Catalonia (Vic–Gurb) area, the results reveal a highly diversified stakeholder landscape (**Annex 7**). A total of 7 stakeholders were identified under *Academia and Research*, including universities and research centres that contribute to scientific knowledge, technical expertise, and innovation, as well as applied research groups with potential links to the territory.

The *Private Sector* accounts for 12 stakeholders, encompassing educational institutions, research and consultancy actors, and a range of organisations involved in health and social care, reflecting a combination of economic activity and service provision. With 30 stakeholders, *Civil Society and Local Community* represents the most extensive and heterogeneous group. It includes educational institutions, neighbourhood and cultural associations, environmental organisations, civic centres, youth and scout groups, social and



religious entities, and public health-related services, highlighting strong community engagement and social diversity across the territory.

Finally, *Administration and Policymakers* comprises 14 stakeholders, including local and regional authorities, civil protection and emergency services, water management agencies, law enforcement, and environmental protection bodies. This category plays a central role in governance, territorial planning, and risk management, ensuring coordination across institutional levels.

### **3.2.3. Implementation Plan for each pilot conducted - Who was involved, how the materials were delivered, and where activities took place.**

A comprehensive set of communication and engagement materials (M1–M8) has been implemented across all pilot areas within the framework of the project. These materials reflect a multi-level and multi-actor engagement strategy, designed to address both the general public and specialised stakeholders through complementary formats and dissemination channels. They range from informational and awareness-raising tools (e.g., large-format infographics, brochures, and magnets) to interactive and educational resources (e.g., serious games, puzzles, and exhibitions), thereby ensuring a diversified outreach approach.

The corresponding implementation plans for all pilot areas are structured according to target audiences, responsible actors, deployment contexts, timelines, and implementation approaches.

#### **Implementation Plan of Malta**

In **Malta (Annex 8)**, the set of materials M1–M4 targets citizens and students, with dissemination coordinated through key institutional stakeholders such as Regjun Tramuntana and the Ghajn – National Awareness Water Conservation Centre, as well as through wider stakeholder networks. The large-format emergency infographic (M1), household preparedness magnet (M2), awareness-raising brochure (M3), and travelling exhibition “Before the



Water Arrives” (M4) are primarily distributed through regional hubs and the Ghajn Educational Centre, as well as via social media and institutional channels. Their deployment is supported by coordinated delivery actions and media coverage organised by EWA, ensuring visibility and public outreach across the pilot area.

Interactive and educational tools are also a central component of the strategy. The Flut Island online decision-making game (M5) and the print & play board game (M6) are designed to engage general users and students through digital and classroom-based activities, supporting learning and awareness on flood risk management. These materials are disseminated online through institutional platforms and stakeholder networks. In addition, the giant river basin puzzle (M7) targets pupils, teachers, and families, and is distributed through partner institutions and educational centres, further promoting experiential and participatory learning approaches. Finally, a more specialised tool is the Flood Risk Management Plan card game (M8), which targets university students and teachers at the University of Malta and is integrated into academic teaching contexts, particularly within Earth Systems education. Its dissemination follows direct collaboration between EWA and the university, complemented by communication activities.

### **Implementation Plan of Palma de Mallorca (Balearic Islands, Spain)**

In **Palma de Mallorca (Annex 9)**, the Large-Format Emergency Infographic (M1) was widely disseminated to support awareness among the general public, schools, and people living or working in flood-prone areas. Its distribution involved multiple stakeholders, including AEMET, Firefighters Palma, Residència Son Güells, IES Son Pacs, and Col·legis Diocesans Mallorca, with additional coordination expected from Emergències 112 Illes Balears. The material was distributed in flood-prone areas such as Palma and Marratxí, as well as in schools and visitor centres, with a combination of magnets and posters tailored to different partners and audiences.

The Household Preparedness Magnet (M2) and the Travelling Exhibition “Before the Water Arrives” (M4) further support public engagement through



physical and visual communication. The exhibition, installed at the Palma Fire Station, benefits from high visibility due to the high number of visitors, including school groups, and is planned to be extended to additional public spaces in collaboration with institutional stakeholders. These materials are designed to reach citizens in high-risk areas through public buildings and community spaces, enhancing awareness and preparedness.

Complementing these, the Awareness-Raising Informational Brochure (M3) is distributed across a wide network of stakeholders, including public institutions, educational centres, and local businesses. Dissemination takes place in flood-prone areas, with confirmed distribution through partners such as Firefighters Palma, AEMET, and local establishments, while other institutional partners are still in the process of deploying the materials. This multi-channel approach ensures both physical and community-based outreach, supported by ongoing distribution efforts.

The Flut Island Online Decision-Making Game (M5) is planned for dissemination through institutional platforms such as Moodle and EDUCAPALMA, with strong interest from stakeholders, particularly Firefighters Palma, who intend to use it during school visits. The Flut Island Print & Play Board Game (M6) and the Giant River Basin Puzzle (M7), both including teaching guides, are designed for schools and the general public, with online availability supporting their use in educational settings. These materials are expected to be integrated into school activities and supported by digital platforms to facilitate access.

Finally, the Flood Risk Management Plan Card Game (M8) implementation was led by the University of the Balearic Islands. The tool has already been used with students and is expected to be adopted by additional stakeholders, supporting learning processes and the integration of Nature-Based Solutions in flood risk management.

### **Implementation Plan of Varna Region (Bulgaria)**

In the **Varna Region (Annex 10)**, materials M1–M4 primarily target the general public and students, with a focus on increasing awareness and preparedness



for flood risks. These materials are disseminated through public institutions, schools, municipal facilities, and community spaces, as well as through public events and targeted distribution campaigns. In particular, the travelling exhibition (M4) ensures extended visibility through its rotation across multiple locations within the pilot area. Materials M5 and M8 are designed to engage both general users and specialised stakeholders, including emergency responders, technical staff, and institutional representatives. Through digital tools and serious gaming approaches, these materials support learning, decision-making, and capacity building. Their dissemination relies on online platforms, institutional websites, and targeted stakeholder engagement activities.

Materials M6 and M7 focus on school communities, including pupils, teachers, and families, promoting experiential and participatory learning through gamified educational tools. These materials are implemented in close collaboration with partner schools across the region, supporting the integration of flood risk awareness into educational settings. In addition, M9 (Nature-Based Solutions cards) provides targeted support for authorities and experts, contributing to knowledge transfer and facilitating discussions on sustainable flood risk management approaches during stakeholder events.

The dissemination of project materials in the Varna pilot area followed a dual approach combining printed and downloadable formats to ensure broad and targeted outreach. Printed materials were distributed among key institutional stakeholders, including the Regional Administration Varna, Dalgopol Municipality, the National Institute of Meteorology and Hydrology, civil protection services, and various regional organisations and agencies, thereby supporting institutional uptake and cascading dissemination through official channels. In parallel, downloadable materials were disseminated via email and made accessible through the BDCA website and the official LOCALL4FLOOD project platform, targeting a wide network of schools, including primary and secondary education institutions, as well as community centres, libraries, and additional civil protection services across the pilot municipalities. This combined approach enabled both dissemination towards decision-makers and professionals, and engagement with students,



Overall, the implementation is coordinated primarily by BDCA Varna, in collaboration with regional and local authorities such as the Regional Administration Varna and partner municipalities. The activities are concentrated in the period November 2025 to February 2026, following the co-creation process and building on stakeholder engagement achieved during the project. The status of implementation indicates that all materials have reached a confirmed readiness stage, while their full deployment remains ongoing. This reflects a phased implementation approach, ensuring progressive dissemination, stakeholder involvement, and adaptation to local contexts.

### **Implementation Plan of Thessaloniki and Central Macedonia (Greece)**

In **Thessaloniki and Central Macedonia (Annex II)**, a first group of materials (M1–M4) primarily targets the general public across different age groups, with particular emphasis on intergenerational knowledge transfer (e.g., children engaging with parents, employees of affected local businesses, specialized stakeholders (e.g., the Fire Service)). These materials are deployed in high-visibility public spaces, such as municipal buildings, museum, educational center, public events, and exhibitions, and are supported by field campaigns and media outreach activities. Their objective is to raise awareness of flood risks and promote preparedness behaviours in an accessible and inclusive manner.

A second group (M5 and M8) is specifically designed for specialised stakeholders and children, including representatives from companies, organisations, and public authorities involved in flood risk management, as well as schools into Anthemountas river catchment. These materials rely on serious gaming approaches, implemented both online and through facilitated in-person sessions, to support decision-making, capacity building, and stakeholder engagement. Their dissemination is reinforced through targeted communication strategies, including direct outreach and institutional collaboration, social media campaigns, and school visits.



Materials M6 and M7 focus on educational and community-oriented engagement, targeting children, teachers, and families. These tools combine playful and pedagogical elements (e.g., board games, puzzles, and teaching guides) and are implemented in collaboration with schools, libraries, and professional organisations. This approach fosters experiential learning and supports the integration of flood risk awareness into educational contexts.

Overall, the implementation strategy is characterised by strong collaboration with local authorities, NGOs, academic institutions, and professional bodies, ensuring both territorial anchoring and stakeholder ownership. The activities are concentrated within the period November 2025 to May 2026, combining preparatory actions, on-site deployment, and communication campaigns. The status of implementation indicates that several actions have already been successfully carried out, for example in the Thermi and Thermaikos areas by partners such as the municipalities, NOESIS (Science Center & Technology Museum), and schools, while others are still ongoing or are planned for replication in additional municipalities, such as Thessaloniki. This demonstrates a phased and adaptive rollout, allowing for scaling-up and contextual adaptation of the materials.

### **Implementation Plan of Bari (Italy)**

In **Bari (Annex 12)**, an infographic with emergency preparedness checklists (M1) was disseminated to support awareness among the general public, schools, and people living or working in flood-prone areas. The material was distributed through the Polytechnic University of Bari and schools, with additional but not fully implemented plans for engagement with Civil Protection due to stakeholder availability constraints. An exhibition accompanied by a scientific conference (M2) was organised at the Polytechnic University of Bari, DicaTech, bringing together institutional and technical stakeholders to discuss the theme “Interaction between Flood Risk and the city,” over a three-day event. Complementing this, brochures with similar content (M3) were produced and distributed in risk-prone areas, with dissemination also planned through social media and institutional websites, although some stakeholder involvement remained pending.



Further engagement was promoted through interactive tools, including an online decision-making game (M4) made available via institutional websites and aimed at schools and the wider public, as well as a printable treasure hunt game (M5) designed for educational use in schools and released both online and physically. A didactic guide combined with guided trips (M6) was developed in collaboration with schools and an environmental association, with planned visits to Lama Balice and subsequent distribution of educational materials.

Additional educational resources include a puzzle (M7), available online for download and intended for classroom use, and a card game (M8) targeting technical staff and communities exposed to flood risk, also distributed online. Overall, the set of materials reflects a diversified communication strategy combining institutional collaboration, educational activities, and digital dissemination to enhance flood risk awareness and preparedness.

### **Implementation Plan of Vic and Gurb (Catalonia, Spain)**

In **Vic and Gurb (Annex 13)**, a set of educational and awareness-raising materials was deployed to support flood risk preparedness across different audiences and stakeholder groups. The Large-Format Emergency Infographic (M1) was distributed to households and businesses in flood-prone areas through Civil Protection volunteers and postal mailings in February–March (Vic) and February (Gurb), while also being made available on municipal websites and shared with mapped stakeholders via email.

The Household Preparedness Magnet (M2) and the Awareness-Raising Informational Brochure (M3) followed similar dissemination strategies, combining direct distribution to homes and local institutions with digital availability and targeted email communication. In both municipalities, these materials were supported by public presentations and coordinated dissemination efforts in January and February.

The Travelling Exhibition “Before the Water Arrives” (M4) was installed in key public and educational spaces, including the Vic Library in November and UVic during January–February, with plans to expand its presence to additional



public venues. In Gurb, the exhibition was hosted at the Sala de la Cultura and later at Institut de Gurb, complemented by a dissemination video, public presentations, and planned teacher training sessions to enhance educational use.

Interactive and gamified resources were also implemented. The Flut Island Online Decision-Making Game (M5) was uploaded to institutional platforms such as SAP in February–March and integrated into educational contexts, supported by training sessions for teachers and stakeholders. The print-and-play board game (M6) and the Giant River Basin Puzzle (M7), including their teaching guides, were made available for download and actively used in schools, with additional support through training sessions, library use (in Vic), and stakeholder engagement activities.

Finally, the Flood Risk Management Plan Card Game (M8) was disseminated to technical staff via email in February and made available through institutional platforms, where it was used as a training tool to support learning and decision-making processes related to flood risk management.

### 3.3. General results from the monitoring

Overall, monitoring data confirm that the LocAll4Flood educational materials component successfully reached diverse target groups across all pilot regions, including citizens living or working in flood-prone areas, schools, technical stakeholders, civil protection actors, and local administrations. The testing phase demonstrated both broad dissemination and meaningful engagement, providing evidence of uptake, practical applicability, and territorial relevance. These results validate the project's approach of tailoring educational tools to local contexts while ensuring cross-pilot coherence, contributing significantly to enhanced awareness, stakeholder engagement, and community preparedness for flash floods.

The educational resources developed within LocAll4Flood align clearly with several Sustainable Development Goals (SDGs), reinforcing their contribution to resilience, safety, and environmental sustainability. The materials support



SDG 3 (Good Health and Well-being) by promoting safe behaviours aimed at reducing injuries, fatalities, and health risks associated with flash floods, while also strengthening social cohesion and psychological preparedness. They contribute to SDG 6 (Clean Water and Sanitation) by raising awareness of potential water contamination during flood events and encouraging responsible water management practices. Through risk communication, evacuation guidance, and the promotion of Nature-Based Solutions, they enhance SDG 11 (Sustainable Cities and Communities). By addressing climate change impacts on extreme weather events and promoting adaptation measures such as Early Warning Systems, they support SDG 13 (Climate Action). Furthermore, by highlighting the protective role of ecosystems such as wetlands and forests in reducing flood risks, they contribute to SDG 15 (Life on Land) and promote ecosystem-based mitigation strategies.

Across all pilot sites, more than 18,000 printed materials were distributed, including approximately 11,300 magnets and infographics (Materials 1 and 2) and 6,750 brochures (Material 3). In addition, 14 travelling exhibitions (Material 4) were displayed in municipalities, universities, schools, research centres, and civil protection facilities. The exhibitions alone reached over 5,000 visitors, including school pupils, educators, technical staff, older adults, and members of the general public. In total, 33 specific entities directly received printed materials, including local administrations, civil protection authorities, fire services, police departments, environmental agencies, research institutions, and schools. Furthermore, 263 stakeholders were contacted through targeted email campaigns to promote dissemination and encourage active use of the materials. Educational resources were republished on 20 external institutional websites, ensuring sustained visibility and accessibility beyond physical distribution.

Regarding individual materials, magnets and infographics achieved extensive territorial coverage. Vic-Gurb recorded the highest distribution levels, with approximately 8,000 units disseminated directly through the city councils to residents, businesses, and stakeholders in flood-risk areas. Palma distributed over 1,200 units through local authorities and educational institutions, while Malta and Greece reached approximately 1,500 and 1,270 units respectively.



Bari and Bulgaria distributed smaller but strategically targeted quantities, reflecting differences in implementation scale and local strategies. Downloads per pilot site ranged between 13 and 32, demonstrating complementary digital engagement.

Awareness-raising brochures also demonstrated significant outreach. Vic-Gurb distributed 4,000 brochures, while Palma, Malta, Greece, and Bulgaria distributed between 100 and 1,200 units each. The brochures provided technical explanations, flood hazard mapping information, and practical preparedness guidance, directly supporting informed decision-making and behavioural change. Downloads ranged between 3 and 9 per pilot site.

The travelling exhibition “Before the Water Arrives” proved to be a strong community engagement tool. Vic-Gurb hosted the exhibition across four locations for up to 150 days, attracting more than 2,000 visitors. Palma displayed it for 120 days with over 1,000 visitors, while Greece hosted exhibitions across four locations, reaching more than 1,500 participants. Bari, Malta, and Bulgaria implemented the exhibition at different scales and durations, reflecting territorial deployment strategies. In all cases, the exhibition combined scientific explanation, visual storytelling, and interactive engagement to strengthen risk perception and community preparedness.

Overall, distribution levels varied across pilot regions. Vic-Gurb demonstrated the highest outreach overall, with 12,000 printed materials distributed and extended exhibition periods. Palma and Malta also showed strong implementation, distributing between 2,270 and 2,700 materials. Greece, Bulgaria, and Bari reported more moderate figures in certain categories, reflecting differences in local scale, timing, and implementation phases.

Materials 5–8 — including the Online Decision Game, Printable Board Game with Didactic Guide, Giant River Basin Puzzle, and Flood Risk Management Plan Card Game — were uploaded to the project website in late February 2026 or early March. These interactive resources provide participatory tools for schools, the general public, and technical stakeholders to explore flood risk management, early warning systems, and Nature-Based Solutions. Their



implementation results will be consolidated by the end of March 2026 to provide a more comprehensive assessment of digital engagement, learning outcomes, and behavioural impact, but see *Deliverable D.2.5.2*.

In addition to on-site distribution, online dissemination significantly enhanced visibility. Two LinkedIn posts dedicated to the educational materials generated 453 and 826 impressions respectively, with notable engagement rates and link clicks. Partner-led publications further amplified outreach at regional level, contributing to sustained digital visibility and reinforcing the multi-channel dissemination strategy.

Taken together, these monitoring results confirm the effectiveness of a comprehensive communication and engagement approach combining direct distribution, institutional partnerships, exhibitions, digital downloads, and social media promotion. The integrated strategy ensured both cross-pilot coherence and local adaptation, strengthening awareness, adaptive capacity, and stakeholder involvement in flood-prone communities.

For more detailed analysis, see *Deliverable D.2.5.2: Monitoring: Assess the efficiency of the LocAll4Flood IMGGM to reduce flash flood risks also through citizen science activities*.

### **3.4. Recommendations for improvement and integration**

Based on the monitoring results and feedback collected across pilot regions, several recommendations can be identified to enhance the effectiveness, sustainability, and integration of the educational materials within local flood risk governance frameworks.

First, strengthening long-term institutional embedding is essential. While distribution and visibility have been significant, sustained impact depends on integrating materials into formal education curricula, municipal communication strategies, and civil protection training programmes. Establishing formal agreements with schools, municipalities, and regional authorities could ensure recurring use of the board game, online decision tool, exhibition, and teaching guides beyond the project lifetime.



Second, monitoring website analytics more systematically would also allow better assessment of long-term digital engagement. Third, enhanced feedback loops would improve adaptive refinement. While initial monitoring focused on reach and engagement, future implementation phases should incorporate short evaluation surveys for teachers, technical staff, and participants using the games and exhibitions. This would allow assessment of learning outcomes, behavioural intention changes, and practical applicability in local planning contexts.

Fourth, scaling strategies should be explored. Pilot experiences demonstrate strong potential for transferability. To maximize impact, dissemination could be extended through regional networks of municipalities, environmental education centres, and civil protection agencies. Presenting the materials in conferences, policy forums, and interregional cooperation platforms would further enhance replication potential.

Finally, continued collaboration within the Quadruple Helix framework remains crucial. The co-creation approach proved valuable in ensuring contextual relevance and stakeholder ownership. Maintaining these collaborative mechanisms beyond the project—through periodic coordination meetings or joint awareness campaigns—would support sustained integration of educational tools into local flood risk management strategies.

Overall, integrating educational materials more structurally into governance, education, and community preparedness systems will ensure that the project's outputs move beyond one-time dissemination and contribute to long-term behavioural change and resilience-building.



#### 4. Conclusion

The LocAll4Flood project demonstrates that effective flash flood adaptation in Mediterranean territories requires an integrated approach combining governance innovation, technical preparedness, stakeholder engagement, and evidence-based educational action. Climate change is intensifying the frequency and magnitude of flash floods, exposing not only physical vulnerabilities but also governance gaps and societal preparedness limitations. Addressing these challenges demands moving beyond reactive emergency management towards proactive, participatory, and knowledge-driven adaptation strategies.

The project successfully operationalised a Quadruple Helix framework, engaging public authorities, civil protection and technical services, research institutions, private sector actors, and civil society organisations across all pilot regions. Through structured training programmes and co-creation workshops covering prevention, adaptation, and mitigation stages, stakeholders strengthened their understanding of Flood Risk Management Plans, Early Warning Systems, risk perception dynamics, and Nature-Based Solutions. Participatory methodologies—such as mapping exercises, role clarification, system dynamics modelling, and scenario development—enabled the alignment of scientific knowledge with local experience and institutional realities.

Monitoring results confirm high levels of satisfaction, strong stakeholder engagement, and progressive improvement in perceived knowledge and practical capacity across the three training sessions. The increasing satisfaction rates from Session 1 to Session 3 indicate that combining technical foundations with interactive and locally contextualised exercises enhances both relevance and ownership. Participants consistently highlighted the importance of non-structural measures, community engagement, inter-institutional coordination, and the integration of Nature-Based Solutions into territorial planning.



The educational component further strengthened the project's impact by translating survey-based evidence into targeted, context-sensitive awareness materials. Baseline results on risk perception, knowledge gaps, and behavioural tendencies directly informed the design of brochures, exhibitions, games, infographics, magnets, and interactive tools. By addressing weak Human–River connection, misconceptions about flood mitigation, and limited familiarity with key flood risk concepts, the project ensured that educational resources were not generic awareness tools but strategic instruments responding to identified vulnerabilities.

Monitoring data demonstrate substantial outreach: over 18,000 printed materials distributed, exhibitions reaching more than 5,000 visitors, dissemination through 33 institutional entities, engagement of 263 stakeholders via targeted communication, and active online visibility through social media channels. The combination of physical distribution, institutional partnerships, digital access, and participatory implementation reflects a comprehensive multi-channel communication strategy capable of reaching heterogeneous target groups across governance levels.

Importantly, the project illustrates that educational innovation and participatory governance are mutually reinforcing. Trainings strengthened institutional capacity; workshops clarified roles and synergies; participatory modelling supported mitigation planning; and educational materials enhanced community awareness and behavioural preparedness. Together, these components contribute to a systemic shift from fragmented and reactive approaches to coordinated, anticipatory flood risk governance.

Variations across pilot regions highlight the importance of contextual adaptation. Differences in distribution levels, stakeholder engagement patterns, and implementation scales reflect local institutional capacity, territorial characteristics, and deployment timing. Nevertheless, cross-pilot coherence was maintained through shared methodological frameworks and aligned objectives, demonstrating the transferability of the Integrated Multilevel Governance Model and Territorial Engagement Model.



The LocAll4Flood experience confirms that sustainable flood resilience depends not only on infrastructure and technology, but also on social capital, institutional coordination, and informed decision-making. By embedding co-creation, evidence-based design, and multi-level collaboration into the adaptation process, the project provides a replicable model for Mediterranean regions facing increasing flash flood risks.

Overall, LocAll4Flood contributes to advancing a proactive, collaborative, and education-driven paradigm of flood risk management—one that integrates prevention, adaptation, and mitigation within a coherent governance framework and strengthens the long-term adaptive capacity of communities and institutions alike.



# Annexes



Annex I: Overview of flood risk communication and educational materials developed within the project. Note: M1–M8 refer to different communication and educational tools designed to enhance flood risk awareness, preparedness, and governance across multiple target groups. Return periods T10, T100, and T500 indicate flood probability scenarios (10-, 100-, and 500-year events). NBS refers to Nature-Based Solutions. FRMP stands for Flood Risk Management Plan, and EWS for Early Warning Systems. All materials are based on case studies and pilot regions, including the Vic Plain and other Mediterranean areas.

Code	Name	Target Audience	Description	Content	Purpose
M1	Large-Format Emergency Infographic	General public	Designed for display in buildings, businesses, and educational spaces for quick reference in flood-prone areas	Visual alerts including the slogan “Hey, you are in a flood-prone area!”; icon-based safety instructions highlighting key prohibitions; QR codes linking to additional resources and civil protection apps	Enable rapid access to essential safety information and reinforce awareness
M2	Household Preparedness Magnet	Households in flood-prone areas	A practical everyday reminder for homes in flood-prone areas	Four critical actions during a flood; emergency number 112	Maintain constant awareness, preparedness, and vigilance
M3	Awareness-Raising Informational Brochure	General public (16+)	Explains flood origins and the impact of climate change on their frequency	Comparison of urbanisation in the Vic Plain (1956–2023) showing increased runoff; flood hazard maps (T10, T100, T500); safety recommendations before, during, and after floods including evacuation routes and avoiding crossing streams	Raise awareness and improve understanding of flood risk
M4	Travelling Exhibition “Before the Water Arrives”	General public (16+)	Nine thematic sections guiding visitors from flood science to participatory governance, including testimonials from multiple sectors	Flood origins (flash floods vs prolonged rainfall, catchments, land cover, human impact); Early Warning Systems (radar, rain gauges, sensors); EU Floods Directive and FRMPs; hazard maps (T10, T100, T500); risk perception studies; emergency protocols; urbanisation impacts; Nature-Based Solutions (rain gardens, green roofs, permeable pavements, river restoration); governance and Quadruple Helix actors	Promote community preparedness and comprehensive understanding of flood risk management
M5	Flut Island Online Decision-Making Game	Secondary students and general public (11+)	Simulation where players act as decision-makers managing flood risk under climate pressure	Scenario-based decisions; trade-off analysis (environmental, social, economic); risk interpretation; consequence feedback; adaptive strategy building; learning on risk drivers, Early Warning Systems, and	Develop critical thinking and decision-making skills in complex contexts



Code	Name	Target Audience	Description	Content	Purpose
				Nature-Based Solutions; scenarios based on LocAll4Flood pilot regions	
M6	Flut Island Print & Play board game (including a teaching guide)	Secondary students and general public (11+)	Narrative-based learning tool where players act as environmental investigators after a catastrophic storm	Challenges include organising emergency phases, distinguishing accidents from negligence, interpreting maps and orthophotos, calculating water velocity, and identifying Nature-Based Solutions; scenarios inspired by Mediterranean pilot regions (Malta, Italy, Bulgaria, Greece, Balearic Islands, Vic Plain)	Foster experiential learning and understanding of flood causes and solutions
M7	Giant River Basin Puzzle (including a teaching guide)	Primary and secondary students	Physical tool to explore river systems and human-environment interactions	Biodiversity and ecological processes (water cycle, soil); ecosystem services (recreation, agriculture, flood regulation); urbanisation impacts; Nature-Based Solutions (riverbank restoration); analysis of cause-effect relationships between geography and land use	Enhance understanding of ecosystems and flood resilience
M8	Flood Risk Management Plan Card Game	Diverse stakeholders (education, workshops, training)	Participatory simulation where players develop a Flood Risk Management Plan under increasing flood risks	Measure selection (prevention, adaptation, mitigation); strategic planning under constraints; stakeholder collaboration; impact evaluation; integrated approach combining structural, non-structural, and Nature-Based Solutions; based on real Mediterranean FRMP practices	Strengthen strategic planning, collaboration, and evidence-based decision-making in flood governance



Annex II. Stakeholders identified during the second session workshop, organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—and further classified into subgroups according to their roles and areas of activity in the Malta pilot.

	<b>Subgroup</b>	<b>Organization / Institution</b>
ACADEMY and RESEARCH	Universities	University of Malta
	Universities	American University of Malta
	Research centers	MCAST
	Research centers	Għajn National Water Conservation Centre
	Research centers	Lifelong Learning
	Research centers	Xjenza Malta
	Research centers	Institute of Tourism Studies
	PRIVATE SECTOR	Professional associations
Professional associations		EMCS
Professional associations		Malta Hotels and Restaurants Association
Professional associations		Malta Development Association
Professional associations		Chamber of SMEs
Professional associations		Kamra tal-Periti
Professional associations		Chamber of Engineers
Professional associations		UHM
Professional associations		GWU
Professional associations		Forum Unions Maltin
Professional associations		Independent Schools Association
Professional associations		Malta Football Association
Healthcare	St. James Hospital	
CIVIL SOCIETY & LOCAL COMMUNITY	Education	Junior College
	Education	Giovanni Curmi Higher Secondary
	Education	Primary Education
	Environmental NGOs	Friends of the Earth
	Environmental NGOs	Nature Trust
	Environmental NGOs	Din L-Art Ħelwa
	Civil protection volunteers	Malta Red Cross Society
	Civil protection volunteers	St John's Ambulance
	Civil protection volunteers	EFRU
	Civil protection volunteers	Canine Search and Rescue Team
	Civil protection volunteers	Order of St. John
	Community groups	Moviment Graffiti
	Community groups	Hospice Malta
	Community groups	YMCA
	Community groups	KSU
	Community groups	Malta Association of Parents
	Community groups	Eko-Skola
	Community groups	Flimkien għal Ambjent Aħjar
	Community groups	Scout Association of Malta
	Cultural centers	Sant'Antrnin Band Club



	<b>Subgroup</b>	<b>Organization / Institution</b>
	Social centers	Active Aging Centres
	Religious	Archdiocese of Malta
	Religious	MUŻEW
ADMINISTRATION and POLICYMAKERS	Infrastructure & environment	Infrastructure Malta
	Infrastructure & environment	Ambjent Malta
	Infrastructure & environment	Coastal and Storm Water Unit
	Infrastructure & environment	Environment and Resources Authority
	Infrastructure & environment	Planning Authority
	Infrastructure & environment	Project Green
	Infrastructure & environment	Water Services Corporation
	Infrastructure & environment	Energy and Water Agency (EWA)
	Infrastructure & environment	EWA-SSU
	Infrastructure & environment	Climate Action Authority
	Infrastructure & environment	Enemalta Ltd
	Ministries	Ministry for Health and Active Ageing
	Ministries	MEEC
	Ministries	MEYR
	Ministries	MTIP
	Ministries	Rural Gozo Directorate
	Regional authorities	Eastern Regional Council
	Regional authorities	Northern Regional Council
	Regional authorities	GRDA
	Local councils	Msida
	Local councils	Birkirkara
	Local councils	St. Paul's Bay
	Local councils	Qormi
	Local councils	Local Council's Association
	Emergency & police	Civil Protection Department
	Emergency & police	Community Police
	Emergency & police	Malta Police Force
	Emergency & police	LESA
	Health sector	Mater Dei Hospital



Annex III: Stakeholders identified during the second session workshop, organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—and further classified into subgroups according to their roles and areas of activity in the Balearic Islands pilot.

Category	Subgroup	Organization / Institution
ACADEMY and RESEARCH	Universities	UIB – GLOWATER GROUP / PHYSICS GROUP
	Education (public)	CEI Santa Catalina Thomas
	Education (public)	CEIP Rafel Vell
	Education (public)	CEIP Rafal Nou
	Education (public)	CEIP Es Molinar
	Education (public)	IES Son Pacs
	Education (public)	IES Son Rullan
	Education (public)	IES Aurora Picornell
	Education (public)	IES Son Cladera
PRIVATE SECTOR	Education (private)	CAI 101 Dálmatas
	Education (private)	Escoleta Koala
	Education (private)	The Academy International School
	Education (private)	Escola Mil Somnis per contar
	Education (private)	C.E.I.P Peter Pan
	Education (semi-public)	Es Liceu
	Education (semi-public)	La Salle Pont d'Inca
	Education (semi-public)	Sant Josep Obrer
	Education (semi-public)	Sant Pere
	Business / Industry	Padel Factory Son Castelló S.L.
	Business / Industry	Pinturas Son Castelló S.L.
	Business / Industry	Auto Desguaces Son Castelló S.L.
	Business / Industry	IKEA
	Business / Industry	Formiroc S.L.
	Business / Industry	Estrella Damm
	Agriculture	Centro Agrícola Balaguer Busquets
Healthcare (private)	Juaneda	
Healthcare (private)	Miramar	
CIVIL SOCIETY & LOCAL COMMUNITY	Environmental NGOs	Centro Ecologista de Marratxí
	Environmental NGOs	Amics de la Terra Mallorca



Category	Subgroup	Organization / Institution
	Environmental NGOs	AAMAR
	Environmental NGOs	GOB Mallorca
	Scout groups	AEG Sant Josep Obrer
	Youth centers	Espais Joves – Ajuntament de Palma
	Youth centers	Casals de Joves de Marratxí
	Leisure / education	Escola de Música i Dansa de Marratxí
	Religious centers	Centro Cristiano de Mallorca
	Religious centers	Iglesia Cristo Vive Mallorca
	Religious centers	Parroquia Nuestra Señora de Lluç
	Religious centers	Iglesia de la Indioteria
	Religious centers	Parroquia Sant Josep del Terme
	Religious centers	Parroquia Sagrada Familia
	Senior centers	Residència Son Güells
	Senior associations	Associació de Persones Majors del Pont d'Inca
	Public healthcare	Centre de Salut Marí Serra Mas
	Public healthcare	Centre de Salut Son Cladera
	Public healthcare	Centre de Salut Son Gotleu
	Public healthcare	Centre de Salut Son Rutllan
	Media	Última Hora
	Media	Diario de Mallorca
	Media	IB3 Ràdio
	Media	RTVE Balears
	Libraries	Biblioteca Municipal Molinar
	Libraries	Biblioteca Municipal Sa Indioteria
	Libraries	Biblioteca Municipal Son Cladera
	Libraries	Biblioteca Municipal Es Pont d'Inca
	Sports centers	Polideportivo Germans Escales
	Neighbourhood associations	AAVV Pont d'Inca
	Neighbourhood associations	AAVV Ses Cases Noves



Category	Subgroup	Organization / Institution
	Neighbourhood associations	Casal Social Ca Ses Monges
	Neighbourhood associations	AAVV Cas Capità
ADMINISTRATION and POLICYMAKERS	Local government	Ajuntament de Palma
	Local government	Ajuntament de Marratxí
	Regional authority	Consell de Mallorca
	Water management	Direcció General de Recursos Hídrics
	Emergency management	Servei de Planificació (Emergències)
	Meteorology	AEMET
	Security	Policia Local de Palma
	Security	Policia Local de Marratxí
	Fire services	Bombers (Palma)
	Fire services	Bombers (Consell de Mallorca)
	Security	Guardia Civil
	Environmental security	SEPRONA
	Emergency response	UME

Annex IV: Stakeholders identified during the second session workshop, organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—and further classified into subgroups according to their roles and areas of activity in the Bulgaria pilot.

Category	Subgroup	Organization / Institution
ACADEMY and RESEARCH	Public research centers / institutes	National Institute of Meteorology and Hydrology (Sofia)
	Public universities	Technical University of Varna
	Public research centers / institutes	Centre of Hydro- and Aerodynamics, Bulgarian Academy of Sciences
	Public research centers / institutes	Institute of Fish Resources
	Think tanks / policy institutes	Marine Cluster Bulgaria



Category	Subgroup	Organization / Institution
PRIVATE SECTOR	Businesses and industries (risk zones)	GEOPONT Sustainable Development Consulting Ltd
	Businesses and industries (risk zones)	Stroi-M62 Ltd
	Businesses and industries (risk zones)	Societe General de Surveillance, Varna branch
	Businesses and industries (risk zones)	Fly System Ltd
	Media / risk communicators	International Black Sea Club Ltd
	Media / risk communicators	ProTema Ltd
CIVIL SOCIETY & LOCAL COMMUNITY	Education (middle schools)	Middle School "Capt. Petko Vojvoda", Galata, Varna
	Education (middle schools)	Middle School "Hristo Botev", Tsonevo, Dalgopol
	Environmental associations	Institute of Ecological Modernisation, Varna
	Environmental associations	GEYA Foundation
	Nature-related clubs	Hunters and fishermen "Kamchia"
	Nature-related clubs	Association of Tourist Boats "Kamchia"
	Civil protection volunteering	Flood Resilience Volunteer Group, Dalgopol
ADMINISTRATION and POLICYMAKERS	Regional administration	Regional Administration Varna
	Local administration	Municipality of Dalgopol
	Local administration	Municipality of Dolni Chiflik
	Local administration	Municipality of Avren
	Basin authority	Black Sea River Basin Directorate
	Civil protection	Regional Dept. of Fire Safety and Civil Protection
	Police	Regional Police Dept. – Dalgopol
	Forestry / environmental protection	State Forest Company, Dalgopol



Category	Subgroup	Organization / Institution
	Water management	National Institute of Meteorology and Hydrology, Sofia
	Citizen-administration bodies	Citizen-administration collaboration bodies
	Financial departments	Financial departments (national/regional/local)
	Institutional communication	Institutional press officers

Annex V: Stakeholders identified during the second session workshop, organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—and further classified into subgroups according to their roles and areas of activity in the Greece pilot.

Category	Subgroup	Organization / Institution
ACADEMY and RESEARCH	Public research centers / institutes	Hellenic Agricultural Organisation (ELGO-DIMITRA), Soil & Water Resources Institute (SWRI)
	Public research centers / institutes	Hellenic Agricultural Organisation (ELGO-DIMITRA), Forest Hydrology at Forest Research Institute (FHFRI)
	Public universities	International Hellenic University (IHU)
	Think tanks / public policy institutes	UNESCO International Network of Water-Environment Centres for the Balkans (INWEB)
PRIVATE SECTOR	Businesses and industries located within risk zones	Nagkoulis Consulting Groundwater Engineer
	Businesses and industries located within risk zones	kartECO Environmental Consulting Company
	Businesses and industries located within risk zones	Hydroexigiantiki Water Engineering Consulting Company
	Businesses and industries located within risk zones	HYDROMARE Hydraulic and Coastal Engineering Consulting Company
	Professional associations	Technical Chamber of Greece (TCG)
CIVIL SOCIETY & LOCAL COMMUNITY	Civil protection volunteering	Civil Protection Volunteers of Themi Municipality



Category	Subgroup	Organization / Institution
	Civil protection volunteering	Civil Protection Volunteers of Thermi Municipality
	Nature and environmental associations	NGO Kallisto
ADMINISTRATION and POLICYMAKERS	Local government	Municipality of Kalamaria
	Local government	Municipality of Thessaloniki
	Local government	Municipality of Thermi
	Local government	Municipality of the Delta
	Regional authority	Region of Central Macedonia (Civil Protection Unit)
	Regional authority	Decentralized Administration - Region of Central Macedonia (Civil Protection Unit)
	Water management	EYATH SA (Thessaloniki Water Supply & Sewerage Co)
	Water management	GOEV: General Agency of Reclamation Projects for Irrigation Network Management
	Water management	Decentralized Administration (Water Directorate)
	Water management	Hellenic National Meteorological Service (Macedonia Airport SKG)
	Civil protection and related territorial services	Region of Central Macedonia (Civil Protection Unit)
	Civil protection and related territorial services	Municipality of Thermi (Civil Protection Office)
	Civil protection and related territorial services	Municipality of the Delta (Civil Protection Department)
	Civil protection and related territorial services	Municipality of Thermaikos (Civil Protection)
	Firefighters	Firefighter Service
	Local and regional police	Police Department
	Financial department at national/regional and local level	Hellenic Agricultural Insurance Organization (ELGA)



Annex VI: Stakeholders identified during the second session workshop, organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—and further classified into subgroups according to their roles and areas of activity in the Bari region pilot.

Category	Subgroup	Organization / Institution
ACADEMY and RESEARCH	Public universities	Polytechnic University of Bari
	High schools (public and semi-private)	Lenoci High School
PRIVATE SECTOR	Media and “risk communicators”	Repubblica Journal
	Other	SIGEA
CIVIL SOCIETY & LOCAL COMMUNITY	Nature and environmental associations	Parco Lama Balice
	Civil protection volunteering	Civil Protection Volunteers
	Cultural centers	Fondazione Pasquale Battista
ADMINISTRATION and POLICYMAKERS	Local government	Metropolitan City of Bari
	Local government	Municipality of Bari
	Regional authority	Regione Puglia
	Water management	ARPA - Regione Puglia
	Water management	ASSET - Regione Puglia
	Water management	Basin Authority
	Civil protection and related territorial services	Local Civil Protection
	Civil protection and related territorial services	Regional Civil Protection
	Civil protection and related territorial services	Firefighters
Local and regional police	Municipality of Bari	



Annex VII: Stakeholders identified during the second session workshop, organised into four main categories—academia and research, private sector, civil society and local community, and administration and policymakers—and further classified into subgroups according to their roles and areas of activity in the Vic-Gurb pilot.

Category	Subgroup	Organization / Institution
<b>ACADEMY and RESEARCH</b>	Public universities	Flood-Up (Universitat de Barcelona)
	Semi-private universities	BETA TC (UVIC)
	Semi-private universities	CERM (UVIC)
	Semi-private universities	GRECC (UVIC, Grup de Recerca en Construcció del Coneixement)
	Private research centres / institutes	ABM Consulting
	Private research centres / institutes	HYDS
	Research centres / institutes	IDAEA
<b>PRIVATE SECTOR</b>	Private nurseries	L'Esquitx
	Private nurseries	La Font – Centre Educatiu Waldorf
	Private nurseries	Vedruna Escorial
	Private schools	La Font – Centre Educatiu Waldorf
	Businesses and industries (risk zones)	Gurb Energia SCCL
	Private healthcare sector	Hospital Universitari de Vic
	Private healthcare sector	Josefines Vic
	Private healthcare sector	Clínica i consultori Bayés
	Residential care & health centres	Osonament
	Residential care & health centres	Residència Mas Vella Terra
	Residential care & health centres	Sant Tomàs - CDIAP Tris Tras
	Residential care & health centres	ADFO – Associació Diversitat Funcional d'Osona
	Residential care & health centres	Residència Saits
<b>CIVIL SOCIETY &amp; LOCAL COMMUNITY</b>	Neighborhood associations	Associació Carrer Clàudia



Category	Subgroup	Organization / Institution
	Neighborhood associations	Associació amics Serrabonica
	Neighborhood associations	Associació de Veïns i Veïnes del Barri del Remei
	Neighborhood associations	Associació Veïns Barri de l'Horta Vermella
	Civic centres	CCVIC Plaça d'Osona
	Civic centres	CCVIC Joan Triadú
	Civic centres	CCVIC Can Pau Raba
	Civic centres	CCVIC La Guixa
	Civic centres	CCVIC Santa Anna
	Community coordination / mediation	Comunalitat de Vic
	Libraries	Biblioteca Pilarin Bayés
	Public nurseries	Escola bressol Gurb
	Public nurseries	Serra de Sanferm
	Public nurseries	Caputxins
	Public nurseries	EBMV Horta Vermella
	Public elementary schools	Sentfores
	Public elementary schools	Guillem de Mont-rodon
	Public elementary schools	Doctor Joaquim Salarich
	Public elementary schools	Vic Centre
	Public elementary schools	La Sínia
	Semi-private elementary schools	El Petit Miquel
	Semi-private elementary schools	Sagrat Cor
	Semi-private elementary schools	Fedac Vic – Pare Coll
	Semi-private elementary schools	Centre Pedagogia Terapèutica Estel
	Public high schools	Institut Jaume Callís
	Public high schools	Institut La Plana
	Public high schools	SIGURB
	Semi-private high schools	Vedruna Escorial
	Semi-private high schools	Fedac Vic – Pare Coll



Category	Subgroup	Organization / Institution
	Semi-private high schools	Centre Pedagogia Terapèutica Estel
	Environmental associations	ADF de Gurb
	Environmental associations	Naturalistes d'Osona
	Environmental associations	Grup Defensa del Ter
	Scout groups	Agrupament escolta i guia Tsunami
	Scout groups	Agrupament escolta i guia Guillem Montrodon
	Youth clubs	Vic Jove
	Youth clubs	Punt Jove de Gurb
	After-school / extracurricular activities	Quiràlia
	After-school / extracurricular activities	Anigami
	After-school / extracurricular activities	Batec d'un somni
	After-school / extracurricular activities	CPA Patinatge
	After-school / extracurricular activities	Fundació El Parés
	Cultural centres / ateneus	Ateneu de Vic
	Senior centres	Casal Cívica i Comunitari Mossèn Guiteras
	Senior centres	Casal Cívica i Comunitari de la Rambla
	Senior centres	Casal de la Gent Gran de Gurb
	Hiking / nature clubs	Unió Excursionista de Vic
	Hiking / nature clubs	Club Ciclista Gurb
	Religious centres	Bisbat de Vic
	Religious centres	Gurudwara Guru Teg Bahadur
	Religious centres	African Muslim Cultural Association
	Religious centres	Iglesia Pentecostal Unida en Europa
	Public healthcare sector	EAP CAP Vic Sud
	Public healthcare sector	EAP Vic Nord



Category	Subgroup	Organization / Institution
	Public healthcare sector	EAP Gurb
<b>ADMINISTRATION and POLICYMAKERS</b>	Civil protection and related services	Ajuntament de Vic (Civil Protection)
	Civil protection and related services	Consell Comarcal d'Osona
	Civil protection and related services	Generalitat de Catalunya
	Water agencies and related administration	Agència Catalana de l'Aigua (ACA)
	Local and regional police	Guàrdia Urbana (Vic)
	Local and regional police	Mossos d'Esquadra
	Forest rangers	Agents Rurals de Catalunya
	Firefighters	Bombers de la Generalitat (Vic and regional units)
	City councils	Ajuntament de Vic
	City councils	Ajuntament de Gurb



### Annex VIII: Overview of communication and engagement materials from Malta

Code	Material	Audience	Who?	Where?	When?	How?
<b>M1</b>	Large-Format Emergency Infographic	Citizens; Students	1. Regjun Tramuntana; 2. Ghajn – National Awareness Water Conservation Centre; 3. All other stakeholders	Regional Hub venue; Ghajn Educational Centre; social media (up to stakeholders)	Feb 2026 (dissemination from March 2026)	1500 magnets (small and large) distributed through hubs; official delivery day and media coverage organised by EWA
<b>M2</b>	Household Preparedness Magnet	Citizens; Students	1. Regjun Tramuntana; 2. Ghajn – National Awareness Water Conservation Centre; 3. All other stakeholders	Regional Hub exhibition; Ghajn premises during school visits and public events; social media and institutional dissemination	Feb 2026 (from March 2026)	Two exhibitions displayed at hubs/centres; official delivery day and media coverage organised by EWA
<b>M3</b>	Awareness-Raising Informational Brochure	Citizens; Students	1. Regjun Tramuntana; 2. Ghajn – National Awareness Water Conservation Centre; 3. Stakeholders involved in trainings & workshops	Regional Hub venue; Ghajn Educational Centre; social media and stakeholder dissemination	Feb 2026 (from March 2026)	1200 brochures distributed through hubs; dissemination via social media; official delivery day and media coverage
<b>M4</b>	Travelling Exhibition “Before the Water Arrives”	Citizens; Students	1. Regjun Tramuntana; 2. Ghajn – National Awareness Water Conservation Centre; 3. Other stakeholders	Regional Hub; Ghajn Educational Centre; public events and school visits	Feb 2026 (from March 2026)	Exhibitions displayed at stakeholder venues; dissemination through public events and institutional engagement



Code	Material	Audience	Who?	Where?	When?	How?
<b>M5</b>	Flut Island Online Decision-Making Game	General users; Students	All stakeholders involved in training & workshops	Online platforms; institutional websites; social media	Feb 2026	Online dissemination via EWA to stakeholders and educational users
<b>M6</b>	Flut Island Print & Play Board Game (incl. teaching guide)	Students; Pupils; Teachers; Parents	All stakeholders involved in training & workshops	Online (downloadable)	Feb 2026	Online dissemination by EWA to stakeholders for educational use
<b>M7</b>	Giant River Basin Puzzle (incl. teaching guide)	Students; Pupils; Teachers; Parents	1. Regjun Tramuntana; 2. Ghajn – National Awareness Water Conservation Centre; 3. Stakeholders involved in workshops	Regional Hub venue; Ghajn Educational Centre; school settings	Feb 2026 (from March 2026)	100 puzzles distributed through hubs/centres; official delivery day and media coverage organised by EWA
<b>M8</b>	Flood Risk Management Plan Card Game	University students; Teachers	University of Malta	University setting (Earth Systems lessons)	From March 2026	Delivery of card sets after meeting between EWA and UoM; supported by social media coverage



## Annex IX: Overview of communication and engagement materials from Palma de Mallorca (Balearic Islands, Spain)

Code	Material	Audience	Who?	Where?	When?	How?
<b>M1</b>	Large-Format Emergency Infographic	General Public; Schools; People who live and work in flood- prone areas	AEMET; Residència Son Güells; IES Son Pacs; Firefighters Palma; Col·legis Diocesans Mallorca; Emergències 112 Illes Balears (pending)	Palma, Marratxí and other flood-prone areas; schools; visitor centres	Nov–...	Distribution in flood-prone areas; 100 magnets and 100 posters (AEMET); 10 posters (IES Son Pacs); 50 magnets and 10 posters (Residència Son Güells); 800 magnets and 200 posters (Firefighters Palma); ongoing distribution by partners
<b>M2</b>	Household Preparedness Magnet	General Public; Schools; People who live and work in flood- prone areas	Firefighters Palma; Emergències 112 Illes Balears (pending); Palma and Marratxí City Council (pending)	Public spaces (indoor/outdoor): Fire Station of Palma; high- risk public buildings (health centres, lobbies, etc.)	Nov–... (Firefighters: 10/02/2026– 10/04/2026)	Exhibition installed at Palma Fire Station with high visitor flow, including school visits; planned expansion to other locations with stakeholders
<b>M3</b>	Awareness- Raising Informational Brochure	General Public; Schools; People who live and work in flood- prone areas	Residència Son Güells; IES Son Pacs; Firefighters Palma; AEMET; Gym 4M; Nermai Hairdresser; Emergències 112 Illes Balears (pending); Col·legis Diocesans Mallorca (pending); Palma and Marratxí City Council (pending)	Facilities in flood-prone areas	Nov–...	Distribution in risk areas; confirmed quantities (e.g. 700 brochures Firefighters, 100 AEMET, 50 each in several partners); ongoing distribution by partners



Code	Material	Audience	Who?	Where?	When?	How?
<b>M4</b>	Travelling Exhibition “Before the Water Arrives”	General Public; Schools; People who live and work in flood-prone areas	Firefighters Palma; 112 Illes Balears (pending); Palma and Marratxí City Council (pending)	Palma Fire Station and other public spaces (health centres, municipal buildings, etc.)	Mar–...	Exhibition installed at Palma Fire Station (10/02/2026–10/04/2026); high visitor exposure including school visits; planned rotation to other locations
<b>M5</b>	Flut Island Online Decision-Making Game	General Public; Schools; People who live and work in flood-prone areas	Firefighters Palma; 112 Illes Balears (pending); Col·legis Diocesans Mallorca (pending)	Online platforms (Moodle, institutional websites, EDUCAPALMA)	Mar–...	Online dissemination planned; expected use during school visits and integration in educational platforms
<b>M6</b>	Flut Island Print & Play Board Game (incl. teaching guide)	General Public; Schools	Firefighters Palma; Col·legis Diocesans Mallorca (pending)	Online (downloadable)	Jan–...	Online dissemination; use in schools and educational centres; supported by EDUCAPALMA for access
<b>M7</b>	Giant River Basin Puzzle (incl. teaching guide)	General Public; Schools	Firefighters Palma; Col·legis Diocesans Mallorca (pending)	Online (downloadable)	Mar–...	Online distribution for schools and general public; integration into educational activities via EDUCAPALMA
<b>M8</b>	Flood Risk Management Plan Card Game	Technical staff; People who live and work in flood-prone areas	University of the Balearic Islands (UIB)	Online (downloadable); institutional and social media channels	Dec	Implemented with students at UIB; dissemination via social media and institutional websites; supports learning on flood risk and NBS



## Annex X: Overview of communication and engagement materials from Varna &amp; Dalgopol (Bulgaria)

Code	Material	Audience	Who?	Where?	When?	How?
<b>M1</b>	Large-Format Emergency Infographic	General Public (families, parents, children); Students	BDCA Varna; Regional Administration Varna (RAV); Dalgopol Municipality; Civil Protection Dept.; National Institute of Meteorology and Hydrology (NIMH)	Information Centre – Varna; Schools; Dalgopol & Dolni Chiflik Municipality Halls; Public events	Dec 2025 – Feb 2026	Distribution of 25 posters; dissemination during TS3 and public events
<b>M2</b>	Household Preparedness Magnet	General Public (families, parents, children); Students	BDCA Varna; RAV; Dalgopol Municipality; Civil Protection Dept.; NIMH	Information Centre – Varna; Schools; Municipality Halls; Public events	Dec 2025 – Feb 2026	Distribution of 100 magnets; dissemination during TS3 and public events
<b>M3</b>	Awareness-Raising Informational Brochure	General Public; Students	BDCA Varna; RAV; Dalgopol Municipality; Civil Protection Dept.; NIMH	Information Centre – Varna; Schools; RAV; Municipality Halls	Dec 2025 – Feb 2026	Distribution of 100 printed brochures; dissemination during TS3 and public events
<b>M4</b>	Travelling Exhibition “Before the Water Arrives”	General Public; Students (via public facilities)	BDCA Varna; Dalgopol Municipality; Dolni Chiflik Municipality	Community Centre “Nikola Vaptsarov” (Dalgopol); Municipality halls; BDCA office; RAV lobby	Dec 2025 – Feb 2026 (approx. 2 weeks per location)	Exhibition setup and rotation across venues; public outreach



Code	Material	Audience	Who?	Where?	When?	How?
<b>M5</b>	Flut Island Online Decision-Making Game	Students; General users	BDCA Varna	Online platforms; BDCA website; School portals	Starting Dec 2025	Online dissemination via website, school platforms, and digital communication
<b>M6</b>	Flut Island Print & Play Board Game (incl. teaching guide)	Students; Pupils; Teachers; Parents	BDCA Varna (through partner schools)	Schools in Varna, Tsonevo, Dalgopol, and Medovets	Dec 2025 – Jan 2026	Distribution of printed game packs (EN/BG); implementation in school activities
<b>M7</b>	Giant River Basin Puzzle (incl. teaching guide)	Students; Pupils; Teachers; Parents	BDCA Varna (through partner schools)	Schools in Varna, Tsonevo, Dalgopol, and Medovets	Dec 2025 – Jan 2026	Educational use in classrooms; integration into school activities
<b>M8</b>	Flood Risk Management Plan Card Game	Emergency responders; Technical staff; Experts; Teachers	BDCA Varna; RAV; Civil Protection Dept.	RAV; Dalgopol Municipality; Dolni Chiflik Municipality; River Basin Directorate	Jan – Feb 2026	Use in training sessions and stakeholder engagement activities
<b>M9</b>	Nature-Based Solutions (NBS) Cards & Posters	Authorities; Experts	(To be specified)	RAV; Dalgopol Municipality; Dolni Chiflik Municipality	Nov 2025	Distribution of 30 sets (22 cards + 6 A0 posters) during TS3



Annex XI: Overview of communication and engagement materials from Thessaloniki & Central Macedonia (Greece). Stakeholders listed in (\*1) include: Eyath SA, Hellenic Agriculture Organisation, Technical Chamber of Greece, KartECO, Hellenic Hydrotechnical Association (HHA), Delta Municipality, ELGO DIMITRA, AUTH, ELGA-KEME, Unesco Chair, Democritus University of Thrace, Municipality of Kalamaria, Technical Chamber of Greece (TCG), Nagkoulis Consulting Groundwater Engineer, Hydroexigiantiki Water Engineering Consulting Company, Hellenic National Meteorological Service (Macedonia Airport SKG), GOEV: General Agency of Reclamation Projects for Irrigation Network Management, Decentralized Administration (Water Directorate), Municipality of Thermaikos (Civil Protection), Civil Protection Volunteers of Thermi Municipality, Natural Environment & Climate Change Agency (NECCA) of Greece, NGO Kallisto, Firefighter Service (2nd EMAK - Special Disaster Response Unit of Thessaloniki), Police Department, Hellenic Red Cross, D.Karakatsanis Civil/Hydraulic Engineering Consulting Company (involved in EUROPELAND-ARSINOE Projects), ANATOLIKI, NECCA, University of the Aegean

	Material	Audience	Who?	Where?	When?	How?
<b>M1</b>	Large- Format Emergency Infographic	General Public (All ages) Employees of affected local businesses. Specialized stakeholders (e.g., the Fire Service)	Municipalities of Thermi, Thermaikos, NOESIS, NECCA, KEPEA Thermi, specialized stakeholder (e.g. The Fire Service), schools within the Anthemountas River Basin with AUTH	Public spaces; Municipal buildings; Scools; Stakeholders amenities (e.g. Fire station)	December 2025 – March 2026	Visual communication campaign; Display in strategic locations
<b>M2</b>	Household Preparedness Magnet	General Public; Children → (Grand-)Parents; Elderly	Municipalities of Thermi and Thermaikos, and other	Thermi, Thermaikos, and Thessaloniki (primarily areas within the Anthemountas River Basin, as well as organisations	December 2025 – March 2026	Sharing materials at venues and facilities of local authorities and relevant organisations.



Material	Audience	Who?	Where?	When?	How?
		relevant organisations (e.g., the Fire Service), in collaboration with AUTH.	outside the basin that have authority in flood events).		Social media campaign – LinkedIn and municipalities accounts
<b>M3</b> Awareness- Raising Informational Brochure	General Public All ages Employees of affected local businesses.	Municipalities of Thermi and Thermaikos, and other relevant organisations (e.g., the Fire Service), in collaboration with AUTH.	Municipalities of Thermi and Thermaikos, and other relevant organisations (e.g., the Fire Service), in collaboration with AUTH., Thermi, Thermaikos, and Thessaloniki (primarily areas within the Anthemountas River Basin, as well as organisations outside the basin that have authority in flood events).	December 2025 – March 2026	Sharing materials at venues and facilities of local authorities and relevant organisations.  Social media campaign – LinkedIn and municipalities accounts
<b>M4</b> Travelling Exhibition “Before the Water Arrives”	General Public Children All ages Specialized stakeholders (e.g., the Fire Service)	Municipalities of Thermi, Thermaikos, NOESIS, NECCA, KEPEA Thermi with AUTH	- NOESIS (Science Center & Technology Museum) - Thermi  - KEPEA Thermi (Center for Education for the Environment and Sustainability) - Thermi	1 Day - Civil Protection exercise of Municipality of Thermaikos → Dec 2025  1 Day - Public Event for High School Students (Municipality of Thermi) → 15 Feb 2026	- Preparatory actions and Setup of the exhibition - Social media campaign - Public statement



Material	Audience	Who?	Where?	When?	How?
			- Natural Environment & Climate Change Agency - Thessaloniki	15 Days - NOESIS (Science Center & Technology Museum) → Febr 2026 45 Days - KEPEA Thermi (Center for Education for the Environment and Sustainability) → Mart & April 2026 45 Days – NECCA Natural Environment & Climate Change Agency → April & May 2026	
<b>M5</b> Flut Island Online Decision-Making Game	Specialized personnel of companies and organizations identified as Stakeholders Students General Public	Municipality of Thermi, NOESIS, High Schools, KEPEA, NECCA with AUTH	Online Campaign School Campain Campaign alongside the exhibition, accessed via QR code.	January 2026 – May 2026	- Call for online play of the serious game - Social Media campaign - Website update - Targeted emails - Exhibition –QR code



	Material	Audience	Who?	Where?	When?	How?
<b>M6</b>	Flut Island Print & Play Board Game (incl. teaching guide)	General Public; Children and Adults	Municipality of Thermi, Schools, NOESIS, NECCA  with AUTH	- Schools into Anthemountas River Catchment  - Campaign alongside the exhibition, accessed via QR code.  - Social media campaign – Linkedin and municipalities accounts	February 2026 – May 2026	- Live play of the flood game  - Social Media campaign – via school blogs  - Website update  - Public Event for High School Students (Municipality of Thermi)  - Teacher training
<b>M7</b>	Giant River Basin Puzzle (incl. teaching guide)	General Public  Students	Municipality of Thermi, Schools, NOESIS, NECCA  with AUTH	Schools into Anthemountas River Catchment  Campaign alongside the exhibition, accessed via QR code.  Social media campaign – Linkedin and municipalities accounts	February 2026 – May 2026	- Live play of the flood game  - Social Media campaign – via school blogs  - Website update  - Public Event for High School Students (Municipality of Thermi)  - Teacher training
<b>M8</b>	Flood Risk Management Plan Card Game	Specialized stakeholders  (companies and organizations)	Stakeholders listed in (*1)	A September Hotel Thessaloniki – 3rd Workshop	November 2025	- Live play of the (serious) flood game  - Social Media campaign  - Website update  - Targeted emails



## Annex XII: Overview of communication and engagement materials from Bari (Italy)

Code	Material	Audience	Who?	Where?	When?	How?
<b>M1</b>	Infographic of checklists for emergency preparedness	General Public; Schools; People who live and work in flood-prone areas	Polytechnic University of Bari; Schools; Civil Protection	Bari (University); School "Perotti"; Public space (Civil Protection)	Nov– Dec	Distribution by university and professors; addressed in schools; planned public events (not carried out with Civil Protection)
<b>M2</b>	Exhibition (and Scientific Conference)	General Public; Schools; People who live and work in flood-prone areas	Polytechnic of Bari; Aldo Moro University; Metropolitan City of Bari; Puglia Region; Basin Authority; Civil Protection	Polytechnic University of Bari, DicaTech	27 Feb	3-day exhibition preceded by a scientific conference on "Interaction between Flood Risk and the city"
<b>M3</b>	Brochures with similar content to the exhibition	General Public; Schools; People who live and work in flood-prone areas	Polytechnic of Bari; Aldo Moro University; Metropolitan City of Bari; Puglia Region; Basin Authority; Civil Protection; Fire-fighters; Media	Facilities in risk areas; social media; institutional websites	Nov– Dec	Distribution in flood-prone areas; online dissemination (downloadable)
<b>M4</b>	Online Game Decision	General Public; Schools; People who live and work in flood-prone areas	Schools; Puglia Region; Environmental association	Online (institutional websites)	Feb	Online availability and dissemination via social media and institutional platforms
<b>M5</b>	Printable Treasure Hunt Game	General Public; Schools	Schools	Online (downloadable)	Dec– Jan– Feb	Online and physical release of materials



Code	Material	Audience	Who?	Where?	When?	How?
<b>M6</b>	Didactic Guide (and guided trip)	General Public; Schools	Schools; Environmental association	Lama Balice	Apr– May	Distribution of didactic guides after guided visits; 2 school visits planned
<b>M7</b>	Puzzle	General Public; Schools	Schools	Online (downloadable)	Dec– Feb	Online and physical release of materials
<b>M8</b>	Card Game	Technical staff; People who live and work in flood-prone areas	Schools	Online (downloadable)	Dec	Online and physical release of materials



## Annex XIII: Overview of communication and engagement materials from Vic-Gurb (Catalonia, Spain)

Code	Material	Audience	Who?	Where?	When?	How?
<b>M1- Vic</b>	Large-Format Emergency Infographic	General Public; Schools; People in flood-prone areas	Vic City Council; CT BETA	Vic (homes, businesses, institutions); website	Jan–Mar	The materials were distributed by Civil Protection volunteers to households and businesses in flood-prone areas in February–March; the materials were made available on the municipal website in January; CT BETA sent an email to mapped stakeholders in Vic in February
<b>M1- Gurb</b>	Large-Format Emergency Infographic	General Public; Schools; People in flood-prone areas	Gurb City Council; CT BETA	Gurb (households, Institut de Gurb); website	Jan–Feb	The materials were sent by mail to households and businesses, including Institut de Gurb, in February; the materials were made available on the municipal website in January; a public presentation was held on 21 November; CT BETA sent an email to mapped stakeholders in February
<b>M2- Vic</b>	Household Preparedness Magnet	General Public; Schools; People in flood-prone areas	Vic City Council; external communication company; CT BETA	Vic (households and businesses); website	Jan–Mar	The magnets were distributed via postal mailing to households and businesses in flood-prone areas in February–March; the materials were made available on the municipal website in January; CT BETA disseminated the materials via email to mapped stakeholders in February
<b>M2- Gurb</b>	Household Preparedness Magnet	General Public; Schools; People in flood-prone areas	Gurb City Council; CT BETA	Gurb (households and businesses); website	Jan–Feb	The magnets were distributed by mail to households and businesses in February; the materials were made available on the municipal website in January; a public presentation was held on 21 November; CT BETA sent emails to mapped stakeholders in February



Code	Material	Audience	Who?	Where?	When?	How?
<b>M3- Vic</b>	Awareness-Raising Informational Brochure	General Public; Schools; People in flood-prone areas	Vic City Council; external communication company; CT BETA	Vic (households and businesses); website	Jan–Mar	The brochures were distributed by mail to households and businesses in flood-prone areas in February–March; the materials were made available on the municipal website in January; CT BETA sent emails to mapped stakeholders in February
<b>M3- Gurb</b>	Awareness-Raising Informational Brochure	General Public; Schools; People in flood-prone areas	Gurb City Council; CT BETA	Gurb (households and businesses); website	Jan–Feb	The brochures were distributed to households and businesses in February; the materials were made available on the municipal website in January; a public presentation was held on 21 November; CT BETA sent emails to mapped stakeholders in February
<b>M4- Vic</b>	Travelling Exhibition “Before the Water Arrives”	General Public; Schools; People in flood-prone areas; Technical staff	Vic City Council; CT BETA	Library; UVic; public spaces	Nov–Jun	The exhibition was installed at the Vic Library in November; it was exhibited at UVic (Torres dels Frares) in January–February; its placement in additional public spaces was planned for March–June; the materials were made available on the website; CT BETA sent emails to stakeholders in February
<b>M4- Gurb</b>	Travelling Exhibition “Before the Water Arrives”	General Public; Schools; People in flood-prone areas; Technical staff	Gurb City Council; CT BETA	Sala de la Cultura; Institut de Gurb	Nov–Mar	The exhibition was displayed at the Sala de la Cultura in November; it was installed at Institut de Gurb in February; a dissemination video was produced in January; a public presentation was held on 21 November; CT BETA sent emails to stakeholders in February; teacher training was proposed for March–April



Code	Material	Audience	Who?	Where?	When?	How?
<b>M5- Vic</b>	Flut Island Online Decision-Making Game	General Public; Schools; Technical staff	HYDS; Vic City Council; CT BETA	Online (SAP, Moodle, EDUCAPALMA)	Mar–Apr	The game was uploaded to the EWS platform in March; it was made available on the municipal website in February; CT BETA sent emails to mapped stakeholders in February; training sessions and workshops were planned for April–May; teacher training was carried out on 14 January
<b>M5- Gurb</b>	Flut Island Online Decision-Making Game	General Public; Schools; Technical staff	HYDS; Gurb City Council; CT BETA	Online (SAP, website)	Feb–Apr	The game was uploaded to SAP in February; it was made available on the municipal website in February; a public presentation was held on 21 November; it was used at Institut de Gurb in March; teacher training was planned for March–April; CT BETA sent emails to stakeholders in February
<b>M6- Vic</b>	Flut Island Print & Play Board Game (incl. teaching guide)	General Public; Schools	Vic City Council; CT BETA	Online; schools	Jan–Apr	The materials were made available for download in February; they were used in schools and teacher training sessions on 14 January; CT BETA sent emails to mapped stakeholders in February; support from EDUCAPALMA was used to facilitate access
<b>M6- Gurb</b>	Flut Island Print & Play Board Game (incl. teaching guide)	General Public; Schools	Gurb City Council; Institut de Gurb; CT BETA	Online; schools	Feb–Apr	The materials were made available for download in February; they were used at Institut de Gurb in February; teacher training sessions were conducted in March–April; CT BETA sent emails to mapped stakeholders in February; a public presentation was held on 21 November
<b>M7- Vic</b>	Giant River Basin Puzzle (incl. teaching guide)	General Public; Schools	Vic City Council; CT BETA	Online; Vic Library	Feb–Apr	The puzzle was made available for download in February; it was used in schools and at the Vic Library as a lending resource; coordination with library staff was carried out; teacher training



Code	Material	Audience	Who?	Where?	When?	How?
						was conducted on 14 January; CT BETA sent emails to mapped stakeholders in February
<b>M7- Gurb</b>	Giant River Basin Puzzle (incl. teaching guide)	General Public; Schools	Gurb City Council; Institut de Gurb; CT BETA	Online; Institut de Gurb	Feb–Apr	The puzzle was made available for download in February; it was used at Institut de Gurb in February; teacher training sessions were conducted in March–April; CT BETA sent emails to mapped stakeholders in February
<b>M8- Vic</b>	Flood Risk Management Plan Card Game	Technical staff	CT BETA	Online	Feb	The card game was disseminated via email to mapped stakeholders in February; it was made available on institutional platforms; it was used as a training tool for technical staff
<b>M8- Gurb</b>	Flood Risk Management Plan Card Game	Technical staff	CT BETA	Online	Feb	The card game was disseminated via email to mapped stakeholders in February; it was made available on institutional platforms; it was used as a technical training resource