

The report includes the comparative study regarding stakeholder interactions, public participation and citizen involvement in the open government

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Executive summary

FLOOD-Serv project's goal is to implement service application that will enhance the involvement of the citizen with the collaborative power of ICT networks to raise awareness on flood risks and to enable collective risk mitigation solutions and response action.

The present report, related to the task 2.3 of WP2, aims to define key concepts about public participation procedures and citizen involvement, including the comparative study regarding stakeholder interactions and public participation and citizen involvement in the open government.

For the purpose of analysing the stakeholders' interactions and the public participation procedures in flood risk management, the following framework has been developed in order to undertake a comparative analysis across the pilot cases involved in the development of the project, such as Genova (Italy), Comune Vila Nova de Famalicao (Portugal) Danube Delta (Tulcea- Romania), Bratislava (Slovakia) and Bilbao (Spain).

According to objective of covering the scope of work of the present deliverable, a review of the scientific literature is carried out, as an initial step, to identify the scientific literature related to the stakeholders' interactions and procedures for public participation focusing on flood risk management, and define the lines of analysis that are more oriented to the object of the deliverable.

Based on the review, the lines of analysis that will be followed in the document are mentioned below:

- Type of stakeholders
- Stakeholders' participation (authority & power)
- Stakeholders' participation (communication and decision mode)
- Stakeholders' interactions in flood risk managements
- Stakeholders' communication flows and communication aims
- Public participation procedures

These lines of analysis form the structure of both the deliverable D2.3 and the questionnaire designed to be completed by each of the pilot cases (see section3.2). The goal of the questionnaire is to inventory the stakeholder interactions and public participation in each pilot case (existing currently), in the context of flood risk managements.

All the information completed and submitted by each of the pilot cases in the selected countries (this information can be consulted in "APPENDIX I: Structure of the questionnaire", has been analysed and evaluated, in order to achieve delivery objective D2.3.

The information provided through the questionnaires and analysed for each pilot case can be consulted in "APPENDIX III: Analysis of each pilot cases" and the section for GENOVA, section BILBAO, section BRATISLAVA, section TULCEA and section VILANOVA DE FAMALICAO.

As part of the results of the analysis of each pilot case, the information contained in Table 1, can be consulted with information extracted as a summary of the most complete analysis that can be found in section 4 (Systematization and benchmark of Flood-Serv pilot cases). This table presents the data according to the percentage (%) of the results more significant for each criterion of analysis.

Criteria	Genova	Bilbao	Bratislava	Tulcea	Vilanova de Famalicao
TYPE OF STAKEHOLDERS	Regional (30 %) Local authorities (20%)	Local authorities (38%) Regional (21 %)	National (40 %) Entrepreneurs (13%) Citizens (13 %)	Provincial & public services (21 %) Citizens (16 %) Local authorities (11%)	Local authorities (25%) Regional (20%)
STAKEHOLDERS' PARTICIPATION (AUTHORITY & POWER)	Self-management (55 %) Consultation (20%)	Self-management (45 %) Delegation & Consultation (15%)	Self-management (54 %) Collaboration (21%)	Self-management (25 %) Collaboration (21%) Provision information (21 %)	Self-management (75 %) Collaboration (15%)
STAKEHOLDERS' PARTICIPATION (COMMUNICATION AND DECISION MODE)	Technical Expertise (50 %) Develop Preferences (20 %)	Technical Expertise (52 %) Explicit data collection (Human sensor) (12 %)	Deliberation and negotiate (56 %) Vote & bargain for interests (22 %)	Deliberation & neg. (18%) Explicit data collection (Human sensor) (18%) Technical Expertise (14%) Vote & bargain for interests (14%) Express Preferences (14%)	Technical Expertise (80 %) Vote & bargain for interests (15 %)
STAKEHOLDERS' INTERACTIONS IN FLOOD RISK MANAGEMENTS	From municipality (27 %) To municipality (24 %) Within municipality (8 %) Outside municipality (41 %)	From municipality (20 %) To municipality (20 %) Within municipality (38 %) Outside municipality (23 %)	From municipality (16 %) To municipality (16 %) Within municipality (0 %) Outside the municipality (67 %)	From municipality (42 %) To municipality (37 %) Within municipality (11 %) Outside municipality (11 %)	From municipality (17 %) To municipality (37 %) Within municipality (14 %) Outside municipality (32 %)
STAKEHOLDERS' COMMUNICATION FLOWS AND COMMUNICATION AIMS	Prevention (15 %) Preparedness (34 %) Response (37 %) Recovery (15 %)	Prevention (47 %) Preparedness (2 %) Response (45 %) Recovery (7 %)	Prevention (17 %) Preparedness (11 %) Response (46 %) Recovery (26 %)	Prevention (34 %) Preparedness (24 %) Response (32 %) Recovery (10 %)	Prevention (44 %) Preparedness (44 %) Response (11 %) Recovery (0 %)
STAKEHOLDERS' COMMUNICATION FLOWS AND COMMUNICATION CHANNELS	INTERNET, EMAIL, (51.5 %) FACE TO FACE (27.9 %) MUNICIPAL WEB (8.8 %) SOCIAL MEDIA (7.4 %)	TELEPHONE / FAX (35.4 %) INTERNET, EMAIL, (29.3 %) SOCIAL MEDIA (13.5 %) FACE TO FACE (13.5 %)	TELEPHONE / FAX (32,9 %) INTERNET, EMAIL, (31.6 %) FACE TO FACE MEETING (29,1 %)	TELEPHONE / FAX (38.2 %) FACE TO FACE (30.9 %) INTERNET, EMAIL, (18.2 %)	INTERNET, EMAIL, (43.8 %) TELEPHONE / FAX (37.5 %) MUNICIPAL WEB (6.3 %) NEWSLETTER (6.3 %) FACE TO FACE (6.3 %)

Criteria	Genova	Bilbao	Bratislava	Tulcea	Vilanova de Famalicao
PUBLIC PARTICIPATION PROCEDURES AND COMMUNICATION AIMS	Prevention (33 %) Preparedness (33 %) Response (33 %) Recovery (0 %)	Prevention (24 %) Preparedness (0 %) Response (24 %) Recovery (53 %)	Prevention (11 %) Preparedness (0 %) Response (44 %) Recovery (44 %)	Prevention (22 %) Preparedness (11 %) Response (44 %) Recovery (22 %)	Prevention (14 %) Preparedness (0 %) Response (71 %) Recovery (14 %)
PUBLIC PARTICIPATION PROCEDURES AND COMMUNICATION CHANNELS	FACE TO FACE (33.3 %) EMAIL (16.7 %) INTERNET (16.7 %) SOCIAL MEDIA (16.7 %) MOBILE APPS (16.7 %)	TELEPHONE / FAX (21.9 %) MUNICIPAL WEB (25 %) SOCIAL MEDIA (28.1 %) INTERNET (12.5 %)	TELEPHONE / FAX (47,4 %) FACE TO FACE (21.1%) EMAIL (15,8 %)	TELEPHONE / FAX (39.1 %) FACE TO FACE (17.4%) CONSENSUS CONFERENCE (8.7 %)	TELEPHONE / FAX (63.69 %) EMAIL (18.2 %) FACE TO FACE (18.2 %)

Table 1: Benchmarking of Flood-Serv pilot cases

According to stakeholders' interactions in flood risk managements, it is possible to emphasize that the number of interactions between different stakeholders shows significant differences between the pilots cases, as well as in the case of the number of communications identified in the flood risk management between the different pilot cases.

Pattern repetition is not identified among the predominant interactions of the different pilot cases. According to each of pilot case predominates different type of interaction, such as "From municipality" (communication flows generated by municipality (or municipal departments) towards stakeholders NOT related to the municipality) in the case of Tulcea, "To municipality" (communication flows received by municipality (or municipal departments) from stakeholders NOT related to the municipality (or municipal departments) from stakeholders NOT related to the municipality) in the case of Vilanova de Famalicao, "Within municipality" (communication flows, which are exclusively generated and received by stakeholders related to the municipality (or municipal departments)) in the case of Bilbao, and "Outside municipality" (communication flows, which are exclusively generated and received by stakeholders NOT related to the municipality (or municipal departments)) in the case of Bilbao, and "Outside municipality" (communication flows, which are exclusively generated and received and received by stakeholders NOT related to the municipality (or municipal departments)) in the case of Bilbao, and "Outside municipality" (communication flows, which are exclusively generated and received by stakeholders NOT related to the municipality (or municipal departments)) in the case of Bilbao.

Taking into account the results in Table 1 for each of the defined lines of analysis and each of the pilot cases, can be highlighted as points of similarity: 1) the type of stakeholders identified by the pilot cases are mainly "Local authorities" and "Regional", 2) the type of authority & power of stakeholders identified by the pilot cases is mainly "Self-management" 3) the communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise" 4) the results of the pilot cases cover in different ways, the predefined options ("From municipality", "To municipality", "Within municipality" and "Outside municipality") but mainly the option "Outside municipality" 5) the result of the pilot cases covers all the predefined options, although mainly between the communication aims of "Response and "Prevention", 6) the most used communication channels related to stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting", 7) the most common communication aim of public participation procedures is mainly "response" and 8) the most used communication channels in public participation procedures are "telephone", "social media" and "email".

As another result of the analysis and evaluation of each of the pilot cases through the information obtained from the circulated questionnaires, the representation of the interactions between stakeholders can be consulted, through the sociograms of relationships made for each pilot case (Pilot case of Bilbao in Figure 1, as example).



Figure 1. Sociogram about relationships between stakeholders. Bilbao.

In addition, a similar exercise is performed to represent the relationship of the existing public participation processes in each of the pilot cases (Pilot case of Bilbao in Figure 2, as example).



Figure 2. Sociogram about public participation procedures. Bilbao

Focusing on the analysis of sociograms, it is possible to emphasize that there are no established patterns between the interactions represented by the different pilot cases, both at the level of types of stakeholders and typologies of communication aims.

As a result, we find that the five pilots present some relevant differences in terms of participation in decision making, as well as in the interactions identified, but also some similarities. The first should be considered as challenges for the next WPs while the similarities should be considered as opportunities to design the platform.

In order to obtain a more detailed analysis of stakeholders and their interdependencies in the five countries, it might be advisable to have a similar sampling (differences in the number of stakeholder identified in the questionnaires are observed) and more exhaustive for each of the pilot cases, focused on the development of an in-depth analysis. However, it is considered that this type of analysis would go far beyond the objectives of the project.

1 Introduction

Public administration is the complex activity of organizing, execution and enforcement of the law through the institutions empowered in this sense, representing a cumulus of mechanisms through which state policies are carried out. It must always be ready to take concrete action with immediate effect so that it can be presented to the citizens. Successful results depend in most cases on constant dialogue with the social groups. At the level of the community the forms of consultation are institutionalized and because of this, the groups know their rights and obligations well and feel that their opinion really matters.

Modern administration puts first in its objectives the development of services for citizens, providing quality, consistent and current information in as friendly forms as possible to any citizen, irrespective of his/her level of training, and also creating the necessary tools for the active participation of any citizen in the administrative and political decisions that concern him/her. Achieving these objectives is crucially based on ICT.

The information society is defined by the predominance of informational processes based on information and communication technology, which implicitly lead to the re-conceptualization and the re-engineering of systems that provide information services and products. In this context, the specification of new methods of organizing work, integrating new skills for collecting, processing, organizing and communicating information becomes an indispensable requirement for the efficiency and effectiveness of a structure. The democratization of access to information, in fact creating the possibility for every citizen to have access to the information he needs, using modern technologies, has generated new forms of information and information dissemination services and products.

The public must be kept informed of the work of public authorities both at the stage of evaluating their work plans and when adopting and implementing decisions, providing them at all times with complete, objective and consistent information of a financial nature or related With the mission and strategic planning of public entities. Transparency allows any person to whom an act of a public entity has the effect of knowing its basis. For their part, public entities receive feedback from higher entities, consisting of a thorough assessment of their activity

The present *Report on the public participation procedures and citizen involvement* is part of the comparative study and analysis on hydrological risk reduction, carried out within Work Package 2 (WP2) of the FLOODserv project comprises also a comparative study of different flood risk management systems and an analysis on the characteristics and specifications of existing flood risk management public services and the use of ICT to support emergency flood management services in the selected regions- Municipality of Genova (Italy), Comune Vila Nova de Famalicao (Portugal) Danube Delta (Tulcea- Romania), Bratislava (Slovakia) and Bilbao (Spain).

The objectives of WP2 are to describe and compare the characteristics and specifications of flood risk management public services in different European countries and especially in the selected regions, focusing on: the governance structure at and between different levels, the strategic use of ICT, the level of participation among stakeholders and the public , the usage of open services and the involvement of different other actors, including NGOs and users, to create or coproduce new public services in the flood management field, the usage of new, smart and mobile public services in the project's domain, the way transparency tools bring

benefit to different sections of the population and establishing practices to challenge emerging inequalities.

Considering specifically task 2.3 of WP2, its objective is to define an initial inventory of stakeholders' interactions and public participation procedures, with the final purpose of developing a comparative study on stakeholder interactions and public participation and citizen involvement in the open government.

Task 2.3 is complemented and fits with the framework analysed in other tasks within WP2, such as task 2.1, in which a comparative study and analysis of different flood risk management systems organised in the selected regions is carried out. Additionally, it is complementary with task 2.2, and the analysis on the characteristics and specifications of existing flood risk management public services and the use of ICT to support emergency flood management services in the selected regions.

In the following sections of the present report, a preliminary review of the state of the question is presented and an analytical approach for understanding Flood-Serv pilot cases is defined. Based on this analytical approach, the topics of analysis are selected and the systematization and benchmark of Flood-Serv pilot cases is carried out. Finally the conclusions, overall lessons learned, recommendations and perceived challenges are identified.

Reviewers' observations	Explanations as to how observations are addressed
Unfinished document as Tables 97 and 98 not completed	Tables 97 and 98 in the APPENDIX are template tables (for data collection) which were sent to Pilot Cities and Technical Partners for completion and return. They are presented as templates and meant to be empty.
	Data received by means of these data collection instruments were presented in Tables 16-19.
	No other changes in this report were made except the addition of this section, 1.1.

2 State of the question

2.1 Key concepts about stakeholders' involvement and public participation in floods emergencies management.

According to scientific literature, there are different definitions of "stakeholders". One of the most common is the following "Parties/persons that are involved in, effected from or have a relationship with a particular project, system or activity"[8].

The importance of the stakeholder participation in decision-making, and in flood risk management in particular, has been recognized by international and regional treaties such as the Aarhus Convention (1999) [1], which promotes public participation in decision-making on environmental issues. The European Flood Directive 2007/60/EC [3] requires the active participation of stakeholders within decision making, as well as the establishment of public participation mechanisms to ensure citizens' involvement in the flood management cycle.

Stakeholder involvement in the decision-making process is perceived differently by different people and depends on the objectives of the process. Stakeholder involvement should de designed to include clear objectives, understanding of the pros and cons and an analysis of the stakeholders that need to be involved. The role of each stakeholder and the mechanism of their involvement need to be carefully designed so that they can be sustainable in the long term.

With the objective of covering the scope of work of the present deliverable, related to the stakeholder interactions and procedures for public participation in flood risk management, a review of the scientific literature is carried out, as an initial step, to identify the lines of analysis that are more oriented to the object of the deliverable.

Based on the review, several interrelated lines of analysis are identified related to the scope of the present study, which have been structured in different sections. These sections form the structure of both the deliverable D2.3 and the questionnaire designed to be completed by each of the pilot cases (see section 3.2).

The lines of analysis defined about the procedures for public participation and stakeholder participation/interaction are strongly linked. Throughout the document, the information is kept traceable, identifying in a first step the different stakeholders (and categories) involved in the management. The information related to the different stakeholders is then characterized by the participation in decision making, as well as by the interactions between the different actors (stakeholders and citizens).

The objective of this section is to present the general concepts associated with the analysis lines (found in the literature on stakeholder participation in flood management), which will be analysed and characterized in more detail in the following sections of the report, once applied to each of the FLOOD-serv Project use cases.

The lines of analysis that will be analysed in the document are mentioned below:

- Type of stakeholders
- Stakeholders' participation (authority & power)
- Stakeholders' participation (communication and decision mode)
- Stakeholders' interactions in flood risk managements
- Stakeholders' communication flows and communication aims
- Public participation procedures

2.1.1 Type of stakeholders

In order to define the framework of the future analysis of the stakeholders' interactions, it is necessary to carefully identify the relevant stakeholders and all the players who should be involved in the participatory process and in the decision making.

All the possible stakeholders involved in flood risk management stages can be categorized into the six groups identified in Table 2, which are defined based on the revision of different scientific literature [8] [9], among others:

- Local authorities Municipality:
 - City departments
- Other public administrations, organizations and agencies:
 - Provincial
 - o Regional
 - National
- Critical service and infrastructure operators:
 - o Public
 - o Private
- Scientific experts and academic institutions
- Organized civil society:
 - o NGOs
 - Entrepreneurs and business organizations
 - Neighbours organizations
 - Voluntary organizations
 - o Etc.
- Citizens and general public



Table 2. Type of participants in decision making ¹

2.1.2 Stakeholders' participation (authority & power)

The level of impact of stakeholder participation on decision making is a relevant dimension in flood risk management [9]. How is what participants say linked to what public authorities do?. Along this spectrum of influence and authority, six categories of institutionalized influence and authority are defined: provision of information (individual education), public hearings (communicative influence), consultation in decision-making, collaboration in decision-making, delegation of responsibilities (co-govern) and self-management (direct authority), as illustrated in Table 3. In Figure 3 each of the categories are described [8].

¹ Type of participants in decision making, based on our own elaboration after review of scientific literature

Provision of information	Public hearings, conferences	Consultation through workshops	Collaboration through advisory groups	Delegation (community cooperatives, development trusts, local councils)	Self- management (Local communities, individual)
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Table 3: Levels and methods of participation (authority & power).²

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Figure 3. Levels and methods of participation.³

² Levels and methods of participation (authority & power) based on [8]

³ Levels and methods of participation based on [8]

2.1.3 Stakeholders' participation (communication and decision mode)

A second dimension of stakeholders' interactions (and public participation) in flood risk management concerns how stakeholders interact in decision making.

Initially six main modes of communication and decision-making in participatory settings were defined [4]. According to new scientific contributions for covering the integration of the new technologies of information and communication (ICT) in the public participation for situation awareness in flooding proceedings [6], the total number of communication and decision modes increase to the following eight, as can be seen in Table 4.

- **Technical Expertise**: Participants with training and professional specialization (planners, regulator, social workers and the like).
- **Deliberation and negotiation**: Participants deliberate to find out what they want individually and as a group. Process characterized by the interaction and exchange of perspectives and experiences that precedes any group choice. Participants in deliberation aim toward agreement with one another based on reasons, arguments and principles.
- Vote and bargain for interests: Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.
- **Develop Preferences**: Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues which are far less common.
- **Express Preferences**: Participants can express their preferences to the audience.
- **Explicit data collection (Human sensor)**: Direct and intentional data provision, e.g. mobile, tablet, laptop, etc.
- **Listen as Spectator**: Participants receive information about some policy or project and they bear witness to struggles between politicians, activists, and interest groups.
- Implicit data collection (Social sensor): Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.

Technical Expertise	Participants with training and professional specialization (planners, regulator, social workers and the like)
Deliberation and negotiation	Participants deliberate to find out what they want individually and as a group. Process characterized for the interaction and exchange of perspectives and experiences, that precedes any group choice. Participants in deliberation aim toward agreement with one another based on reasons, arguments and principles.
Vote and bargain for interests	Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.
Develop Preferences	Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues are far less common.
Express Preferences	Participants can express their preferences to the audience.
Explicit data collection (Human sensor)	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc.
Listen as Spectator	Participants receive information about some policy or project and they bear witness to struggles between politicians, activists, and interest groups
Implicit data collection (Social sensor)	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.

Table 4: Modes of communication and decision-making.⁴

⁴ Modes of communication and decision-making, based on [9]

2.1.4 Stakeholders' interactions in flood risk managements

The objective of this section is to identify all possible interactions between stakeholders related to flood risk management. All potential flows of existing relationships are identified in Table 5, selecting the stakeholder of origin (column "FROM"), and then, all the different stakeholders of destination (rows "TO") that can be associated with the origin, considering the flood risk management, in general, and more detailed the interactions within the municipal emergency plans, action protocols, coordination processes, communication procedures, public participation processes, etc.

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Table 5: Stakeholders' interactions. 5

2.1.5 Stakeholders' communication flows and communication aims

The relationships identified among the stakeholders in the previous point form the basis for characterizing, in this section, the flows of existing relationships detailing for each one of them:

- Communication aims (prevention, preparedness, response and recovery)
- Content of communication (Recommendations, procedures, protocols, alerts, etc.)
- Communication channels (Social media, internet, phone, radio, face to face, etc.)

 $^{^{\}rm 5}$ Stakeholders' interactions, own elaboration based on the revision of scientific literature.

The information provided in 2.1.4 (Stakeholders' interactions in flood risk managements) in addition to the information obtained in this section (Stakeholders' communication flow and communication aims), will be the basis for the analysis about the relationships between stakeholders and, if the case, represent results as of the example of sociogram in Figure 4, [5] [2].



Figure 4. Example of sociogram about relationships between stakeholders ⁶

2.1.6 Public participation procedures

According to the scientific literature, "public participation" encompasses a group of procedures designed to consult, involve, and inform the public to allow those affected by a decision to have an input into that decision. In this analysis, "input" is the key phrase, differentiating participation methods from other communication strategies.

Although public participation and interaction between stakeholders are strongly linked, in this section, a framework to characterize the existing public participation procedures in the pilot cases under study is defined.

Within the scope of the evaluation, the most formalized participation methods are considered, based on the review of the scientific literature [7].

⁶ Example of sociogram about relationships between stakeholders [5] [2]

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The relationships identified between the citizen environment and the rest of stakeholders, will be the basis for characterizing the flows of existing relationships detailed for each one of them, with the criteria identified in Table 6:

- Communication aims (prevention, preparedness, response and recovery)
- Public participation methods (Referenda, Public hearing/inquiries, etc.) [7]
- Communication channels (Social media, internet, phone, radio, face to face, etc.)
- Authority & power (classification of section 2.1.2)
- Communication & Decision Mode (classification of section 2.1.3)

	COMMUNICATION FLOW (INTERACTION)			PUB PARTICI METH	PATION				
CITIZENS (FROM)	STAKEHOLDER (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication	Channels Remarks		AUTHORITY & POWER	COMMUNIC. & DECISION MODE		
CITIZENS									

 Table 6: Public participation procedures.

2.2 Literature review, state of the art and challenges.

The aim of the search is the identification of scientific literature related to the stakeholders' interactions and procedures for public participation focusing on flood risk management. This search covers the realization of an inventory of the types of stakeholders involved in flood risk management and their characterization from different approaches analyzed in the scientific literature.

The defined search criteria have also been focused on inventorying and analyzing the interactions between stakeholders and the processes of public participation in the management of flood risk.

The main sources criteria:

- English-language literature
- Main sources of literature:
 - Major databases of scientific journals such as: Science Direct, Web of Science.
 - Open access journals Directory: OpenAIRE, RECOLECTA
 - Other sources: Scholar Google (<u>https://scholar.google.es/</u>)

⁷ Public participation procedures, own elaboration based on the revision of scientific literature.

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- Type of publication: Refine filters to limit the publications to flooding and flood risk management scopes.
- Keywords: A list of keywords were used to search related papers, using a combination of the following keywords in all fields and in the fields "Abstract", "Title" and "keywords". These keywords include, among others:
 - Flood risk management OR Flood management OR Flooding OR ...
 - o AND Stakeholders
 - AND Citizens
 - AND Participation OR Engagement
 - AND Decision-making
 - o AND Interactions of stakeholders
 - AND Public participation procedures
 - o AND Citizens observatory
 - Flood risk management OR Flood management OR Flooding AND Stakeholders
 - o Flood risk management OR Flood management OR Flooding AND Citizens
 - Flood risk management OR Flood management OR Flooding AND Participation
 - Flood risk management OR Flood management OR Flooding AND Participation AND Citizens
 - Flood risk management OR Flood management OR Flooding AND Participation AND Stakeholders
 - Flood risk management OR Flood management OR Flooding AND Citizen observatory
 - Flood risk management OR Flood management OR Flooding AND Decision-making
 - Flood risk management OR Flood management OR Flooding AND Interactions of stakeholders
 - Flood risk management OR Flood management OR Flooding AND Public participation procedures
 - o ...

In general, majority of papers of interest identified are sourced from international journals, followed by reports from governmental authorities, guidances and reports from research institutes and specialized agency, such as the United Nations (UN).

Many papers published in international journals are associated with fields of Flood Management Policy, Information Systems for Crisis Response and Management, Environmental Science, Biological Conservation, among others.

3 Analytical approach for understanding Flood-Serv pilot cases

3.1 Deliverable 2.1 and Emergencies management plans summaries of Flood-Serv pilot cases as starting point.

By 2015, Member States drew up the flood risk management plans for the areas where a potential significant flood risk was identified. These plans include measures to reduce the probability of flooding and its potential consequences, addressing all phases of the flood risk management cycle, but focusing on preventing damage caused by floods by avoiding construction of houses and industries in present and future flood-prone areas, or by adapting future developments to the risk of flooding by taking measures to reduce the likelihood of floods and/or the impact of floods in a specific location such as restoring flood plains and wetlands and providing instructions to the public on what to do in the even indicate to policy makers and the public the nature of the risk and the measures proposed to manage these risks of flooding.

Due to the nature of flooding, more flexibility on objectives and measures are left to the Member States in view of subsidiarity. D2.1 deliverable of FLOODserv project carried out the analysis of indicating the public in the selected regions - Genova (Italy), Comune Vila Nova de Famalicao (Portugal), Danube Delta (Tulcea- Romania), Bratislava (Slovakia) and Bilbao (Spain)- the nature of the risk and the measures proposed to manage these risks.

Chapter 8 of Floods Directive, states that all stages of implementation are carried out with the active involvement of the interested parties, encouraging reviewing and updating of documents according to the negotiated policies. Thus, the Directive shifts the focus from operational processes management, to risk management and offers an interactive perspective when empowers the public with parts of the decision.

Communication in emergency situations is crucial and Member States developed different codes and channels in order to facilitate the transmission off the information as quickly and as efficiently as possible. Actually, communication flow is closely related to the decision flow, as shown in the following synoptic figure (Figure 5).



Figure 5. Synoptic structure of decision making process in flood management in BILBAO

3.2 Individual questionnaire of Pilot cases defined to deliverable D2.3 and cities' reference documents.

The present questionnaire has been developed within Task2.3, included in WP2. The goal of the questionnaire is to inventory the stakeholder interactions and public participation in each pilot case (existing currently), in the context of flood risk managements.

For the purpose of analysing the stakeholders' interactions and the public participation procedures in flood risk management, the following framework has been developed to undertake a comparative analysis across the pilot cases.

The information completed by the cities and river basins in the selected countries (pilot cases), have been finally analysed and evaluated, to reach the aim of deliverable D2.3.

The structure of the questionnaire follows the topics:

- Identification of stakeholders involved in the flood risk management.
- Characterization of stakeholder type.
- Characterization of stakeholder's authority & power.
- Characterization of stakeholders' communication and decision mode.
- Stakeholders' interactions in flood risk managements.
- Stakeholders' communication flow and communication aims.
- Public participation procedures.

For further information, all the tables and formats developed for each topic of investigation are included in "APPENDIX I: Structure of the questionnaire" for its consultation.

Additionally, all the information completed and submitted by each of the pilot cases in the selected countries, which it has been analysed and evaluated in order to achieve delivery objective D2.3 can be consulted in "APPENDIX II: Questionnaires of pilot cases".

3.3 Topics of analysis:

The main topics of analysis, which have guided the development of the present deliverable, are collected in the following paragraphs. These topics are aligned with the information requested to each of the pilot cases involved in the project, through the distribution of the questionnaire structure in section 2.2.

3.3.1 Classification of stakeholders

As a first step to carry out an inventory of the stakeholders' interactions and of the processes of public participation, it is necessary to be able to characterize the stakeholders based on a predefined typology that will constitute the framework for each of pilot cases. The definition of the typologies identified has as a starting point the revision and analysis of the scientific literature according to the criteria defined in section 2.2., integrating the different type of stakeholders who may be directly or indirectly involved in the management of flood risk and / or share the concern about the consequences of a flood event in their territory.

The types of predefined stakeholders have been identified with the idea of covering the different administrative levels, critical services operators, academic institutions and organized civil organizations, in addition to citizens and public in general. They are the following:

- Local authorities Municipality:
 - City departments
- Other public administrations, organizations and agencies:
 - Provincial
 - \circ Regional
 - \circ National
- Critical service and infrastructure operators:
 - o Public
 - o Private
- Scientific experts and academic institutions
- Organized civil society:
 - o NGOs
 - o Entrepreneurs
 - Neighbours organizations
 - Voluntary organizations
 - o Etc.
- Citizens and general public

The following figures represent the stakeholders' classification for each of the pilot cases analysed: Genova (Figure 6), Bilbao (Figure 7), Bratislava (Figure 8), Tulcea (Figure 9), and Vilanova de Famalicao (Figure 10).



Figure 6. Stakeholders identified in questionnaire of Genova.



Figure 7. Stakeholders identified in questionnaire of Bilbao.



Figure 8. Stakeholders identified in questionnaire of Bratislava.



Figure 9. Stakeholders identified in questionnaire of Tulcea.



Figure 10. Stakeholders identified in questionnaire of Vilanova de Famalicao.

Complementarily to the evaluation of the "stakeholders' type", is considered the analysis of two additional dimensions, encompassed in the framework of the analysis of stakeholders' participation. One dimension (Stakeholder's authority & power) is related to the level of impact of participation on decision making, and the other (Stakeholders' communication and decision mode) concerns how participants interact in decision making [9].

These key concepts are explained in section 2.1.2 and 2.1.3 respectively and consider the adaptation to fully capture the possibilities of ICT-enabled citizen observatories [9].

The results of each of the dimensions mentioned in the previous paragraph, in relation to the participation of stakeholders in decision making (stakeholder type, stakeholders' authority & power and stakeholders' communication and decision mode) can be consulted for further analysis in section 4 (Systematization and benchmark of Flood-Serv pilot cases), and more specifically for each one of the pilot cases in "APPENDIX III: Analysis of each pilot cases" and the section for GENOVA, section BILBAO, section BRATISLAVA, section TULCEA and section VILANOVA DE FAMALICAO.

3.3.2 Communication flow

The analysis of stakeholders' interactions as well as of the public participation procedures can be carried out analysing the relationship flows maintained between the participating agents. This analysis can be carried out from different perspectives, which enable a characterization of the communication between stakeholders, from different approaches.

One of the analysed approaches that we have denominated "communication flow" relates the source stakeholder (generates the communication) and the final stakeholder (receives the

communication). This analysis classifies the flows of communication in four typologies, based on the scope of the communication:

- <u>From municipality</u>: Communication flows generated by stakeholders related to the municipality (or municipal departments) with a destination towards stakeholders NOT related to the municipality.
- <u>To municipality</u>: Communication flows received by stakeholders related to the municipality (or municipal departments) with an origin of the communication exclusively from stakeholders NOT related to the municipality.
- <u>Within municipality</u>: Communication flows, which are exclusively generated and received by stakeholders related to the municipality (or municipal departments).
- <u>Outside municipality</u>: Communication flows, which are exclusively generated and received by stakeholders NOT related to the municipality (or municipal departments).

Following these criteria, the results of this analysis can be consulted for further analysis in section 4 (Systematization and benchmark of Flood-Serv pilot cases), and more specifically for each one of the pilot cases according to following figures: Genova (Figure 11), Bilbao (Figure 12), Bratislava (Figure 13), Tulcea (Figure 14), and Vilanova de Famalicao (Figure 15).



Figure 11. Stakeholders' interactions in flood risk managements. Genova.



Figure 12. Stakeholders' interactions in flood risk managements. Bilbao.



Figure 13. Stakeholders' interactions in flood risk managements. Bratislava.



Figure 14. Stakeholders' interactions in flood risk managements. Tulcea.



Figure 15. Stakeholders' interactions in flood risk managements. Vilanova de Famalicao.

3.3.3 Communication aims

Other approach analyzed in order to evaluate the stakeholders' interactions as well as of the public participation procedures, is the "communication aims" that generates the interaction between stakeholders.

This analysis classifies the aims of communication in four typologies:

- Prevention
- Preparedness
- Response
- Recovery

Following these criteria, the results of this analysis can be consulted for further analysis in section 4 (Systematization and benchmark of Flood-Serv pilot cases), both in the case of the analysis of the interaction between the stakeholders as well as for the processes of public participation.

The results specifically for stakeholders' interaction for each one of the pilot cases are represented in the following figures: Bilbao (Figure 16), Genova (Figure 18), Vilanova de Famalicao (Figure 20), Bratislava (Figure 22) and Tulcea (Figure 24).

On the other hand, the results specifically for public participation procedures for each one of the pilot cases are represented in the following figures: Bilbao (Figure 17), Genova (Figure 19), Vilanova de Famalicao (Figure 21), Bratislava (Figure 23) and Tulcea (Figure 25).



Figure 16. Stakeholders' communication flow (Communication aims). Bilbao.



Figure 17. Public participation procedures (Communication aims). Bilbao.



Figure 18. Stakeholders' communication flow (Communication aims). Genova.


Figure 19. Public participation procedures (Communication aims). Genova.



Figure 20. Stakeholders' communication flow (Communication aims). Vilanova de Famalicao.



Figure 21. Public participation procedures (Communication aims). Vilanova de Famalicao.



Figure 22. Stakeholders' communication flow (Communication aims). Bratislava.



Figure 23. Public participation procedures (Communication aims). Bratislava.



Figure 24. Stakeholders' communication flow (Communication aims). Tulcea.



Figure 25. Public participation procedures (Communication aims). Tulcea.

3.3.4 Communication channels

Finally, the third approach analyzed in order to evaluate the stakeholders' interactions as well as the public participation procedures, is the "communication channel" through which generates the interaction between stakeholders.

In the analysis of stakeholders' interaction, the alternatives considered are classified in:

- Municipal web
- Mobile apps
- Social media
- Radio and TV
- Telephone/fax
- Newsletter
- Internet, email
- Face to face meeting
- Others

In the case of public participation procedures, the alternatives are extended to consider the most formalized participation methods, based on the revision of the scientific literature [7].

- Referenda
- Hearings
- Inquiries
- Public opinion surveys
- Rule making negociated
- Consensus conference
- Citizens jury/panel
- Advisory committee
- Focus group
- Face to face

- Radio and tv
- Written press
- Newsletter
- Telephone/fax
- Municipal web
- Mobile apps
- Social media
- Internet
- Email
- Others

Following these criteria, the results of this analysis can be consulted for further analysis in section 4 (Systematization and benchmark of Flood-Serv pilot cases), both in the case of the analysis of the interaction between the stakeholders as well as for the processes of public participation.

The results specifically for stakeholders' interaction for each one of the pilot cases are represented in the following figures: Bilbao (Figure 26), Genova (Figure 28), Vilanova de Famalicao (Figure 30), Bratislava (Figure 32) and Tulcea (Figure 34).

On the other hand, the results specifically for public participation procedures for each one of the pilot cases are represented in the following figures: Bilbao (Figure 27), Genova (Figure 29), Vilanova de Famalicao (Figure 31), Bratislava (Figure 33) and Tulcea (Figure 35).



Figure 26. Stakeholders' communication flow (Communication channels). Bilbao.



Figure 27. Public participation procedures (Communication channels). Bilbao.



Figure 28. Stakeholders' communication flow (Communication channels). Genova.



Figure 29. Public participation procedures (Communication channels). Genova.



Figure 30. Stakeholders' communication flow (Communication channels). Vilanova de Famalicao.



Figure 31. Public participation procedures (Communication channels). Vilanova de Famalicao.



Figure 32. Stakeholders' communication flow (Communication channels). Bratislava.



Figure 33. Public participation procedures (Communication channels). Bratislava.



Figure 34. Stakeholders' communication flow (Communication channels). Tulcea



Figure 35. Public participation procedures (Communication channels). Tulcea

4 Systematization and benchmark of Flood-Serv pilot cases.

As already mentioned in this report, the final objective of this deliverable is the evaluation of stakeholders' interactions and the analysis of public participation procedures in the preparation of the flood risk management plans in the selected regions.

The information received from the different pilot cases through the shared questionnaire has been analysed and finally, a comparative study has been carried out with the results of the pilot cases. The information related to this comparative study can be consulted in the present section.

The information provided through the questionnaires and analysed for each pilot case can be consulted in "APPENDIX III: Analysis of each pilot cases" and the section for GENOVA, section BILBAO, section BRATISLAVA, section TULCEA and section VILANOVA DE FAMALICAO.

The evaluation of the interactions between stakeholders as well as the analysis of public participation procedures is carried out taking into account the lines of analysis identified in the report and the structure of the questionnaire provided to the pilot cases.

It is taken into account, as a starting point of the comparative study, the inventory of the stakeholders of each pilot case, for inventory later the interactions of the stakeholders and the public participation that currently exists in each pilot case, in all cases the context of the flood risk management.

The criteria of the comparative study between the pilot cases is structured taking into account the lines of analysis mentioned previously. These are the following:

- Type of stakeholder (type of participants in the decision making)
- Stakeholders' participation Authority & power in the flood risk managements
- Stakeholders' participation Communication and decision mode in the flood risk managements
- Stakeholders' interactions in flood risk managements
- Stakeholders' communication aims and communication channels.
- Public participation procedures and communication aims
- Public participation procedures and communication channels.

Analysis on these dimensions is carried out in the following subsections 4.1 to 4.7.

The table with the summary of the comparative study between pilots cases performed for each line of analysis can be found in the subsection 4.8, Table 15.

			OTHER PUBL ORGANIZA					ICAL SERVI RUCTURE (CE AND OPERATORS	SCIENTIFIC EXPERTS		ORGANIZ	ED CIVIL S	ΟCIETY		CITIZENS AND	٢
PILOT CASES	#/%	Local authoriti es	Provincial	Regional	National	Others	Public	Private	Others	AND ACADEMIC INSTITUTIO NS	NGOs	Entrepreneu rs businesses organization S			Others	CITIZENS AND GENERAL PUBLIC	TOTAL
BILBAO	#	9	1	5	1	0	1	1	0	0	1	1	1	1	1	1	24
SILDRO	%	38%	4%	21%	4%	0%	4%	4%	0%	0%	4%	4%	4%	4%	4%	4%	100%
CENOVA	#	4	3	6	0	0	1	1	0	0	1	2	0	1	0	1	20
GENOVA	%	20%	15%	30%	0%	0%	5%	5%	0%	0%	5%	10%	0%	5%	0%	5%	100%
CMVNF	#	5	2	2	4	0	0	3	0	0	0	0	0	3	0	1	20
CIVIVINE	%	25%	10%	10%	20%	0%	0%	15%	0%	0%	0%	0%	0%	15%	0%	5%	100%
BSK	#	1	0	1	6	0	1	0	0	0	1	2	0	1	0	2	15
BSK	%	7%	0%	7%	40%	0%	7%	0%	0%	0%	7%	13%	0%	7%	0%	13%	100%
TULCEA	#	2	4	1	0	0	4	1	0	1	0	1	1	1	0	3	19
TULCEA	%	11%	21%	5%	0%	0%	21%	5%	0%	5%	0%	5%	5%	5%	0%	16%	100%
	#	21	10	15	11	0	7	6	0	1	3	6	2	7	1	8	98
ALL	%	21.4%	10.2%	15.3%	11.2%	0.0%	7.1%	6.1%	0.0%	1.0%	3.1%	6.1%	2.0%	7.1%	1.0%	8.2%	100%

4.1 Type of stakeholder (type of participants in decision making)

Table 7: Benchmarking of type of stakeholder between pilot cases.



Figure 36. Benchmarking of type of stakeholder between pilot cases.

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The data collected in Table 7 above shows the values of type of stakeholders identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 36 show only the data of each of the pilot cases and not the totals.

Considering the total values accumulated for all pilot cases, the most frequently identified "type of stakeholders" are mainly "local authorities" (21.4%) and "regional" (15.3%).

Taking into account the analysis of the type of stakeholder most frequently identified by each of the pilot cases it can be highlighted for the case of Genova ("Regional administration", with a percentage of 30% of those identified), Bilbao ("Local authorities", with a percentage of 38%), Bratislava ("National", with a percentage of 40%), Tulcea ("Provincial administration" and "Public critical service" with a percentage of 21%) and Vilanova de Famalicao ("Local authorities", with a percentage of 25%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 15 to 24 records, being Bilbao the pilot case that more information identifies in this section.

4.2 Stakeholders' participation - Authority & power in the flood risk managements

PILOT CASES	# / %	Self- management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information	τοται
BILBAO	#	9	3	2	3	1	2	20
DILDAU	%	45%	15%	10%	15%	5%	10%	100%
	#	11	0	3	4	0	2	20
GENOVA	%	55%	0%	15%	20%	0%	10%	100%
	#	15	1	3	0	0	1	20
CMVNF	%	75%	5%	15%	0%	0%	5%	100%
DCK	#	13	2	5	1	1	2	24
BSK	%	54%	8%	21%	4%	4%	8%	100%
	#	6	4	5	3	1	5	24
TULCEA	%	25%	17%	21%	13%	4%	21%	100%
	#	54	10	18	11	3	12	108
ALL	%	50.0%	9.3%	16.7%	10.2%	2.8%	11.1%	100%

 Table 8: Benchmarking of type of Stakeholders' participation (Authority & power) between pilot cases.



Figure 37. Benchmarking of type of Stakeholders' participation (Authority & power) between pilot cases

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The data collected in Table 8 above shows the values related to the type of stakeholders' participation (Authority & power) identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 37 show only the data of each of the pilot cases and not the totals.

Considering the total values accumulated for all pilot cases, the type of authority & power of stakeholders most frequently identified by the pilot cases is mainly "Self-management" with a percentage of 50% of the total.

Taking into account the analysis of the type of authority & power of stakeholders most frequently identified by each of the pilot cases, it can be highlighted that in all the cases is "Self-management" the more selected option. For the case of Genova ("Self-management", with a percentage of 55% of those identified), Bilbao ("Self-management", with a percentage of 45%), Bratislava ("Self-management", with a percentage of 54%), Tulcea ("Self-management" with a percentage of 25%) and Vilanova de Famalicao ("Self-management", with a percentage of 75%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 20 to 24 records, being Bratislava and Tulcea the pilot cases that more information identifies in this section.

4.3 Stakeholders' participation - Communication and decision mode in the flood risk managements

PILOT CASES	# / %	Technical Expertise	Deliberation and negotiate	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)	τοται
BILBAO	#	13	2	1	1	1	3	2	2	25
BILBAU	%	52%	8%	4%	4%	4%	12%	8%	8%	100%
GENOVA	#	10	1	0	4	2	2	1	0	20
GENOVA	%	50%	5%	0%	20%	10%	10%	5%	0%	100%
CMVNF	#	16	0	3	0	0	0	0	1	20
CIVIVINE	%	80%	0%	15%	0%	0%	0%	0%	5%	100%
DCK	#	2	10	4	0	0	1	0	1	18
BSK	%	11%	56%	22%	0%	0%	6%	0%	6%	100%
	#	4	5	4	2	4	5	1	3	28
TULCEA	%	14%	18%	14%	7%	14%	18%	4%	11%	100%
	#	45	18	12	7	7	11	4	7	111
ALL	%	40.5%	16.2%	10.8%	6.3%	6.3%	9.9%	3.6%	6.3%	100%

 Table 9: Benchmarking of type of Stakeholders' participation (Communication and decision mode)

 between pilot cases.



Figure 38. Benchmarking of type of Stakeholders' participation (Communication and decision mode) between pilot cases.

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The data collected in Figure 11 above shows the values of the communication and decision mode of the stakeholders by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 38 show only the data of each of the pilot cases and not the totals.

Considering the total values accumulated for all pilot cases, the communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise" with a percentage of 45% of the total.

Taking into account the analysis of the communication and decision mode most frequently identified by each of the pilot cases it can be highlighted for the case of Genova ("Technical Expertise", with a percentage of 50% of those identified), Bilbao ("Technical Expertise", with a percentage of 52%), Bratislava ("Deliveration and negotiation", with a percentage of 56%), Tulcea ("Deliveration and negotiation" and "Explicit data collection (Human sensor)" with a percentage of 18%) and Vilanova de Famalicao ("Technical Expertise", with a percentage of 80%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 18 to 28 records, being Tulcea the pilot case that more information identifies in this section.

PILOT CASES	# / %	From municipality	To municipality	Within municipality	Outside the municipality	ΤΟΤΑΙ
BILBAO	#	21	21	40	24	106
BILBAU	%	20%	20%	38%	23%	100%
	#	31	27	9	46	113
GENOVA	%	27%	24%	8%	41%	100%
	#	13	29	11	25	78
CMVNF	%	17%	37%	14%	32%	100%
DCK	#	14	14	0	58	86
BSK	%	16%	16%	0%	67%	100%
THUCEA	#	8	7	2	2	19
TULCEA	%	42%	37%	11%	11%	100%
A11	#	87	98	62	155	402
ALL	%	21.6%	24.4%	15.4%	38.6%	100%

4.4 Stakeholders' interactions in flood risk managements

Table 10: Benchmarking of Stakeholders' interactions in flood risk managements between pilot cases.



Figure 39. Benchmarking of Stakeholders' interactions in flood risk managements between pilot cases.

The data collected in Table 10 above shows the values of the stakeholders' interactions identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 39 show only the data of each of the pilot cases and not the totals.

Regarding the interactions between the stakeholders, the results of the pilot cases cover in different ways, the predefined options ("From municipality", "To municipality", "Within municipality" and "Outside municipality"). However, considering the total values accumulated for all pilot cases, the option most frequently identified are mainly the flows " Outside the municipality" with a percentage of 38.6 % of the total.

Taking into account the analysis of the flow related to stakeholders' interactions most frequently identified by each of the pilot cases it can be highlighted for the case of Genova ("Outside municipality", with a percentage of 41% of those identified), Bilbao ("Within municipality", with a percentage of 38%), Bratislava ("Outside municipality", with a percentage of 67%), Tulcea ("From municipality" with a percentage of 42%) and Vilanova de Famalicao ("To municipality", with a percentage of 37%).

Regarding to the amount of data provided by each pilot case, the range is maintained between a minimum of 19 to a maximum of 113 records, being Genova and Bilbao the pilot cases that more information identifies in this section.

PILOT CASES	#/%	Prevention	Preparedness	Response	Recovery	TOTAL
	#	49	2	47	7	105
BILBAO	%	47%	2%	45%	7%	100%
	#	6	14	15	6	41
GENOVA	%	15%	34%	37%	15%	100%
CAMUNE	#	4	4	1	0	9
CMVNF	%	44%	44%	11%	0%	100%
DCK	#	6	4	16	9	35
BSK	%	17%	11%	46%	26%	100%
	#	14	10	13	4	41
TULCEA	%	34%	24%	32%	10%	100%
	#	79	34	92	26	231
ALL	%	34.2%	14.7%	39.8%	11.3%	100%

4.5 Stakeholders' communication aims and communication channels.

 Table 11: Benchmarking of Stakeholders' communication (aims) in flood risk managements between

 pilot cases.



Figure 40. Benchmarking of Stakeholders' communication (aims) in flood risk managements between pilot cases.

The data collected in Table 11 above shows the values of type of stakeholders' communication flows and communication aims identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 40 show only the data of each of the pilot cases and not the totals.

According to the stakeholders' communication flows and communication aims, the result covers all the predefined options, although mainly between the communication aims of "Response", "Preparedness" and "Prevention". However, considering the total values accumulated for all pilot cases, the communication aim most frequently identified are mainly "Response" (39.8%) and "Prevention" (34.2%).

Taking into account the analysis of communication flows and communication aims most frequently identified by each of the pilot cases it can be highlighted for the case of Genova ("Response", with a percentage of 37% of those identified), Bilbao ("Prevention", with a percentage of 47%), Bratislava ("Response", with a percentage of 46%), Tulcea ("Prevention" with a percentage of 34%) and Vilanova de Famalicao ("Preparedness" and "Prevention", with a percentage of 44%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 9 to 105 records, being Bilbao the pilot case that more information identifies in this section.

PILOT CASES	# %	MUNICIPAL WEB	MOBILE APPS	SOCIAL MEDIA	RADIO AND TV	TELEPHONE / FAX	NEWSLETTER	INTERNET, EMAIL,	FACE TO FACE MEETING	Other (add "remarks")	TOTAL
BILBAO	#	10	1	31	4	81	4	67	31	0	229
DIEDAO	%	4.4%	0.4%	13.5%	1.7%	35.4%	1.7%	29.3%	13.5%	0.0%	100%
GENOVA	#	6	2	5	1	0	0	35	19	0	68
GENOVA	%	8.8%	2.9%	7.4%	1.5%	0.0%	0.0%	51.5%	27.9%	0.0%	100%
CMVNF	#	1	0	0	0	6	1	7	1	0	16
CIVIVINF	%	6.3%	0.0%	0.0%	0.0%	37.5%	6.3%	43.8%	6.3%	0.0%	100%
BSK	#	1	0	1	3	26	0	25	23	0	79
ВЭК	%	1.3%	0.0%	1.3%	3.8%	32.9%	0.0%	31.6%	29.1%	0.0%	100%
TULCEA	#	1	8	0	2	42	3	20	34	0	110
TOLCEA	%	0.9%	7.3%	0.0%	1.8%	38.2%	2.7%	18.2%	30.9%	0.0%	100%
ALL	#	19	11	37	10	155	8	154	108	0	502
ALL	%	3.8%	2.2%	7.4%	2.0%	30.9%	1.6%	30.7%	21.5%	0.0%	100%

 Table 12: Benchmarking of Stakeholders' communication (channels) in flood risk managements

 between pilot cases.



Figure 41. Benchmarking of Stakeholders' communication (channels) in flood risk managements between pilot cases.

The data collected in Table 12 above shows the values of type of stakeholders' communication flows and communication channels identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 41 show only the data of each of the pilot cases and not the totals.

Considering the total values accumulated for all pilot cases, the most used communication channels in the stakeholders' communication flows are "telephone" (30.9%), "Internet, email" (30.7%) and "face to face meeting (25.1%)

Taking into account the analysis of communication flows and communication channel most frequently identified by each of the pilot cases it can be highlighted for the case of Genova ("Internet, email", with a percentage of 51.5% of those identified), Bilbao ("telephone", with a percentage of 35.4%), Bratislava ("telephone", with a percentage of 32.9%), Tulcea ("telephone" with a percentage of 38.2%) and Vilanova de Famalicao ("Internet, email ", with a percentage of 43.8%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 16 to 229 records, being Bilbao the pilot case that more information identifies in this section.

PILOT CASES	# %	Prevention	Preparedness	Response	Recovery	TOTAL
BILBAO	#	4	0	4	9	17
DILDAU	%	24%	0%	24%	53%	100%
GENOVA	#	1	1	1	0	3
GENOVA	%	33%	33%	33%	0%	100%
	#	1	0	5	1	7
CMVNF	%	14%	0%	71%	14%	100%
BSK	#	1	0	4	4	9
BSK	%	11%	0%	44%	44%	100%
THICEA	#	2	1	4	2	9
TULCEA	%	22%	11%	44%	22%	100%
	#	9	2	18	16	45
ALL	%	20.0%	4.4%	40.0%	35.6%	100%

4.6 Public participation procedures and communication aims

 Table 13: Benchmarking of public participation procedures (communication aims) in flood risk

 managements between pilot cases.



Figure 42. Benchmarking of public participation procedures (communication aims) in flood risk managements between pilot cases.

The data collected in Table 13 above shows the values of communication flows and communication aims of public participation procedures identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 42 show only the data of each of the pilot cases and not the totals.

Considering the total values accumulated for all pilot cases, the communication aim most frequently identified are mainly "Response" with a percentage of 40 % of the total.

Taking into account the analysis of communication flows and communication aims most frequently identified by each of the pilot cases it can be highlighted for the case of Genova ("Response", "Preparedness" and "Prevention", with a percentage of 33% of those identified), Bilbao ("Recovery", with a percentage of 53%), Bratislava ("Response" and "Recovery", with a percentage of 44%), Tulcea ("Response", with a percentage of 44%) and Vilanova de Famalicao ("Response", with a percentage of 71%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 3 to 17 records, being Bilbao the pilot case that more information identifies in this section.

PILOT CASES	# / %	REFERE NDA	HEARI NGS	INQUIR IES	PUBLIC OPINIO N SURVE YS	MAKIN G	CONSE NSUS CONFE RENCE	CITIZE NS JURY/P ANEL	ADVIS ORY COMM ITEE	FOCUS GROUP	FACE TO FACE	RADIO AND TV	WRITT EN PRESS	NEWSL ETTER	TELEPH ONE / FAX	MUNIC IPAL WEB	MOBIL E APPS		INTERN ET	EMAIL	OTHER	τοται
	#	0	0	0	0	0	0	0	0	0	3	0	0	0	7	8	1	9	4	0	0	32
BILBAO	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4%	0.0%	0.0%	0.0%	21.9%	25.0%	3.1%	28.1%	12.5%	0.0%	0.0%	100%
GENOVA	#	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1	1	1	0	6
GENOVA	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	16.7%	16.7%	16.7%	0.0%	100%
CMVNF	#	0	0	0	0	0	0	0	0	0	2	0	0	0	7	0	0	0	0	2	0	11
CIVIVINF	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.2%	0.0%	0.0%	0.0%	63.6%	0.0%	0.0%	0.0%	0.0%	18.2%	0.0%	100%
BSK	#	0	1	0	0	0	0	0	0	0	4	0	0	0	9	0	0	2	0	3	0	19
DJK	%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.1%	0.0%	0.0%	0.0%	47.4%	0.0%	0.0%	10.5%	0.0%	15.8%	0.0%	100%
TULCEA	#	0	1	0	0	0	2	0	2	0	4	1	1	0	9	1	0	0	1	1	0	23
TOLCEA	%	0.0%	4.3%	0.0%	0.0%	0.0%	8.7%	0.0%	8.7%	0.0%	17.4%	4.3%	4.3%	0.0%	39.1%	4.3%	0.0%	0.0%	4.3%	4.3%	0.0%	100%
ALL	#	0	2	0	0	0	2	0	2	0	15	1	1	0	32	9	2	12	6	7	0	91
ALL	%	0.0%	2.2%	0.0%	0.0%	0.0%	2.2%	0.0%	2.2%	0.0%	16.5%	1.1%	1.1%	0.0%	35.2%	9.9%	2.2%	13.2%	6.6%	7.7%	0.0%	100%

4.7 Public participation procedures and Communication channels

Table 14: Benchmarking of public participation procedures (communication channels) in flood riskmanagements between pilot cases.



Figure 43. Benchmarking of public participation procedures (communication channels) in flood risk managements between pilot cases.

The data collected in Table 14 above shows the values of communication flows and communication channels of public participation procedures identified by each of the pilot cases, as well as the accumulated value of each predefined option for the total of the pilot cases analysed (last row of the table). The values of the Figure 43Figure 41 show only the data of each of the pilot cases and not the totals.

Considering the total values accumulated for all pilot cases, the most used communication channels in the public participation procedures are "telephone" (35.2%), "face to face" (16.5%), "social media" (13.2%). And "email" (7.7%).

Taking into account the analysis of communication flows and communication channel most frequently identified by each of the pilot cases, it can be highlighted for the case of Genova ("face to face", with a percentage of 33% of those identified), Bilbao ("social media", with a percentage of 28.1%), Bratislava ("telephone", with a percentage of 47.4%), Tulcea ("telephone" with a percentage of 39.1%) and Vilanova de Famalicao ("telephone", with a percentage of 63.6%).

Regarding to the amount of data provided by each pilot case, the range is maintained between 6 to 32 records, being Bilbao the pilot case that more information identifies in this section.

4.8 General discussion and analysis

Taking into account the results for each of the defined lines of analysis and pilot cases, these are presented and summarized in the following Table 15 in which it can be highlighted as points of similarity: 1) the type of stakeholders identified by the pilot cases are mainly "Local authorities" and "Regional", 2) the type of authority & power of stakeholders identified by the pilot cases is mainly "Self-management" 3) the communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise" 4) the results of the pilot cases cover in different ways, the predefined options ("From municipality", "To municipality", "Within municipality" and "Outside municipality"), but mainly the option "Outside municipality" 5) the result of the pilot cases covers all the predefined options, although mainly between the communication aims of "Response" and "Prevention", 6) the most used communication channels related to stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting", 7) the most common communication channels in public participation procedures are "telephone", "face to face", "social media" and "email".

For further information about the topic of investigation and the information provided through the questionnaires and analysed for each pilot case can be consulted in "APPENDIX III: Analysis of each pilot cases" and the section for GENOVA, section BILBAO, section BRATISLAVA, section TULCEA and section VILANOVA DE FAMALICAO.

As another result of the analysis and evaluation of each of the pilot cases through the information obtained from the circulated questionnaires, the representation of the interactions between stakeholders can be consulted, through the sociograms of relationships made for each pilot case.

The resulting sociogram of stakeholders' interaction & public participation procedures for each one of the pilot cases are represented in the following figures: Genova (Figure 44), Bilbao (Figure 45), Bratislava (Figure 46), Tulcea (Figure 47).and Vilanova de Famalicao (Figure 48).

Focusing on the analysis of sociograms, it is possible to emphasize that there are no established patterns between the interactions represented by the different pilot cases, both at the level of types of stakeholders and typologies of communication aims.

Criteria	Remarks (all)	Genova	Bilbao	Bratislava	Tulcea	Vilanova de Famalicao
Type of stakeholders: (Local authorities, Provincial, Regional and National administrations, Public and Private Critical Service, Scientific experts and academic institutions, Organized divil society (NGOs, Enterpreners, Neighbours organizations, Voluntary organizations, Etc.) and Citizens and general public)	The type of stakeholders identified by the pilot cases are mainly, Local authorities and Regional.	Regional (30 %) Local authorities (20%)	Local authorities (38%) Regional (21 %)	National (40 %) Entrepreneurs (13%) Citizens (13 %)	Provincial & public services (21 %) Citizens (16 %) Local authorities (11%)	Local authorities (25%) Regional (20 %)
Stakeholders participation (authority & power): (Self-management, Delegation, Collaboration, Consultation, Public hearings, and Provision of information)	The type of authority & power of stakeholders identified by the pilot cases is mainly "Self- management".	Self-management (55 %) Consultation (20%)	Self-management (45 %) Delegation & Consultation (15%)	Self-management (54 %) Collaboration (21%)	Self-management (25 %) Collaboration (21%) Provision information (21 %)	Self-management (75 %) Collaboration (15%)
Stakeholders' participation (communication and decision mode): (Technical Expertise, Deliberation and negotiate, Vote and bargain for interests, Develop Preferences, Experts Orderences, Experts Listen as Spectator, Implicit data collection (Social sensor).	The communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise".	Technical Expertise (50 %) Develop Preferences (20 %)	Technical Expertise (52 %) Explicit data collection (Human sensor) (12 %)	Deliberation and negotiate (56 %) Vote & bargain for interests (22 %)	Deliberation and negotiate (18 %) Explicit data collection (Human sensor) (18 %) Technical Expertise (14 %) Vote & bargain for interests (14 %) Express Preferences (14 %)	Technical Expertise (80 %) Vote and bargain for interests (15 %)
Stakeholders' interactions in flood risk managements: (From municipality, To municipality, Within municipality, Outside the municipality)	Regarding the interactions between the stakeholders, the results of the pilot cases covers in different ways, the predefined options, mainly "out municipality	From municipality (27 %) To municipality (24 %) Within municipality (8 %) Outside the municipality (41 %)	From municipality (20%) To municipality (20%) Within municipality (38%) Outside the municipality (23%)	From municipality (16%) To municipality (16%) Within municipality (0%) Outside the municipality (67%)	From municipality (42 %) To municipality (37 %) Within municipality (11 %) Outside the municipality (11 %)	From municipality (17%) To municipality (37%) Within municipality (14%) Outside the municipality (32%)
Stakeholders' communication flows and communication aims: (prevention, preparedness, response and recovery)	According to the stakeholders' communication flows and communication aims, the result covers all the predefined options, although mainly "Response" and "Prevention"	Prevention (15%) Preparedness (34%) Response (37%) Recovery (15%)	Prevention (47 %) Preparedness (2 %) Response (45 %) Recovery (7 %)	Prevention (17 %) Preparedness (11 %) Response (46 %) Recovery (26 %)	Prevention (34 %) Preparedness (24 %) Response (32 %) Recovery (10 %)	Prevention (44 %) Preparedness (44 %) Response (11 %) Recovery (0 %)
Stakeholders' communication flows and communication channels: (Municipal web, Mobile apps, Social media, Radio and TV, Telephone/fax, Newsletter, Internet, email, Face to face meeting, Others)	The most used communication channels in the Stakeholders' communication flows are "telephone", "internet, email" and "face to face meeting".	INTERNET, EMAIL, (51.5 %) FACE TO FACE MEETING (27.9 %) MUNICIPAL WEB (8.8 %) SOCIAL MEDIA (7.4 %)	TELEPHONE / FAX (35.4 %) INTERNET, EMAIL, (29.3 %) SOCIAL MEDIA (13.5 %) FACE TO FACE MEETING (13.5 %)	TELEPHONE / FAX (32,9 %) INTERNET, EMAIL, (31.6 %) FACE TO FACE MEETING (29,1 %)	TELEPHONE / FAX (38.2 %) FACE TO FACE MEETING (30.9 %) INTERNET, EMAIL, (18.2 %)	INTERNET, EMAIL, (43.8 %) TELEPHONE / FAX (37.5 %) MUNICIPAL WEB (6.3 %) NEWSLETTER (6.3 %) FACE TO FACE MEETING (6.3 %)
Public participation procedures and communication aims: prevention, preparedness, response and recovery)	According to the stakeholders' communication aims, the most common communication aim of public participation procedures is mainly "response".	Prevention (33 %) Preparedness (33 %) Response (33 %) Recovery (0 %)	Prevention (24 %) Preparedness (0 %) Response (24 %) Recovery (53 %)	Prevention (11%) Preparedness (0%) Response (44%) Recovery (44%)	Prevention (22 %) Preparedness (11 %) Response (44 %) Recovery (22 %)	Prevention (14 %) Preparedness (0 %) Response (71 %) Recovery (14 %)
Public participation procedures and communication channels: (Referenda, Hearings, Iquivilies, Public options urveys, Rule making negociated, Consensus conference, Citizens jury/panel Advisory committee, Focus group, Face to face, Radio and tv, Written press, Newsletter, Telephone/fax, Municipal web, Moble apps, Social media, Internet, Email, Others)	The most used communication channels in Public participation procedures are "telephone", "face to face", "social media" and "email"	FACE TO FACE (33.3 %) EMAIL (16.7 %) INTERNET (16.7 %) SOCIAL MEDIA (16.7 %) MOBILE APPS (16.7 %)	TELEPHONE / FAX (21.9 %) MUNICIPAL WEB (25 %) SOCIAL MEDIA (28.1 %) INTERNET (12.5 %)	TELEPHONE / FAX (47,4 %) FACE TO FACE (21.1%) EMAIL (15,8 %)	TELEPHONE / FAX (39.1 %) FACE TO FACE (17.4%) CONSENSUS CONFERENCE (8.7 %)	TELEPHONE / FAX (63.69 %) EMAIL (18.2 %) FACE TO FACE (18.2 %)

Table 15: Benchmarking of Flood-Serv pilot cases.



Sociegram about relationships between stakeholders & public participation procedures. GENOW:

Figure 44. Sociogram about relationships between stakeholders & public participation procedures. GENOVA

Sociegram about relationships between stakeholders & public participation procedures. BUBAD



Figure 45. Sociogram about relationships between stakeholders & public participation procedures. BILBAO

Sociegram about relationships between stakeholders & public participation procedures. BRATISLAWA.

Figure 46. Sociogram about relationships between stakeholders & public participation procedures. BRATISLAVA



Sociogram about relationships between stakeholders & public participation procedures. TULCEA.

Figure 47. Sociogram about relationships between stakeholders & public participation procedures. TULCEA



Sociegram about relationships between stakeholders & public participation procedures. CVIvINE.

Figure 48. Sociogram about relationships between stakeholders & public participation procedures. CMVNF.

5 Conclusions. Overall lessons learned, recommendations and perceived challenges.

The present report aims to define the inventory the stakeholder interactions and public participation, including the comparative study regarding stakeholder interactions and public participation and citizen involvement in the open government.

The evaluation of the interactions between stakeholders as well as the analysis of public participation procedures is carried out taking into account the relevant lines of analysis identified in the report and the structure of the questionnaire provided to the pilot cases.

The comparative study of the interactions between stakeholders as well as the analysis of public participation procedures is carried out taking into account the information collected in the questionnaires by the pilot cases. This information can be consulted in "APPENDIX III: Analysis of each pilot cases", in the section of GENOVA, BILBAO, BRATISLAVA, TULCEA and VILANOVA DE FAMALICAO.

Taking into account the benchmarking of Flood-Serv pilots cases, and the results for each of the defined lines of analysis and each of the pilot cases, we found out that the five project partners present some relevant differences in terms of stakeholders' interactions and the public participation, but also some similarities.

The table with the main conclusion and the summary of the comparative study between pilots cases performed for each line of analysis can be found in Table 15. This table presents the data according to the percentage (%) of the result for each criterion of analysis.

According to stakeholders' interactions in flood risk managements, it is possible to emphasize that the number of interactions between different stakeholders shows significant differences between the different pilots cases, as well as in the case of the number of communications identified in the flood risk management between the different pilot cases, being in the second case more significant the differences.

Pattern repetition is not identified among the predominant interactions of the pilot cases. According to different pilot case predominates different type of interaction: "From municipality" (Tulcea), "To municipality" (Vilanova de Famalicao), "Within municipality" (Bilbao) and "Outside municipality" (Bratislava and Genova).

The most frequent communication aims related to stakeholders' interactions mainly cover the dimensions of "Prevention" and "Response", in similar levels. According to the public participation procedures the main communication aim is the dimensions of "Response".

Focusing on the communication channels, the most frequent in the Stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting", while regarding to public participation procedures they are "telephone", "face to face", "social media" and "email".

The following points of similarity (patterns), between pilot cases, can be highlighted:

- The type of stakeholders identified by the pilot cases are mainly, "Local authorities" and "Regional".
- The type of authority & power of stakeholders most frequently identified by the pilot cases is mainly "Self-management".
- The communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise".
- Regarding the interactions between the stakeholders, the results of the pilot cases cover in different ways, the predefined options ("From municipality", "To municipality", "Within municipality" and "Outside municipality") but it can be highlighted mainly the option "Outside municipality".
- According to the stakeholders' communication flows and communication aims, the result covers all the predefined options, although mainly between the communication aims of "Response" and "Prevention".
- The most used communication channels in the Stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting".
- According to the stakeholders' communication aims, the most common communication aim of public participation procedures is mainly "response".
- The most used communication channels in Public participation procedures are "telephone", "face to face", "social media" and "email".

Taking into account these "patterns" or trends detected between the pilot cases, an additional questionnaire has been shared to identify and extend conclusions in relation to the analysis developed in D2.3 deliverable. This questionnaire (APPENDIX IV: Questionnaire of conclusion of each pilot cases and technical partners) has been designed to recovery a greater detail in conclusions, related to both pilot cases and the project developments (by technical partners).

5.1 Conclusions of D2.3 related to the Pilot Cases.

For the identification of the information in this section, the questionnaire previously mentioned has been taken as a base. This questionnaire is divided into two parts. A first part of the questionnaire (see Figure 96) is focused to the pilot cases (Genova, Bilbao, Bratislava, Tulcea and Vilanova de Famalicao) with the objective of expanding the conclusions in relation to the analysis developed in D2.3.

This information related to the pilot cases is contained in the framework of three sections that are explained below.

5.1.1 Patterns and deviations. Reasons, justifications and conclusions.

Taking into account the patterns or trends detected in each line of analysis considering all the pilot cases of the project, the goal of this section is to validate this pattern or trends with the situation that reflects each pilot case, and if that is not the case, identify the possible causes or reasons that determine these differences.

In general terms, the trends or patterns identified coincide with the options of each of the pilots and this diagnosis has been validated by each of the pilots. The comments carried out by some of their own pilot cases are highlighted below and the rest of information can be consulted in the Table 16.

In the pilot case of Bilbao, the most common stakeholders' interaction is ""within municipality", followed by " Outside the municipality" (the pattern identified in this line of analysis) due mainly to the greater number of stakeholders identified within the typology of "Local authorities". Also in relation to public participation procedures and communication aims, the most common communication aim is "recovery", followed by "response" (the pattern identified in this line of analysis), due in large part to the existence of the different flows of communication by citizenship with these "Local authorities".

In the case of Bratislava, the type of stakeholders is mainly from National administration, and then Local and Regional authorities, considering more appropriate, in the case of this pilot, the allocation of the percentage of "Entrepreneurs" to these latter types of stakeholders. In relation to the criteria "Stakeholders' participation (communication and decision mode)" the reclassification of the options is proposed, being for Bratislava the most important the "Deliberation and negotiate", then "Technical expertise" and "Vote & bargain for interest".

5.1.2 Future perspectives in the pilot cases.

In this section the pilot cases are asked for future perspectives of changes that imply modifications in the situation of previous section, associated to each pilot case.

In general terms, there are no identified perspectives of future changes, respect to the basic diagnosis associated with each pilot, except the comments mentioned by some of their own pilot cases, which are highlighted below. The rest of information can be consulted in the Table 17.

In the pilot case of Genova and in relation to the "Stakeholders' communication flows and communication channels", is expected in the future the experimentation of Mobile App (mugugn.app) to collect and georeference the indications of citizens on the state of conservation of the territory.

In the case of Vilanova de Famalicao and related to the criteria of "Public participation procedures and communication aims" the expectation is that prevention takes on greater importance in public participation procedures.

5.1.3 Needs and opportunities.

The needs and opportunities detected by each pilot case, are identified in this section grouped by the different lines of analysis established in D2.3. All the information can be consulted in the Table 18.

Type of stakeholders

• Greater interoperability between data produced by different public administrations (Genova)

Stakeholders participation (authority & power)

- Make the needs visible and increase the attention of the public decision-makers (Genova)
- Simplification of the technical questionnaires from nation to local authorities during the flood crisis (due to insurance monitoring) (Bratislava)

Stakeholders' participation (communication and decision mode)

• Effectiveness of communication (Genova)

Stakeholders' interactions in flood risk managements:

• Create a network of risk aware citizens (Genova)

Stakeholders' communication flows and communication aims

- Be informed to be more resilient (Genova)
- It would be a good opportunity to collaborate in prevention actions (Bilbao)
- The opportunity can be in the enhancement in communication regarding prevention. (Bratislava)

Stakeholders' communication flows and communication channels

- Find the correspondence between the technical terms and the words of the current language. (Genova)
- Based of FLOOD-serv project the opportunity can be to enhance the "Internet, email" communication flow or modern technologies e.g. web and mobile apps. (Bratislava)
- Needs: the main weaknesses of the intervention system are related to the lack of vehicles (special machines, ships, equipment for reducing the time of intervention). Much of the fleet of the local Inspectorate for Emergency Situations' vehicles is outdated, 50% are 10 years old and nearly 60% over 20 years. Developing a training system for professional rescuers involved in emergencies is another critical need for the study area. Special emergency vehicles will help isolated communities to better deal with floods by providing them with food and other basic supplies, improving residents' resilience in disaster situations and also in situations where the Danube freezes and communities remain isolated for longer periods. (Tulcea)
- Opportunities: (ADI- ITI Delta Dunarii) an integrated territorial instrument that functions within the Danube Delta Biosphere Reserve, that finances the Sustainable Development Strategy for the Danube Delta 2014-2022. Priority Axe 5 of Large
Infrastructure Operational Romanian Programme 2014-2020 (POIM), finances capacity building for increased disaster response. (Tulcea)

Public participation procedures and communication aims

- Monitoring of the "health" state of the territory and make a list of intervention priorities. (Genova)
- Based on Flood-serv, the use of social media in the management of emergency situations could enhance the public participation in the previous phases such as prevention and preparedness. (Bilbao)
- The opportunity can be in the enhancement in communication regarding prevention. (Bratislava)
- Creating more resilient and active communities in preventing and reducing the negative effects of Flood. (Vilanova de Famalicao)

Public participation procedures and communication channels

- Create a flow of information between citizens and public administration. (Genova)
- Direct participation of citizens in spaces such us focus groups, Citizens committees or conferences related to flood management could enhance the current management systems. (Bilbao)
- Based of FLOOD-serv project the opportunity can be to enhance the "Internet, email" communication flow or modern technologies e.g. web and mobile apps in connection with social media. (Bratislava)
- Increased citizens' initiative in flood risk management as well as greater awareness of the natural hazards affecting the VNF territory (Vilanova de Famalicao)

5.2 Conclusions of D2.3 related to the project developments (technical partners)

The relationships between D2.3 and the project developments are defined in the second part of the questionnaire, designed for the consult to the technical partners (see Figure 97), with the objective of expanding the conclusions of D2.3 in relation to the impact that may have on the design of the Flood_Serv system.

The purpose of this section is to define (by the technical partners of the project) a preliminary assessment of the possible influence on the developments of the products contained in the WP3 (SMC-Cellent, EMC-Answare, TMS-ANO and CDF-ANO) and WP4 (platform-SIVECO), of each of the line of analysis of the deliverable D. 2.3, and / or estimate the possible effect on hypothetical changes in the patterns or trends identified as conclusions of D2.3.

The possible influences estimated for the development of the component EMC (Answare) are detailed below. All the information can be consulted in the Table 19. For the rest of the component and the Flood-Serv platform, no information has been received related to possible influences in relation to the results obtained in D2.3.

Type of stakeholders

• The stakeholder pattern identified in WP2 conditions the EMC use because this tool is only accessible by experts in the flood management process, in this case by Local authorities and Regional. (EMC-Answare)

Stakeholders participation (authority & power)

• The DSS included in the EMC implements the protocol associated to the flood management by each city. So, in this case the DSS considers the flood management protocol defined by each one of the pilot cities. (EMC-Answare)

Stakeholders' participation (communication and decision mode)

• The EMC has been designed according to the stakeholders' recommendations. So, in this case most of the recommendations are technical. (EMC-Answare)

Stakeholders' interactions in flood risk managements:

• The EMC is involved in the three phases of prevention, response and recovery, and mitigation. So, this pattern identification is key to plan the EMC piloting. (EMC-Answare)

Stakeholders' communication flows and communication aims

• This pattern identification is key to design the communication flow and tasks inside the EMC. (EMC-Answare)

Stakeholders' communication flows and communication channels

• EMC represents a new communication channel among stakeholders, which complements to these channels identified as most used. (EMC-Answare)

Public participation procedures and communication channels

• The communication channels mostly used impact in the EMC, so in this case it was decided to integrate automatically in the EMC the information coming from social media. Besides, the EMC users can introduce directly information in the EMC. (EMC-Answare)

The information identified in the previous paragraphs has been compiled in order to provide clarifications at a greater level of detail, about the possible impact that these conclusions may have on the design of the FLOOD-serv system and to minimize, the possible risk of that the key decisions for the development of the FLOOD-serv system could be incorrect.

As another result of the analysis and evaluation of each of the pilot cases through the information obtained from the initial circulated questionnaires, the representation of the interactions between stakeholders can be consulted, through the sociograms of relationships made for each pilot case.

The resulting sociogram of stakeholders' interaction & public participation procedures for each one of the pilot cases can be consulted in the followings figures: Genova (Figure 44), Bilbao (Figure 45), Bratislava (Figure 46), Tulcea (Figure 47) and Vilanova de Famalicao (Figure 48).

Focusing on the analysis of sociograms, it is possible to emphasize that there are no established patterns between the interactions represented by the different pilot cases, both at the level of types of stakeholders and typologies of communication aims.

From a general point of view, the objective of the analysis carried out has been to provide a clear understanding of what kind of interactions are produced and among which agents of interest, in relation to the decision-making in the risk management of floods in each analyzed region.

As a result, we find that the five pilots present some relevant differences in terms of participation in decision making, as well as in the interactions identified, but also some similarities. The first should be considered as challenges for the next WPs while the similarities should be considered as opportunities to design the platform.

In conclusion, we can state that the analysis can be adopted as a verification tool for testing and validation of service applications. The conclusions obtained from D2.3 can contribute to the achievement of the objectives of WP3 (FLOOD-serv system components), and the objectives of WP4 such as, the organization and use of open data, the implementation of the communication system devoted to collect information related to the communication flows between stakeholders and in public participation procedures, to predispose other service applications devoted to increase information, communication, collaboration and participation among the existing interactions between all types of stakeholders.

In order to obtain a more detailed analysis of stakeholders and their interdependencies in the five countries, it might be advisable to have a similar sampling (differences in the number of stakeholder identified in the questionnaires are observed) and more exhaustive for each of the pilot cases, focused on the development of an in-depth analysis. However, it is considered that this type of analysis would go far beyond the objectives of the project.

		Patterns and deviations. Reasons, justifications and conclusions.					
Criteria	"PATTERNS"	Does this pattern or trends (column "PATTERNS") agree with the situation that reflects your city? (Yes or no) if it does not agree, what are the causes or reasons that determine these differences?					
		GENOVA	BILBAO	BRATISLAVA	TULCEA	VILANOVA DE FAMALICAO	
Type of stakeholders:	The type of stakeholders identified by the pilot cases are mainly, Local authorities and Regional.	YES	YES	The type of stakeholders is mainly from National administration, then Local and Regional authorities (the "Entrepreneurs "% should be given to Local and Regional authorities)	YES	YES	
Stakeholders participation (authority & power):	The type of authority & power of stakeholders identified by the pilot cases is mainly "Self-management" .	YES	YES	YES	YES	YES	
Stakeholders' participation (communication and decision mode):	The communication and decision mode of the stakeholders most common in all the pilot cases is mainly " Technical Expertise ".	YES	YES Modification to Deliberation and negotiate, then Technical expertise YES and then Vote & bargain for interest.		YES		
Stakeholders' interactions in flood risk managements:	Regarding the interactions between the stakeholders, the results of the pilot cases covers in different ways, the predefined options, mainly "out municipality	YES	NO. The most common option is "Within municipality ", followed by " Outside the municipality ".	YES	YES	NO. The main option is "To municipality".	
Stakeholders' communication flows and communication aims:	According to the stakeholders' communication flows and communication aims, the result covers all the predefined options, although mainly " Response" and " Prevention "	YES	YES	"Response" is the most common aim of communication, the rest of aims are equal.	YES	YES	
Stakeholders' communication flows and communication channels:	The most used communication channels in the Stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting".	YES YES YES YES		YES			
Public participation procedures and communication aims:	According to the stakeholders' communication aims, the most common communication aim of public participation procedures is mainly " response ".	NO. The most common communication aim of public participation procedures is mainly "prevention"	NO. The most common communication aim of public participation procedures is mainly followed by " Response".		YES		
Public participation procedures and communication channels:	The most used communication channels in Public participation procedures are "telephone", "face to face", "social media" and "email"	YES	YES	YES	YES	YES	

 Table 16. Questionnaire of conclusions related to pilot cases. Patterns and deviations (1 /3)

		Future perspectives in the pilot cases						
Criteria	"PATTERNS"	Are there future perspectives of changes that imply modifications in the situation reflected in the Table 1, associated to each pilot case?						
		GENOVA	BILBAO	BRATISLAVA	TULCEA	VILANOVA DE FAMALICAO		
Type of stakeholders:	The type of stakeholders identified by the pilot cases are mainly, Local authorities and Regional.	NO	NO	NO	NO	NO		
Stakeholders participation (authority & power):	The type of authority & power of stakeholders identified by the pilot cases is mainly "Self-management ".	NO	NO	NO	NO	NO		
Stakeholders' participation (communication and decision mode):	The communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise ".	NO	NO	NO	NO	NO		
Stakeholders' interactions in flood risk managements:	Regarding the interactions between the stakeholders, the results of the pilot cases covers in different ways, the predefined options, mainly "out municipality	NO	NO	NO	NO	NO		
Stakeholders' communication flows and communication aims:	According to the stakeholders' communication flows and communication aims, the result covers all the predefined options, although mainly " Response" and " Prevention "	NO	NO	NO NO NO		NO		
Stakeholders' communication flows and communication channels:	The most used communication channels in the Stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting".	Experimentation of Mobile App (mugugn.app) to collect and georeference the indications of citizens on the state of conservation of the territory.	bllect and dications of NO NO NO		NO			
Public participation procedures and communication aims:	According to the stakeholders' communication aims, the most common communication aim of public participation procedures is mainly " response ".	NO	NO	NO	NO	The expectation is that prevention takes on greater importance in public participation procedures.		
Public participation procedures and communication channels:	The most used communication channels in Public participation procedures are "telephone", "face to face", "social media" and "email"	NO	ΝΟ	NO	ΝΟ	ΝΟ		

Table 17. Questionnaire of conclusions related to pilot cases. Future perspectives in the pilot cases. (2/3)

		Needs and opportunities detected in the pilot case					
Criteria	"PATTERNS"	GENOVA	BILBAO	BRATISLAVA	TULCEA	VILANOVA DE FAMALICAO	
Type of stakeholders:	The type of stakeholders identified by the pilot cases are mainly, Local authorities and Regional.	Greater interoperability between data produced by different public administrations	-	-	-	-	
Stakeholders participation (authority & power):	The type of authority & power of stakeholders identified by the pilot cases is mainly " Self-management ".	Make the needs visible and increase the attention of the public decision- makers	-	Simplification of the technical questionnaires from nation to local authorities during the flood crisis (due to insurance monitoring)	-	-	
Stakeholders' participation (communication and decision mode):	The communication and decision mode of the stakeholders most common in all the pilot cases is mainly " Technical Expertise ".	Effectiveness of communication		-			
Stakeholders' interactions in flood risk managements:	Regarding the interactions between the stakeholders, the results of the pilot cases covers in different ways, the predefined options, mainly " out municipality	Create a network of risk aware citizens	-	-	-	-	
Stakeholders' communication flows and communication aims:	According to the stakeholders' communication flows and communication aims, the result covers all the predefined options, although mainly " Response" and " Prevention "	Be informed to be more resilient	It would be a good opportunity to collaborate in prevention actions	The opportunity can be in the enhancement in communication regarding prevention.			
Stakeholders' communication flows and communication channels:	The most used communication channels in the Stakeholders' communication flows are "telephone", "Internet, email" and "face to face meeting".	Find the correspondence between the technical terms and the words of the current language	-	Based of FLOOD-serv project the opportunity can be to enhance the "Internet, email" communication flow or modern technologies e.g. web and mobile apps	NEEDS- The main weaknesses of the intervention system are related to the lack of vehicles (special machines, ships, equipment for reducing the time of intervention). Much of the fleet of the local Inspectorate for Emergency Situations' vehicles is outdated, - 50% are 10 years old and nearly 60% over 20 years. Developing a training system for professional rescuers involved in emergencies is another critical need for the study area. Special emergency vehicles will help isolated communities to better deal with floods by providing them with food and other basic	-	

			Needs and opportunities detected in the pilot case					
Criteria	"PATTERNS" GENOVA BILBAO BRATISLAVA TULCEA		TULCEA	VILANOVA DE FAMALICAO				
					supplies, improving residents' resilience in disaster situations and also in situations where the Danube freezes and communities remain isolated for longer periods. OPPORTUNITIES- ADI- ITI Delta Dunarii- an integrated territorial instrument that functions within the Danube Delta Biosphere Reserve, that finances the Sustainable Development Strategy for the Danube Delta 2014-2022 . Priority Axe 5 of Large Infrastructure Operational Romanian Programme 2014-2020 (POIM), finances capacity building for increased disaster response.			
Public participation procedures and communication aims:	According to the stakeholders' communication aims, the most common communication aim of public participation procedures is mainly " response ".	Monitoring of the "health" state of the territory and make a list of intervention priorities	Based on Flood-serv, the use of social media in the management of emergency situations could enhance the public participation (real time data) in the previous phases such as prevention and preparedness.	The opportunity can be in the enhancement in communication regarding prevention.	-	Creating more resilient and active communities in preventing and reducing the negative effects of Flood		
Public participation procedures and communication channels:	The most used communication channels in Public participation procedures are "telephone", "face to face", "social media" and "email"	Create a flow of information between citizens and public administration	Direct participation of citizens in spaces such us focus groups, Citizens committees or conferences related to flood management could enhance the current management systems.	Based of FLOOD-serv project the opportunity can be to enhance the "Internet, email" communication flow or modern technologies e.g. web and mobile apps in connection with social media.	-	Increased citizens' initiative in flood risk management as well as greater awareness of the natural hazards affecting the VNF territory.		

Table 18. Questionnaire of conclusions related to pilot cases. Needs and opportunities detected in the pilot cases. (3/3)

Criteria	"PATTERNS"	Estimate the possible influence on WP3/WP4 developments, of each of the line of analysis of the deliverable D. 2 possible effect of hypothetical changes in the patterns or trends identified as conclusions of D2.3 (column "PATT WP3				
		SMC	ЕМС	TMS	CDF	Platform
Type of stakeholders: (Local authorities, Provincial, Regional and National administrations, Public and Private Critical Service, Scientific experts and academic institutions, Organized civil society (NGOs, Entrepreneurs, Neighbours organizations, Voluntary organizations, Etc.) and Citizens and general public)	The type of stakeholders identified by the pilot cases are mainly, Local authorities and Regional.	Cellent -	Answare Yes. The stakeholder pattern identified in WP2 conditions the EMC use because this tool is only accessible by experts in the flood management process, in this case by Local authorities and Regional.	Ano -	Ano -	Siveco -
Stakeholders participation (authority & power): Self-management, Delegation, Collaboration, consultation, Public hearings, and Provision of information)	The type of authority & power of stakeholders identified by the pilot cases is mainly "Self- management ".	-	Yes. The DSS included in the EMC implements the protocol associated to the flood management by each city. So, in this case the DSS considers the flood management protocol defined by each one of the pilot cities.	-	-	-
Stakeholders' participation (communication and decision mode): (Technical Expertise, Deliberation and negotiate, Vote and bargain for interests, Develop Preferences, Express Preferences, xplicit data collection (Human sensor), Listen as Spectator, Implicit data collection (Social sensor).	The communication and decision mode of the stakeholders most common in all the pilot cases is mainly "Technical Expertise" .	-	Yes. The EMC has been designed according to the stakeholders' recommendations. So, in this case most of the recommendations are technical.	-	-	-
Stakeholders' interactions in flood risk managements: (From municipality, To municipality, Within municipality, Outside the municipality)	Regarding the interactions between the stakeholders, the results of the pilot cases covers in different ways, the predefined options, mainly "out municipality	-	Yes. The EMC is involved in the three phases of prevention, response and recovery, and mitigation. So, this pattern identification is key to plan the EMC piloting.	-	-	-

		Estimate the possible influence on WP3/WP4 developments, of each of the line of analysis of the deliverable D. 2 possible effect of hypothetical changes in the patterns or trends identified as conclusions of D2.3 (column "PATT				TERNS" highlighted in red)
Criteria	"PATTERNS"		WF			WP4
		SMC	ЕМС	TMS	CDF	Platform
		Cellent	Answare	Ano	Ano	Siveco
Stakeholders'	According to the stakeholders'					
communication flows and	communication flows and communication aims, the		Yes. This pattern identification is			
communication aims:	result covers all the predefined	-	key to design the communication flow and tasks inside the EMC.	-	-	-
(prevention, preparedness, response and	options, although mainly "Response" and "Prevention"		now and tasks inside the Effet			
recovery)	Response and Frevention					
Stakeholders'			Yes, because the EMC represents a			
communication flows and	The most used communication channels in the Stakeholders'		new communication channel among			
communication channels:	communication flows are	-	stakeholders, which complements to these channels identified as most	-	-	-
(Municipal web, Mobile apps, Social media, Radio and TV, Telephone/fax, Newsletter,	"telephone", "Internet, email" and "face to face meeting".		used.			
Internet, email, Face to face meeting, Others)						
Public participation	According to the stakeholders'					
procedures and	communication aims, the most common communication aim					
communication aims:	of public participation	-	•	-		-
prevention, preparedness, response and recovery)	procedures is mainly "response".					
Public participation						
procedures and			Yes. The communication channels			
communication channels:	The most used communication		mostly used impact in the EMC, so			
(Referenda, Hearings, Inquiries, Public opinion surveys, Rule making negociated, Consensus	channels in Public participation		in this case it was decided to integrate automatically in the EMC			
conference, Citizens jury/panel Advisory "face to face", "social media"	-	the information coming from social	-	-	-	
committee, Focus group, Face to face, Radio and tv, Written press, Newsletter,	and "email"		media. Besides, the EMC users can introduce directly information in the			
Telephone/fax, Municipal web,			EMC.			
Mobile apps, Social media, Internet, Email,						
Others)		T-11- 10 0+!				

Table 19. Questionnaire of conclusions related to technical partners

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7 APPENDIX I: Structure of the questionnaire

- Identification of stakeholders involved in the flood risk management (Figure 50)
- Characterization of stakeholder type (Figure 51)
- Characterization of stakeholder's authority & power (Figure 53)
- Characterization of stakeholders' communication and decision mode (Figure 54)
- Stakeholders' interactions in flood risk managements (Figure 57)
- Stakeholders' communication flow and communication aims (Figure 59)
- Public participation procedures (Figure 64)





Figure 49. Front cover of questionnaire

7.1.1 Identification of stakeholders involved in the flood risk management.



Figure 50. Table (1) of the questionnaire related to stakeholders' Identification.

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7.1.2 Type of stakeholders



Figure 51. Table (2) of the questionnaire related to type of stakeholders



Figure 52. Selection of stakeholder type (Select "YES" or "NO")



7.1.3 Stakeholder's authority & power.

Figure 53. Table (3) of the questionnaire related to stakeholders' participation (authority & power).

Stakeholders	Remarks	Self-management (Local communities, individual)	des 1
SH_1	-	-	-
SH_2		YES	

Figure 54. Selection of stakeholders' authority & power type (Select "YES" or "NO")

7.1.4 Stakeholders' communication and decision mode.



Figure 55. Table (4) of the questionnaire related to stakeholders' participation (communication and decision mode).

<u>Anna an</u>	Tonnak e	Technical Expertise
SH_1		1
કમ, ર		YES

Figure 56. Selection of stakeholders' communication and decision mode (Select "YES" or "NO")



7.1.5 Stakeholders' interactions in flood risk managements

Figure 57. Table (5) of the questionnaire related to stakeholders' interactions.

10.4	SH_1	SH_2	ડમ_3
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SH_2		-	
SH_3	ND		

Figure 58. Selection of stakeholders' interaction (Select "YES" or "NO")

7.1.6 Stakeholders' communication flows and communication aims



Figure 59. Table (6) of the questionnaire related to stakeholders' communication flow and communication aims.

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9(1		
	SH_1 SH_2	-
	94,4 94,5 94,6 94,7	

Figure 60. Selection of interaction's communication flow (column "FROM" / column " TO") (Select each stakeholder from the drop-down list)



Figure 61. Selection of interactions' aims (Select the most suitable from the drop-down list)

Communication flow (Interaction)		Communication aims		Content of commu
Солоналария (РЭСМД	Stakeholders (10)	[Proverdices, Preparechieses, Persparan, Decovery]	Remarks	Non-exhaustive list of estimatication context (if the same, please add news in remarks)
SH(1	SH_3	Prevention		
				Recommendations Public Information Early warning
				Screening and Detection Threats identification Land use regulations Urban planning

Figure 62. Selection of communication content (Select the most suitable from the drop-down list)

Communication	toe (Interaction)	Communication		Content of communi		Continuarication channels			
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						HOBLE APPS SOCIAL MEDIA RADO AND TV TELEPHORE IFAX MEWSLETTER			
						FACE TO FACE NEET *			

Figure 63. Selection of communication channels (Select the most suitable from the drop-down list)



7.1.7 Public participation procedures.

Figure 64. Table (7) of the questionnaire related to public participation procedures.

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OTIZENS	94(5 94(6	
CITIZENS	907	

Figure 65. Selection of public participations' communication flow (column " TO") (Select the destination stakeholder from the drop-down list)



Figure 66. Selection of public participations' aims (Select the most suitable from the drop-down list)

	Public particip	uation Methods	
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Figure 67. Selection of communication channels (Select the most suitable from the drop-down list)



Figure 68. Selection of stakeholders' authority & power type (Select the most suitable from the dropdown list)



Figure 69. Selection of stakeholders' communication and decision mode (Select the most suitable from the drop-down list)

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8 APPENDIX II: Questionnaires of pilot cases

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9 APPENDIX III: Analysis of each pilot cases

GENOVA. BILBAO. BRATISLAVA. TULCEA. VILANOVA DE FAMALICAO.





9.1.1 GENOVA

Stakeholders	
(short name)	Description of each stakeholder
Regional CP	Civil protecione and Emergency Department of Regione Liguria
ARPAL	Regional agency for weather forecast
112	Emergency receiving center (Regional)
Allerta Meteo	Regional agency for meteo allert
Prefecture	Prefettura di Genova, district State autority
State police	Polizia di Stato, Carabinieri e Carabinieri Forestali, Guardia costiera,
Fire fighters	Vigili del Fuoco provinciali
Municipality CP U.O.	Civil Protection Direction (department) of Comune di Genova
Municipality U.O.	Other Directions (Departments involved in flood risk management: Information Systems, Hydraulics activities, Communication, Environment and hygiene, Heritage and public property, Youth Policy, Social Policies, Economic Development, Culture, Urban Mobility, Urban Maintenancei)
Municipi	Municipi
Local police	Polizia municipale
Shops consortia	"Centri integrati di via" - "Integrated street centers", association of local traders
Markets and supermarkets	-
Schools	-
Hospitals, Health	-
Public service companies	Aster (Urban maintenance), Amiu (Environment management and garbage colletion), Iren (gas ad water), AMT(local public (transport)



Private service company	Enel (electricity), Gestori telefonici (telecommunication)
CP Municipality Group NGO	Civil protecion volunteer Group organized by Municipality
CP NGO	Civil protecion volunteer Groups coordinated by Municipality with specific agreements
Citizen	Citizen and general public

Table 20: Stakeholders identified in questionnaire of Genova.

Stakeholders Remar ks	Remar	Other public administrations, organizations and agencies						Critical service and infrastructure operators			Organized civil society					Citize ns and
		Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	and - academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
Regional CP				YES												
ARPAL				YES				5			÷					
112				YES												
Allerta Meteo				YES												
Prefecture			YES					•	2							
State police			YES					5 								
Fire fighters			YES													
Municipality CP U.O.		YES														
Municipality U.O.		YES						A								
Municipi		YES														
Local police		YES														
Shops consortia												YES				
Markets and												YES				

Stakeholders	Remar ks	Other public administrations, organizations and agencies						Critical service and infrastructure operators			Organized civil society					Citize ns and
		Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	and academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
supermarkets																
Schools				YES												
Hospitals, Health				YES												
Public service companies							YES									
Private service company								YES								
CP Municipality Group NGO											YES					
CP NGO														YES		
Citizen																YES

Table 21: Stakeholders identified in questionnaire of Genova. Type of stakeholder.



Figure 70. Stakeholders identified in questionnaire of Genova. Type of stakeholder.

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
Regional CP	YES						
ARPAL	YES						
112	YES						
Allerta Meteo	YES						
Prefecture	YES						
State police	YES						
Fire fighters	YES						
Municipality CP U.O.	YES						
Municipality U.O.	YES						
Municipi	YES						
Local police	YES						
Shops consortia					YES		
Markets and supermarkets					YES		
Schools				YES			
Hospitals, Health				YES			

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
Public service companies				YES			
Private service company							YES
CP Municipality Group NGO						YES	
CP NGO						YES	
Citizen							YES

 Table 22: Stakeholders identified in questionnaire of Genova. Authority & power.



Figure 71.Stakeholders identified in questionnaire of Genova. Authority & power.
	Remarks	Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Participants with training and profesional specialization (planners, regulator, social workers and the like)	Perticipants deliberate to find out what they want individually and as a group. Process characterizated for the interaction and exchange of perspectives and speriences, that precede any group choke. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives an public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc	Participants receive information about some policy or project and they bear witness to struggles between politicians, activists, and interest groups.	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.
Regional CP	YES								
ARPAL	YES								
112	YES								
Allerta Meteo	YES								
Prefecture	YES								
State police	YES								
Fire fighters	YES								
Municipality CP U.O.	YES								
Municipality U.O.	YES								
Municipi		YES							
Local police	YES								
Shops consortia					YES				

		Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Participants with training and profesional specialization (planners, regulator, social workers and the like)	Participants deliberate to find out what they want individually and as a group. Process characteristical for the interaction and exchange of perspectives and appenences, that precedes any group choke. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc.	Participants receive information about some policy or project and they bear winness to struggles between politicians, activists, and interest groups.	Implicit data provision via social media, e.g. Jacebook, twitter, youtube, etc.
Markets and supermarkets					YES				
Schools						YES			
Hospitals, Health						YES			
Public service companies					YES				
Private service company					YES				
CP Municipality Group NGO							YES		
CP NGO							YES		
Citizen								YES	

 Table 23: Stakeholders identified in questionnaire of Genova. Communication and decision mode.



Figure 72. Stakeholders identified in questionnaire of Genova. Communication and decision mode.

	INTERACTION BETWEEN EACH OF THE STAKEHOLDERS IN COLUMN "FROM" WITH THE STAKEHOLDERS IN THE ROW "TO" (FROM> TO)																			
										FRO	м									
то	Regional CP	ARPAL	112	Allerta Meteo	Prefectu re	State police	Fire fighters	Municip ality CP U.O.	Municip ality U.O.	Municipi	Local police	Shops consorti a	Markets and superma rkets	Schools	Hospital s, Health	Public service compani es	Private service compan y	CP Municip ality Group NGO	CP NGO	Citizen
Regional CP		YES	YES	YES	YES		YES							YES	YES			YES	YES	
ARPAL	YES			YES				YES												
112	YES				YES	YES	YES	YES			YES				YES					
Allerta Meteo	YES	YES			YES			YES												YES
Prefecture	YES					YES	YES	YES			YES			YES	YES	YES	YES			YES
State police					YES		YES	YES			YES									YES
Fire fighters	YES				YES	YES		YES			YES									YES
Municipali ty CP U.O.	YES	YES			YES		YES		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Municipali ty U.O.								YES		YES	YES	YES	YES	YES	YES	YES	YES			YES
Municipi								YES	YES		YES	YES	YES	YES		YES				YES

	INTERACTION BETWEEN EACH OF THE STAKEHOLDERS IN COLUMN "FROM" WITH THE STAKEHOLDERS IN THE ROW "TO" (FROM> TO)																			
										FRO	м									
то	Regional CP	ARPAL	112	Allerta Meteo	Prefectu re	State police	Fire fighters	Municip ality CP U.O.	Municip ality U.O.	Municipi	Local police	Shops consorti a	Markets and superma rkets	Schools	Hospital s, Health	Public service compani es	Private service compan y	CP Municip ality Group NGO	CP NGO	Citizen
Local police					YES	YES														
Shops consortia			YES						YES	YES	YES					YES	YES			
Markets and supermark ets			YES						YES	YES	YES					YES	YES			
Schools								YES	YES		YES					YES	YES			
Hospitals, Health								YES			YES									
Public service companies								YES	YES	YES	YES									
Private service company								YES	YES	YES	YES									
CP Municipali ty Group								YES												YES

	INTERACTION BETWEEN EACH OF THE STAKEHOLDERS IN COLUMN "FROM" WITH THE STAKEHOLDERS IN THE ROW "TO" (FROM> TO)																			
		FROM																		
то	- Regional CP	ARPAL	112	Allerta Meteo	Prefectu re	State police	Fire fighters	Municip ality CP U.O.	Municip ality U.O.	Municipi	Local police	Shops consorti a	Markets and superma rkets	Schools	Hospital s, Health	Public service compani es	Private service compan y	CP Municip ality Group NGO	CP NGO	Citizen
NGO																				
CP NGO								YES												YES
Citizen			YES																	

Table 24: Stakeholders' interactions in flood risk managements. Genova.

Communication flow	v (Interaction)	Communicat	ion aims	Content of communica	tion		Commu	nication chann	els
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks
Regional CP	Municipality CP U.O.	Prevention		Flooding studies		INTERNET, EMAIL,			
Regional CP	Municipality CP U.O.	Prevention		Land use regulations		INTERNET, EMAIL,			
Regional CP	Municipality CP U.O.	Prevention		Urban planning		INTERNET, EMAIL,			
ARPAL	Municipality CP U.O.	Prevention		Meteorological information		INTERNET, EMAIL,			
Allerta Meteo	Municipality CP U.O.	Prevention		Early warning		INTERNET, EMAIL,			
Municipality CP U.O.	Citizen	Preparedness		Auto-protection protocols		MUNICIPAL WEB	SOCIAL MEDIA	FACE TO FACE MEETING	
Municipality CP U.O.	Municipality U.O.	Preparedness		Civil Protection Plans		INTERNET, EMAIL,			
Municipality CP U.O.	Municipality U.O.	Preparedness		Operating procedures		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality CP U.O.	Municipality U.O.	Preparedness		Training Programs		INTERNET, EMAIL,	FACE TO FACE		

Communication flow	v (Interaction)	Communicat	ion aims	Content of communica	tion		Сотти	inication chanr	nels
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks
							MEETING		
Municipality CP U.O.	Citizen	Prevention		Public awareness		MUNICIPAL WEB	SOCIAL MEDIA	FACE TO FACE MEETING	
Municipality CP U.O.	CP Municipality Group NGO	Preparedness		Emergencies planning		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality CP U.O.	CP Municipality Group NGO	Preparedness		Training Programs		FACE TO FACE MEETING			
Municipality CP U.O.	Citizen	Response		Early warning alerts		MUNICIPAL WEB	MOBILE APPS	SOCIAL MEDIA	
Allerta Meteo	Municipality CP U.O.	Response		Early warning alerts		INTERNET, EMAIL,			
Municipality CP U.O.	Municipality U.O.	Response		Intervention management		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality CP U.O.	Prefecture	Response		Resource management		INTERNET, EMAIL,			
Municipality U.O.	Regional CP	Response		Operational coordination		INTERNET, EMAIL,			

Communication flow	(Interaction)	Communicat	ion aims	Content of communica	tion		Commu	nication chann	els
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks
Municipality CP U.O.	CP Municipality Group NGO	Response		Intervention management		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality CP U.O.	CP NGO	Response		Operational coordination		INTERNET, EMAIL,			
Prefecture	State police	Response		Operational coordination		INTERNET, EMAIL,			
Prefecture	Fire fighters	Response		Operational coordination		INTERNET, EMAIL,			
Prefecture	Municipality CP U.O.	Preparedness		Coordination protocols		INTERNET, EMAIL,	FACE TO FACE MEETING		
Prefecture	State police	Preparedness		Coordination protocols		INTERNET, EMAIL,	FACE TO FACE MEETING		
Prefecture	Fire fighters	Preparedness		Coordination protocols		INTERNET, EMAIL,	FACE TO FACE MEETING		
Regional CP	CP NGO	Preparedness		Coordination protocols		INTERNET, EMAIL,			

Communication flow	v (Interaction)	Communicat	ion aims	Content of communica	tion		Commu	nication chann	els
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks
Regional CP	CP NGO	Preparedness		Training Programs		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality U.O.	Public service companies	Preparedness		Emergencies planning		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality U.O.	Private service company	Preparedness		Coordination protocols		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality U.O.	Public service companies	Response		Intervention management		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality U.O.	Private service company	Response		Operational coordination		INTERNET, EMAIL,			
Municipality CP U.O.	Citizen	Preparedness		Information/awareness		MUNICIPAL WEB	MOBILE APPS	SOCIAL MEDIA	
Municipality CP U.O.	Citizen	Response		Land use restrictions	Y	MUNICIPAL WEB	INTERNET, EMAIL,		
Municipality CP U.O.	Citizen	Response		Public information		MUNICIPAL WEB	SOCIAL MEDIA	RADIO AND TV	

Communication flow	v (Interaction)	Communicat	ion aims	Content of communica	tion		Commu	nication chann	els
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks
Municipality CP U.O.	Municipality U.O.	Response		Resource management		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality CP U.O.	Prefecture	Response		Citizen security, First aid		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality CP U.O.	Prefecture	Recovery		Situational awareness		INTERNET, EMAIL,			
Municipality CP U.O.	Prefecture	Recovery		Measures definition		INTERNET, EMAIL,			
Municipality U.O.	Hospitals, Health	Recovery		Health support		INTERNET, EMAIL,			
Municipality U.O.	Prefecture	Recovery		Citizens relocation		INTERNET, EMAIL,			
Municipality U.O.	Public service companies	Recovery		Essential services recovery		INTERNET, EMAIL,	FACE TO FACE MEETING		
Municipality U.O.	Private service company	Recovery		Essential services recovery		INTERNET, EMAIL,	FACE TO FACE MEETING		

Table 25: Stakeholders' communication flows and communication aims. Genova.



Figure 73. Sociogram about relationships between stakeholders. Genova.

Communication flow	v (Interaction)	Communi	cation aims		Public pa	rticipation Met	thods	Deuticiantian mathead	Communication &
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.	Communication channels (if the case, choose max 3 options)		Remarks	Participation method (authority) - (See table 3)	Decision Mode - (See table 4)	
CITIZENS	Municipality CP U.O.	Prevention	Progetto Resilienza 141 - Survey on vulnerability in the flood risk areas	FACE TO FACE				Consultation	Explicit data collection
CITIZENS	Municipality CP U.O.	Response	Sentinelle - Human sensors	MOBILE APPS	INTERNET			Collaboration	Explicit data collection
CITIZENS	Municipi	Preparedness	Collection of citizen report to front office of Municipi	FACE TO FACE	EMAIL	SOCIAL MEDIA		Information	Explicit data collection

Table 26: Public participation procedures. Genova.



Figure 74. Sociogram about public participation procedures. Genova.



9.1.2 BILBAO

Stakeholders (short name)	Description of each stakeholder
MUNICIPALITY	PEMU DIRECTOR, BUDGETA ND GENERAL SERIVICES, CECOPAL (COORDINATION BOARD), CIMUBISA (BILBAO MUNICIPAL INFORMATION SYSTEMS), AND OTHER MUNICIPAL DEPARTMENTS NOT EXPECTED BELOW.
CIVIL_PROT_MU	CIVIL PROTECTION AREA , INTEGRATES MUNICIPAL FIREFIGHTERS AND MUNICIPAL AMBULANCES (ACTION GROUP, INTERVENTION GROUP)
FIRE_MU	CIVIL PROTECTION AREA (ACTION GROUP, INTERVENTION GROUP)
POLICE_MU	CITIZEN SECURITY AREA (ACTION GROUP, SECURITY GROUP)
PRESS_MU	PRESS OFFICE. SOCIAL NETWORKS. MUNICIPAL PRESS.
HEALTH_MU	HEALTH AND CONSUMPTION (ACTION GROUP, HEALTH GROUP)
WORKS_MU	CIVIL WORKS AND SERVICES (ACTION GROUP, REHABILITATION GROUP OF ESSENTIAL SERVICES)
SOCIAL_MU	SOCIAL ACTION (ACTION GROUP, LOGISTIC GROUP)
TRANSP_MU	TRANSPORT AND TRAFFIC (ACTION GROUP, LOGISTICS GROUP)
VOST_ONG	NGOS. SOCIAL NETWORKS & EMERGENCIES
DFB_PR	BIZKAIA COUNTY COUNCIL (DFB). FIRE-FIGHTERS, AND COMPETENCES RELATED TO ROADS AND CONTAMINATION OF THE RIVER.
EMERGE_RE	EMERGENCY ATTENTION DIRECTORATE OF THE BASQUE GOVERNMENT. IT IS INCLUDED EMERGENCY WARNINGS SYSTEM THROUGH SOS-DEIAK.
SECURITY_NA	MINISTRY OF INTERIOR, EMERGENCY UNIT (UME), STATE SECURITY FORCES (CIVIL GUARD, NATIONAL POLICE,)
EUSKALMET_RE	EMERGENCY ATTENTION DIRECTORATE OF THE BASQUE GOVERNMENT.BASQUE AGENCY FOR METEOROLOGY



	(EUSKALMET).
URA_RE	ENVIRONMENT DIRECTORATE OF THE BASQUE GOVERNMENT. BASQUE AGENCY FOR WATER (URA)
OSAKIDETZA_RE	BASQUE GOVERNMENT. BASQUE HEALTH SERVICE (OSAKIDETZA)
MEDIA	MEDIA. TELEVISION, RADIO, NEWSPAPERS,
POLICE_RE	INTERIOR COUNSELING OF THE BASQUE GOVERNMENT. ERTZAINTZA (ACTION GROUP, SECURITY GROUP).
	CRITICAL INFRASTRUCTURE RELATED TO SERVICES PUBLIC SECTOR: BILBAO BIZKAIA WATER CONSORTIUM. TRANSPORT, METRO, FEVE RAILWAY, RENFE RAILWAY, BUS.
CRITI_INFRA	CRITICAL INFRASTRUCTURE RELATED TO SERVICES PRIVATE SECTOR. ELECTRICITY (IBERDROLA), FIXED COMMUNICATIONS (EUSKALTEL) AND MOBILE COMMUNICATIONS (MOVISTAR), GAS, HEALTH (IMQ, ETC.)
CITIZENS	CITIZENS, BUSINESS ASSOCIATION, ENREPRENEURS ASOCIATION, NEIGHBORHOODS,

Table 27: Stakeholders identified in questionnaire of Bilbao.

	Remar	Other p	ublic admin	istrations, agencies	organizat	ions and		tical serv tructure	ice and operators	Scientific experts and		Or	ganized civil so	ociety		Citize ns and
Stakeholders	ks	Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
MUNICIPALIT Y		YES														
CIVIL_PROT_ MU		YES														
FIRE_MU		YES														
POLICE_MU		YES														
PRESS_MU		YES														
HEALTH_MU		YES														
WORKS_MU		YES														
SOCIAL_MU		YES														
TRANSP_MU		YES														
VOST_ONG											YES					
DFB_PR			YES													
EMERGE_RE				YES									***************************************			
SECURITY_NA					YES											

	Remar	Other p	Other public administrations, organizations and agencies						Critical service and infrastructure operators			Or	ganized civil s	ociety		Citize ns and
Stakeholders	ks	Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	and academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
EUSKALMET_ RE				YES												
URA_RE				YES												
OSAKIDETZA_ RE				YES												
MEDIA															MEDIA	
POLICE_RE				YES												
CRITI_INFRA	•						YES	YES	1	3						
CITIZENS											ý	YES	YES	YES		YES

Table 28: Stakeholders identified in questionnaire of Bilbao. Type of stakeholder.



Figure 75. Stakeholders identified in questionnaire of Bilbao. Type of stakeholder.

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
MUNICIPALITY		YES					
CIVIL_PROT_MU		YES					
FIRE_MU		YES					
POLICE_MU		YES					
PRESS_MU		YES					
HEALTH_MU		YES					
WORKS_MU		YES					
SOCIAL_MU		YES					
TRANSP_MU		YES					
VOST_ONG					YES		
DFB_PR			YES				
EMERGE_RE			YES		Y		
SECURITY_NA				YES			
EUSKALMET_RE					YES		
URA_RE					YES		

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
OSAKIDETZA_RE				YES			
MEDIA							YES
POLICE_RE				YES			
CRITI_INFRA						YES	
CITIZENS							YES

 Table 29: Stakeholders identified in questionnaire of Bilbao. Authority & power.



Figure 76. Stakeholders identified in questionnaire of Bilbao. Authority & power.

	Remarks	Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Participants with training and profesional specialization (planners, regulator, social workers and the like)	Participants deliberate to find out what they want individually and as a group. Process characterizated for the interaction and exchange of perspectives and appertanets, that precedes any group choke. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preference-and perspectives on public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, loptop, etc.	Participants receive information about some policy or project and they bear winness to struggles between politicians, activists, and interest groups.	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.
MUNICIPALITY			YES						
CIVIL_PROT_MU		YES							
FIRE_MU		YES							
POLICE_MU		YES							
PRESS_MU							YES		
HEALTH_MU		YES							
WORKS_MU		YES							
SOCIAL_MU		YES							
TRANSP_MU		YES							
VOST_ONG				YES					
DFB_PR			YES						
EMERGE_RE		YES							

		Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Porticipants with training and profesional specialization (planners: regulatar, social workers and the like)	Participants deliberate to find out what they want individually and as a group. Process characterizated for the interaction and exchange of perspectives and experiences, that precedes any aroup choke. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptap, etc.	Participants receive information about some policy or project and they bear witness to struggist between politicians, activists, and interest groups.	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.
SECURITY_NA		YES							
EUSKALMET_RE		YES							
URA_RE		YES							
OSAKIDETZA_RE		YES							
MEDIA							YES	YES	YES
POLICE_RE		YES							
CRITI_INFRA					YES	YES			
CITIZENS							YES	YES	YES

Table 30: Stakeholders identified in questionnaire of Bilbao. Communication and decision mode.



Figure 77. Stakeholders identified in questionnaire of Bilbao. Communication and decision mode.

	INTERACTION BETWEEN EACH OF THE STAKEHOLDERS IN COLUMN "FROM" WITH THE STAKEHOLDERS IN THE ROW "TO" (FROM> TO)																			
										FRO	м									
то	MUNIC IPALITY	CIVIL_P ROT_M U	FIRE_M U	POLICE _MU	PRESS_ MU	HEALT H_MU	WORKS _MU	SOCIAL _MU	TRANS P_MU	VOST_ ONG	DFB_P R	EMERG E_RE	SECURI TY_NA	EUSKAL MET_R E	URA_R E	OSAKID ETZA_R E	MEDIA	POLICE _RE	CRITI_I NFRA	CITIZEN S
MUNICIPALIT Y		YES		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES			YES			YES	YES
CIVIL_PROT_ MU	YES		YES	YES	YES	YES	YES	YES	YES			YES		YES	YES	YES			YES	YES
FIRE_MU		YES		YES								YES								YES
POLICE_MU	YES	YES	YES		YES							YES						YES		YES
PRESS_MU	YES	YES		YES		YES	YES	YES	YES	YES							YES			YES
HEALTH_MU	YES	YES			YES															
WORKS_MU	YES	YES			YES															
SOCIAL_MU	YES	YES			YES															
TRANSP_MU	YES	YES			YES															
VOST_ONG	YES																			YES
DFB_PR	YES	YES																		
EMERGE_RE	YES	YES	YES	YES									YES	YES	YES	YES		YES		YES
SECURITY_NA												YES								
EUSKALMET_ RE												YES								YES

	INTERACTION BETWEEN EACH OF THE STAKEHOLDERS IN COLUMN "FROM" WITH THE STAKEHOLDERS IN THE ROW "TO" (FROM> TO)																			
		FROM																		
то	MUNIC IPALITY	CIVIL_P ROT_M U	FIRE_M U	POLICE _MU	PRESS_ MU		WORKS _MU	SOCIAL _MU	TRANS P_MU	VOST_ ONG	DFB_P R	EMERG E_RE	SECURI TY_NA	EUSKAL MET_R E	URA_R E	OSAKID ETZA_R E	MEDIA	POLICE _RE	CRITI_I NFRA	CITIZEN S
URA_RE		YES										YES								
OSAKIDETZA_ RE						YES						YES								
MEDIA					YES						YES	YES		YES						
POLICE_RE				YES								YES	YES							
CRITI_INFRA			YES	YES			YES													YES
CITIZENS	YES	YES	YES	YES	YES			YES	YES			YES	YES	YES	YES		YES		YES	

Table 31: Stakeholders' interactions in flood risk managements. Bilbao.

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Communication fl	ow (Interaction)	Communicat	ion aims	Content of communi	cation		Commun	ication channels	5
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication c	hannels (if the cas options)	e, choose max 3	Remarks
MUNICIPALITY	CIVIL_PROT_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
MUNICIPALITY	POLICE_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
MUNICIPALITY	PRESS_MU	Response		Public information		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
MUNICIPALITY	HEALTH_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
MUNICIPALITY	WORKS_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
MUNICIPALITY	SOCIAL_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
MUNICIPALITY	TRANSP_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL

Communication flo	ow (Interaction)	Communicat	ion aims	Content of communi	ication		Commu	nication channels	;
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication c	hannels (if the ca options)	se, choose max 3	Remarks
MUNICIPALITY	VOST_ONG	Prevention		Public awareness		INTERNET, EMAIL,			
MUNICIPALITY	DFB_PR	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX		
MUNICIPALITY	EMERGE_RE	Response		Resource management		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
MUNICIPALITY	CITIZENS	Prevention		Public Information	Information to public	MUNICIPAL WEB	SOCIAL MEDIA		
CIVIL_PROT_MU	MUNICIPALITY	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL
CIVIL_PROT_MU	FIRE_MU	Response		Resource management	Assignment of task and resources	INTERNET, EMAIL,	TELEPHONE / FAX	OTHER (Add in "remarks")	TETRA
CIVIL_PROT_MU	POLICE_MU	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	OTHER (Add in "remarks")	
CIVIL_PROT_MU	PRESS_MU	Prevention		Public Information	Information to public	INTERNET, EMAIL,	MUNICIPAL WEB		
CIVIL_PROT_MU	HEALTH_MU	Response		Resource management	Assignment of task and	TELEPHONE /	FACE TO FACE		

Communication fl	ow (Interaction)	Communicat	ion aims	Content of communi	cation		Commun	ication channel	5
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication c	hannels (if the cas options)	e, choose max 3	Remarks
					resources	FAX	MEETING		
CIVIL_PROT_MU	WORKS_MU	Response		Resource management	Assignment of task and resources	TELEPHONE / FAX	FACE TO FACE MEETING		
CIVIL_PROT_MU	SOCIAL_MU	Response		Resource management	Assignment of task and resources	TELEPHONE / FAX	FACE TO FACE MEETING		
CIVIL_PROT_MU	TRANSP_MU	Response		Resource management	Assignment of task and resources	TELEPHONE / FAX	FACE TO FACE MEETING		
CIVIL_PROT_MU	EMERGE_RE	Prevention		Recommendations	information	TELEPHONE / FAX	FACE TO FACE MEETING		
CIVIL_PROT_MU	URA_RE	Prevention		Recommendations	information	TELEPHONE / FAX	FACE TO FACE MEETING		
CIVIL_PROT_MU	CITIZENS	Prevention		Recommendations		MUNICIPAL WEB	NEWSLETTER	RADIO AND TV	
FIRE_MU	CIVIL_PROT_MU	Response		Resource management		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	TETRA

Communication fl	Communication flow (Interaction)		ion aims	Content of communication		Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication c	Remarks			
FIRE_MU	POLICE_MU	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL	
FIRE_MU	EMERGE_RE	Response		Resource management	& information	TELEPHONE / FAX			112	
FIRE_MU	CRITI_INFRA	Preparedness		Coordination protocols		TELEPHONE / FAX				
FIRE_MU	CITIZENS	Prevention		Public information		SOCIAL MEDIA				
POLICE_MU	MUNICIPALITY	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL	
POLICE_MU	CIVIL_PROT_MU	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	OTHER (Add in "remarks")		
POLICE_MU	FIRE_MU	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL	
POLICE_MU	PRESS_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
POLICE_MU	EMERGE_RE	Prevention		Recommendations		INTERNET,				

Communication flow (Interaction)		Communication aims		Content of communication		Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)			Remarks	
						EMAIL,				
POLICE_MU	POLICE_RE	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING		
POLICE_MU	CRITI_INFRA	Preparedness		Coordination protocols		TELEPHONE / FAX				
POLICE_MU	CITIZENS	Prevention		Recommendations		MUNICIPAL WEB	SOCIAL MEDIA			
PRESS_MU	MUNICIPALITY	Response		Public information		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL	
PRESS_MU	CIVIL_PROT_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	CECOPAL	
PRESS_MU	POLICE_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
PRESS_MU	HEALTH_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
PRESS_MU	WORKS_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			

Communication flow (Interaction)		Communication aims		Content of communication		Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)			Remarks	
PRESS_MU	WORKS_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
PRESS_MU	TRANSP_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
PRESS_MU	MEDIA	Prevention		Public Information		MUNICIPAL WEB	TELEPHONE / FAX	SOCIAL MEDIA		
PRESS_MU	CITIZENS	Prevention		Recommendations		MUNICIPAL WEB	SOCIAL MEDIA	NEWSLETTER		
HEALTH_MU	MUNICIPALITY	Response		Emergency alerts		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING		
HEALTH_MU	CIVIL_PROT_MU	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING		
HEALTH_MU	PRESS_MU	Prevention		Emergency alerts		INTERNET, EMAIL,	TELEPHONE / FAX			
HEALTH_MU	OSAKIDETZA_RE	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX			
WORKS_MU	MUNICIPALITY	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE		

Communication flow (Interaction)		Communication aims		Content of communication		Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)			Remarks	
								MEETING		
WORKS_MU	CIVIL_PROT_MU	Response		Intervention management		INTERNET, EMAIL,	TELEPHONE / FAX			
WORKS_MU	PRESS_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
WORKS_MU	CRITI_INFRA	Response		Resource management		INTERNET, EMAIL,	TELEPHONE / FAX			
SOCIAL_MU	MUNICIPALITY	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING		
SOCIAL_MU	CIVIL_PROT_MU	Response		Emergency alerts		INTERNET, EMAIL,	TELEPHONE / FAX			
SOCIAL_MU	PRESS_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
SOCIAL_MU	CITIZENS	Prevention		Citizen security, First aid		FACE TO FACE MEETING	MUNICIPAL WEB	SOCIAL MEDIA		
TRANSP_MU	MUNICIPALITY	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING		
TRANSP_MU	CIVIL_PROT_MU	Response		Operational coordination		INTERNET,	TELEPHONE			

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Communication f	Communication flow (Interaction)		ion aims	Content of communication		Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)			Remarks	
						EMAIL,	/ FAX			
TRANSP_MU	PRESS_MU	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX			
TRANSP_MU	CITIZENS	Prevention		Public Information		MUNICIPAL WEB	SOCIAL MEDIA			
VOST_ONG	MUNICIPALITY	Prevention		Threats identification		SOCIAL MEDIA				
VOST_ONG	PRESS_MU	Prevention		Threats identification		SOCIAL MEDIA				
DFB_PR	MUNICIPALITY	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX			
DFB_PR	MEDIA	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX	SOCIAL MEDIA		
EMERGE_RE	MUNICIPALITY	Prevention		Early warning		INTERNET, EMAIL,	TELEPHONE / FAX			
EMERGE_RE	CIVIL_PROT_MU	Prevention		Early warning		INTERNET, EMAIL,	TELEPHONE / FAX			
EMERGE_RE	FIRE_MU	Prevention		Early warning		TELEPHONE / FAX			112	

Communication fl	Communication flow (Interaction)		ion aims	Content of communication		Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)			Remarks	
EMERGE_RE	POLICE_MU	Prevention		Early warning		TELEPHONE / FAX			112	
EMERGE_RE	SECURITY_NA	Response		Operational coordination		INTERNET, EMAIL,	NEWSLETTER			
EMERGE_RE	EUSKALMET_RE	Prevention		Threats identification		INTERNET, EMAIL,	SOCIAL MEDIA			
EMERGE_RE	URA_RE	Prevention		Threats identification		INTERNET, EMAIL,	SOCIAL MEDIA			
EMERGE_RE	OSAKIDETZA_RE	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX			
EMERGE_RE	MEDIA	Prevention		Public Information		INTERNET, EMAIL,	SOCIAL MEDIA			
EMERGE_RE	POLICE_RE	Response		Early warning alerts		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING		
EMERGE_RE	CITIZENS	Prevention		Public Information		INTERNET, EMAIL,	SOCIAL MEDIA			
SECURITY_NA	MUNICIPALITY	Response		Emergency response protocols		TELEPHONE / FAX				
Communication fl	ow (Interaction)	Communicat	ion aims	Content of communi	cation		Commu	nication channel	5	
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Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication o	hannels (if the ca options)	se, choose max 3	Remarks	
SECURITY_NA	EMERGE_RE	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX			
SECURITY_NA	POLICE_RE	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	NEWSLETTER		
SECURITY_NA	CITIZENS	Prevention		Public Information		SOCIAL MEDIA	RADIO AND TV			
EUSKALMET_RE	CIVIL_PROT_MU	Prevention		Meteorological information		INTERNET, EMAIL,	SOCIAL MEDIA	TELEPHONE / FAX		
EUSKALMET_RE	EMERGE_RE	Prevention		Meteorological information		INTERNET, EMAIL,	TELEPHONE / FAX	SOCIAL MEDIA		
EUSKALMET_RE	MEDIA	Prevention		Meteorological information		SOCIAL MEDIA	INTERNET, EMAIL,			
EUSKALMET_RE	CITIZENS	Prevention		Meteorological information		SOCIAL MEDIA	RADIO AND TV			
URA_RE	CIVIL_PROT_MU	Prevention		Early warning		INTERNET, EMAIL,	TELEPHONE / FAX			
URA_RE	EMERGE_RE	Prevention		Early warning		INTERNET, EMAIL,	TELEPHONE / FAX			
URA_RE	CITIZENS	Prevention		Early warning		SOCIAL				

Communication fl	ow (Interaction)	Communicat	ion aims	Content of communi	cation		Commun	ication channels	
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication c	hannels (if the cas options)	e, choose max 3	Remarks
						MEDIA			
OSAKIDETZA_RE	MUNICIPALITY	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX		
OSAKIDETZA_RE	CIVIL_PROT_MU	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX		
OSAKIDETZA_RE	EMERGE_RE	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX		
COMUNICACIÓN	PRESS_MU	Prevention		Public Information		TELEPHONE / FAX	SOCIAL MEDIA		
COMUNICACIÓN	CITIZENS	Prevention		Public Information		SOCIAL MEDIA	RADIO AND TV		
POLICE_RE	POLICE_MU	Response		Operational coordination		TELEPHONE / FAX			tetra
POLICE_RE	EMERGE_RE	Response		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX		
CRITI_INFRA	MUNICIPALITY	Recovery		Essential services recovery		INTERNET, EMAIL,	TELEPHONE / FAX		
CRITI_INFRA	CIVIL_PROT_MU	Recovery		Essential services recovery		INTERNET, EMAIL,	TELEPHONE / FAX		

Communication fl	ow (Interaction)	Communicat	ion aims	Content of commun	ication		Commu	nication channels	5
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication c	hannels (if the cas options)	se, choose max 3	Remarks
CRITI_INFRA	CITIZENS	Recovery		Essential services recovery		SOCIAL MEDIA	TELEPHONE / FAX	FACE TO FACE MEETING	
CITIZENS	MUNICIPALITY	Response		Other (add "remarks")	collaboration	MUNICIPAL WEB	TELEPHONE / FAX	SOCIAL MEDIA	
CITIZENS	CIVIL_PROT_MU	Prevention		Recommendations		TELEPHONE / FAX	SOCIAL MEDIA		
CITIZENS	FIRE_MU	Recovery		Citizen security, First aid		TELEPHONE / FAX	SOCIAL MEDIA		112
CITIZENS	POLICE_MU	Recovery		Citizen security, First aid		TELEPHONE / FAX	SOCIAL MEDIA		112
CITIZENS	PRESS_MU	Prevention		Minimize flood damage		MUNICIPAL WEB	SOCIAL MEDIA	TELEPHONE / FAX	
CITIZENS	VOST_ONG	Prevention		Minimize flood damage		SOCIAL MEDIA			
CITIZENS	EMERGE_RE	Recovery		Flood incidents		TELEPHONE / FAX	SOCIAL MEDIA		
CITIZENS	EUSKALMET_RE	Prevention		Early warning		SOCIAL MEDIA			

Communication flo	ow (Interaction)	Communicat	tion aims	Content of communi	cation		Commu	nication channels	5
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication cl	Remarks		
CITIZENS	CRITI_INFRA	Recovery		Essential services recovery		TELEPHONE / FAX	MOBILE APPS	FACE TO FACE MEETING	

Table 32: Stakeholders' communication flows and communication aims. Bilbao.



Figure 78. Sociogram about relationships between stakeholders. Bilbao.

Communication fl	ow (Interaction)	Commi	inication aims		Public pa	rticipation Me	thods		
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.		ion channels(se max 3 optio		Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)
CITIZENS	MUNICIPALITY	Response	Flood incidents	MUNICIPAL WEB	SOCIAL MEDIA	FACE TO FACE	TELEFONO	Collaboration	Explicit data collection
CITIZENS	FIRE_MU	Response	Flood incidents	TELEPHONE / FAX	SOCIAL MEDIA		112, 080	Influence	Express Preferences
CITIZENS	EMERGE_RE	Response	Flood incidents	TELEPHONE / FAX	SOCIAL MEDIA		WEB PAGE, 112	Influence	Express Preferences
CITIZENS	CIVIL_PROT_MU	Prevention	Recommendations	MUNICIPAL WEB	SOCIAL MEDIA			Influence	Express Preferences
CITIZENS	MUNICIPALITY	Recovery	Financial support	MUNICIPAL WEB	FACE TO FACE			Collaboration	Develop Preferences
CITIZENS	FIRE_MU	Recovery	Citizen security, First aid	TELEPHONE / FAX			080	Collaboration	Express Preferences
CITIZENS	POLICE_MU	Recovery	Citizen security, First aid	TELEPHONE / FAX			092, 112	Collaboration	Express Preferences
CITIZENS	VOST_ONG	Prevention	Situational awareness	SOCIAL MEDIA				Influence	Implicit data collection
CITIZENS	EMERGE_RE	Response	Flood incidents	TELEPHONE / FAX	SOCIAL MEDIA	INTERNET	112 (WEB PAGE)	Collaboration	Express Preferences
CITIZENS	EMERGE_RE	Recovery	Flood incidents	TELEPHONE / FAX	SOCIAL MEDIA	INTERNET	112 (WEB PAGE)	Collaboration	Express Preferences
CITIZENS	WORKS_MU	Recovery	Essential services	MUNICIPAL				Collaboration	Express Preferences

Communication fl	ow (Interaction)	Commu	nication aims		Public pa	rticipation Me	ethods		
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.	Communication channels (if the case, choose max 3 options)		Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)	
			recovery	WEB					
CITIZENS	SOCIAL_MU	Recovery	Essential services recovery	MUNICIPAL WEB				Collaboration	Express Preferences
CITIZENS	SOCIAL_MU	Recovery	Financial support	MUNICIPAL WEB	FACE TO FACE			Collaboration	Express Preferences
CITIZENS	TRANSP_MU	Recovery	Essential services recovery	MUNICIPAL WEB				Collaboration	Express Preferences
CITIZENS	INFRA_CRITI	Recovery	Essential services recovery	TELEPHONE / FAX	INTERNET	SOCIAL MEDIA		Collaboration	Express Preferences
CITIZENS	PRESS_MU	Prevention	Minimize flood damage	MUNICIPAL WEB	SOCIAL MEDIA			Collaboration	Express Preferences
CITIZENS	EUSKALMET_RE	Prevention	Info niveles de Iamina de agua	INTERNET	MOBILE APPS		WEB PAGE		

Table 33: Public participation procedures. Bilbao.



Figure 79. Sociogram about public participation procedures. Bilbao

9.1.3 BRATISLAVA

Stakeholders (short name)	Description of each stakeholder
SHMU	SLOVAK HYDROMETEOROLOGICAL INSTITUTE
SVP	SLOVAK WATER MANAGEMENT ENTERPRISE
CI_WATER	BRATISLAVA WATER COMPANY - CRITICAL WATER INFRASTRUCTURE
DISTRICT	DISTRICTS (OKRESNY URAD - ODBORY KRIZOVEHO RIADENIA A ZIVOTNEHO PROSTREDIA)
MUNICIPALITY	MUNICIPALITY (OBEC - PETRZALKA, DEVIN,; MAGISTRÁT HLAVNÉHO MESTA BRATISLAVY)
REGION	SELF GOVERNING REGION (BSK)
MINV	MINV (MINISTRY OF INTERIOR incl. IRS (112), FIREFIGHTERS, POLICE)
CITIZEN	CITIZEN AND GENERAL PUBLIC
MZP	MINISTRY OF ENVIRONMENT
DHZ	VOLUNTARY FIREFIGHTERS GROUP
VOLUNTEERS	VOLUNTEERS
SPP	SLOVAK GAS INDUSTRY COMPANY
ZSE	WEST SLOVAKIA ENERGY COMPANY
CHARITY	CHARITY
ARMY	ARMY

Table 34: Stakeholders identified in questionnaire of Bratislava.

	Remar	Other p	ther public administrations, organizations and agencies					tical servi tructure	ice and operators	Scientific experts				ociety	n ar	Citize ns and
Stakeholders	ks	Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
SHMU					YES											
SVP					YES		-	5								
CI_WATER							YES									
DISTRICT					YES											
MUNICIPALIT Y		YES		<u>J</u>							2 					
REGION				YES												
MINV					YES											
CITIZEN		NO														YES
MZP					YES											
DHZ														YES		
VOLUNTEERS																YES
SPP												YES				
ZSE												YES				
CHARITY											YES					

	Remar	Other public administrations, organizations and agencies						Critical service and infrastructure operators			Organized civil society					Citize ns – and
Stakeholders	ks	Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	and academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
ARMY					YES											

Table 35: Stakeholders identified in questionnaire of Bratislava. Type of stakeholder.



Figure 80. Stakeholders identified in questionnaire of Bratislava. Type of stakeholder.

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
SHMU		YES		YES		YES	YES
SVP		YES		YES			
CI_WATER		YES		YES			
DISTRICT		YES					
MUNICIPALITY		YES					
REGION			YES				
MINV		YES					
CITIZEN							YES
MZP		YES					
DHZ		YES					
VOLUNTEERS		YES	YES		YES		
SPP		YES		YES	***************************************		
ZSE		YES		YES			
CHARITY		YES			Y		

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
ARMY		YES					

Table 36: Stakeholders identified in questionnaire of Bratislava. Authority & power.



Figure 81. Stakeholders identified in questionnaire of Bratislava. Authority & power.

		Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Participants with training and profesional specialization (planners, regulator, social workers and the like)	Participants deliberate to find out what they want tadividually and as a group. Process characterizated for the interaction and exchange of perspectives and experimens, that precedes any group choic. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the made of decision making aggregates their preferences into a social choice.	Participants can explore, develay, and perforps transform their preforences and perspectives on public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc	Participants receive information about some policy or project and they ber winness to struggles between politicions, activists, and interest groups.	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.
SHMU		YES							
SVP		YES	YES	YES					
CI_WATER				YES					
DISTRICT			YES						
MUNICIPALITY			YES						
REGION			YES						
MINV			YES						
CITIZEN									YES
MZP			YES						
DHZ			YES						
VOLUNTEERS			YES				YES		
SPP				YES					

		Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Participants with training and profesional specialization (planners, regulator, social workers and the like)	Participants deliberate to find out what they want tadividually and as a group. Process characteristicated for the interaction and exchange of perspectives and experimence, that precedes any group choice. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the mode of decision making oggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues are for less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc.	Participants receive information about some policy or project and they beer withness to struggles between politicions, activists, and interest groups.	Implicit data provision via social media, e.g. Jacebook, twitter, youtube, etc.
ZSE				YES					
CHARITY			YES						
ARMY			YES						

Table 37: Stakeholders identified in questionnaire of. Communication and decision mode. Bratislava.



Figure 82. Stakeholders identified in questionnaire of. Communication and decision mode. Bratislava.

		INTE	RACTION BET	WEEN EACH	H OF THE STAKEH	OLDERS IN	COLUMN	"FROM" V		STAKEHO	OLDERS IN THE	ROW "TO	(FROM	I> TO)	
							FR	ом							
то	<i>SHMU</i>	SVP	CI_WATER	DISTRICT	MUNICIPALITY	REGION	MINV	CITIZEN	MZP	DHZ	VOLUNTEERS	SPP	ZSE	CHARITY	ARMY
SHMU			YES		YES										
SVP	YES		YES	YES	YES	YES	YES		YES			YES	YES		
CI_WATER	YES	YES			YES										
DISTRICT	YES	YES	YES		YES	YES	YES		YES						
MUNICIPALITY	YES	YES	YES	YES		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
REGION	YES	YES	YES	YES	YES		YES		YES						
MINV	YES	YES		YES	YES	YES				YES					YES
CITIZEN	YES			YES	YES						YES			YES	
MZP	YES	YES	YES	YES	YES	YES	YES	YES							
DHZ	YES	YES			YES		YES	YES			YES				
VOLUNTEERS	YES	YES			YES			YES		YES					
SPP	YES	YES			YES										
ZSE	YES	YES			YES										
CHARITY	YES				YES			YES			YES				

		INTERACTION BETWEEN EACH OF THE STAKEHOLDERS IN COLUMN "FROM" WITH THE STAKEHOLDERS IN THE ROW "TO" (FROM> TO)													
		FROM													
то	SHML	I SVP	CI_WATER	DISTRICT	MUNICIPALITY	REGION	MINV	CITIZEN	MZP	DHZ	VOLUNTEERS	SPP	ZSE	CHARITY	ARMY
ARMY	YES	YES YES YES YES YES A TABLE AND A T													

Table 38: Stakeholders' interactions in flood risk managements. Bratislava.

Communication f	flow (Interaction)	Communicat	tion aims	Content of commun	nication		Communication ch	annels	
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication cl	annels (if the case, cl options)	hoose max 3	Remarks
SHMU	DISTRICT	Prevention	& to ALL	Meteorological information		INTERNET, EMAIL,	RADIO AND TV		
SHMU	DISTRICT	Response	& to ALL	Early warning alerts		TELEPHONE / FAX	INTERNET, EMAIL,	RADIO AND TV	
SVP	DISTRICT	Prevention	& to MUNICIPALITY, REGION	Recommendations		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
SVP	DISTRICT	Preparedness		Periodic checks		TELEPHONE / FAX	FACE TO FACE MEETING		
SVP	MUNICIPALITY	Response	& to DISTRICT	Emergency alerts		TELEPHONE / FAX	INTERNET, EMAIL,		
SVP	DISTRICT	Recovery	& to MUNICIPALITY, REGION	Situational awareness		FACE TO FACE MEETING			
CI_WATER	DISTRICT	Response	& to MUNICIPALITY, REGION	Emergency alerts		TELEPHONE / FAX	INTERNET, EMAIL,		
CI_WATER	MUNICIPALITY	Recovery		Recovery protocols		INTERNET, EMAIL,			

Communication f	flow (Interaction)	Communicat	tion aims	Content of commun	nication		Communication ch	annels	
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication ch	aannels (if the case, c options)	hoose max 3	Remarks
DISTRICT	MUNICIPALITY	Prevention	& to REGION, SVP	Threats identification		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
DISTRICT	MUNICIPALITY	Preparedness	in cooperation with IRS, FIREFIGHTERS	Training Programs		FACE TO FACE MEETING			
DISTRICT	MUNICIPALITY	Response	& to SHMU, SVP, IZS, FIREFIGHTERS	Emergency alerts		TELEPHONE / FAX	INTERNET, EMAIL,		
MUNICIPALITY	SVP	Prevention		Technical flood defense		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
MUNICIPALITY	DISTRICT	Preparedness		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
MUNICIPALITY	DISTRICT	Response	& to SVP, SHMU	Emergency alerts		TELEPHONE / FAX	INTERNET, EMAIL,		
MUNICIPALITY	CITIZEN	Response		Public information		RADIO AND TV	MUNICIPAL WEB	SOCIAL MEDIA	LOCAL SIRENS
MUNICIPALITY	DISTRICT	Recovery		Situational awareness		INTERNET, EMAIL,			

Communication f	flow (Interaction)	Communicat	ion aims	Content of commun	nication		Communication ch	annels	
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication cl	hannels (if the case, c options)	hoose max 3	Remarks
REGION	DISTRICT	Preparedness		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
REGION	DISTRICT	Recovery		Situational awareness		INTERNET, EMAIL,			
IRS, FIREFIGHT	DISTRICT	Response		Emergency alerts		TELEPHONE / FAX	INTERNET, EMAIL,		
MZP	DISTRICT	Response		Emergency alerts		TELEPHONE / FAX	INTERNET, EMAIL,		Main authority for border river Danube Flood Emergency declaration
DHZ	MUNICIPALITY	Response		Operational coordination		FACE TO FACE MEETING	TELEPHONE / FAX		
DHZ	MINV	Response		Operational coordination		TELEPHONE / FAX	FACE TO FACE MEETING		
DHZ	VOLUNTEERS	Response		Operational coordination		FACE TO FACE MEETING	TELEPHONE / FAX		
VOLUNTEERS	MUNICIPALITY	Response		Action groups coordination		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,	

Communication f	flow (Interaction)	Communicat	ion aims	Content of commun	nication		Communication ch	annels	
Stakeholders (FROM)	Stakeholders (ТО)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication cl	nannels (if the case, c options)	hoose max 3	Remarks
VOLUNTEERS	CITIZEN	Response		Citizen security, First aid		FACE TO FACE MEETING			
VOLUNTEERS	DHZ	Response		Operational coordination		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,	
VOLUNTEERS	CHARITY	Recovery		Reconstruction		FACE TO FACE MEETING	TELEPHONE / FAX		
SPP	SVP	Prevention		Threats identification		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
SPP	MUNICIPALITY	Recovery		Reconstruction		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
ZSE	SVP	Prevention		Threats identification		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
ZSE	MUNICIPALITY	Recovery		Reconstruction		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
CHARITY	MUNICIPALITY	Recovery		Basic sanitation		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	

Communication f	low (Interaction)	Communicat	ion aims	Content of commun	nication		Communication ch	annels	
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication ch	nannels (if the case, o options)	choose max 3	Remarks
CHARITY	CITIZEN	Recovery		Citizens relocation		FACE TO FACE MEETING			
ARMY	MUNICIPALITY	Response		Flood defense measures		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING	
ARMY	MINV	Response		Operational coordination		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING	

Table 39: Stakeholders' communication flows and communication aims. Bratislava

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Figure 83. Sociogram about relationships between stakeholders. Bratislava.

Communication flow	w (Interaction)	Communi	cation aims		Public pa	rticipation Met	hods		
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.		tion channels (ij se max 3 option		Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)
CITIZENS	MUNICIPALITY	Response	Flood incidents	TELEPHONE / FAX	EMAIL	SOCIAL MEDIA		Information	Implicit data collection
CITIZENS	MUNICIPALITY	Prevention	Inform local authoritis on specific problems that could lead to increase risk of property damage in case of flood	TELEPHONE / FAX	HEARINGS	SOCIAL MEDIA		Self-management	Technical Expertise
CITIZENS	MUNICIPALITY	Recovery	Request evaluation of property damage and compensation for the loss	TELEPHONE / FAX	EMAIL			Self-management	Technical Expertise
CITIZENS	CHARITY	Recovery	Request support for specific recovery action	TELEPHONE / FAX	EMAIL			Self-management	Deliverable and Negotiate
CITIZENS	VOLUNTEERS	Response	Request support for specific response action	TELEPHONE / FAX	FACE TO FACE			Self-management	Explicit data collection
CITIZENS	MINV	Response	Call 112 in case of emergency	TELEPHONE / FAX				Self-management	Technical Expertise
CITIZENS	VOLUNTEERS	Recovery	Request support for specific recovery action	TELEPHONE / FAX	FACE TO FACE			Self-management	Explicit data collection

Communication flow	v (Interaction)	Communi	cation aims		Public part	icipation Me	thods	Denticiantica method	Communication 8
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.		tion channels(if t ise max 3 options		Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)
CITIZENS	DHZ	Response	Request support for specific response action	TELEPHONE / FAX	FACE TO FACE			Self-management	Explicit data collection
CITIZENS	DHZ	Recovery	Request support for specific recovery action	TELEPHONE / FAX	FACE TO FACE			Self-management	Explicit data collection

Table 40: Public participation procedures. Bratislava.



Figure 84. Sociogram about public participation procedures. Bratislava.

9.1.4 TULCEA

Stakeholders (short name)	Description of each stakeholder
Tulcea Municipality	Assesses, at local level, the emergency situations caused by floods, establishes specific measures and actions to address them and follows their fulfillment; it has an important role in prevention and intervention and it elaborates the local flood defense plan;
Tulcea County Prefect's Office	Representantive of the Romanian Government on territorial level. It coordinates and monitors the implementation of the public policies and the Government Programme; the Prefect presides the County Committee for Emergency Situations. In case of flooding events, the County Committee for Emergency Situations assesses the emergency situations caused by floods, establishes specific measures and actions to address them and follows their fulfillment and with the help of the Technical Support Group elaborates flood defence plan, coordinates the actions for managing the emergency situations caused by floods and elaborates the territoerial flood defence plan.
Dobrogea-Litoral Water Branch	Responsible for (regional) cross-border cooperation and flood protection infrastructure; it plays a key role in the management of water related emergencies; throught its units a it assists local and regional public administrations in the development of emergency plans.
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Coordinator of the Techical Support Group and provides logistics for in situ intervention operations and intervention plans.
Local voluntary teams	Operate under the coordination and preparation of ISU Delta Tulcea ; it is activated in cases of major events
Local entrepreneurs	Activated as part of the flood management plan, by the County Comeettee for the Emergency Situations

Table 41: Stakeholders identified in questionnaire of Tulcea.

	Remar	Other p	ublic admin	istrations, agencies	organizat	ions and		tical servi tructure	ice and operators	Scientific experts and		Or	ganized civil so	ociety		Citize ns and
Stakeholders	ks	Local authoritie S	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
Tulcea Municipality		YES	NO	NO	NO		YES	NO		NO	NO	NO	NO	NO		YES
Tulcea County Prefect's Office		NO	YES	NO	NO		YES	NO		NO	NO	NO	NO	NO		NO
Dobrogea- Litoral Water Branch		NO	YES	YES	NO		YES	NO		YES	NO	NO	YES	NO		NO
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)		YES	YES	NO	NO		YES	NO		NO	NO	NO	NO	NO		NO
Local voluntary teams		NO	NO	NO	NO		NO	NO		NO	NO	NO	NO	YES		YES
Local entrepreneurs		NO	YES	NO	NO		NO	YES		NO	NO	YES	NO	NO		YES

 Table 42: Stakeholders identified in questionnaire of Tulcea. Type of stakeholder.



Figure 85. Stakeholders identified in questionnaire of Tulcea. Type of stakeholder.

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
Tulcea Municipality		YES	YES	YES	NO	NO	YES
Tulcea County Prefect's Office		YES	NO	YES	NO	YES	YES
Dobrogea-Litoral Water Branch		YES	NO	YES	YES	NO	YES
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)		YES	YES	YES	NO	NO	YES
Local voluntary teams		YES	YES	NO	YES	NO	YES
Local entrepreneurs		YES	YES	YES	YES	NO	NO

 Table 43: Stakeholders identified in questionnaire of Tulcea. Authority & power.



Figure 86. Stakeholders identified in questionnaire of Tulcea. Authority & power..

Stakeholders	Remarks	Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
		Porticipants with training and profesional specialization (planners: regulator, social workers and the like)	Porticipants deliberate to find out what they want individually and as a group. Process characterizated for the interaction and exchange of perspectives and experiences, that precedes any aroug choke. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the made of decision making aggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives an public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptap, etc.	Participants receive information about some policy or project and they bear witness to struggist between politicians, activists, and interest groups.	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.
Tulcea Municipality		YES	YES	YES	YES	YES	YES	YES	NO
Tulcea County Prefect's Office		YES	YES	YES	NO	YES	YES	NO	YES
Dobrogea-Litoral Water Branch		YES	YES	YES	NO	YES	YES	NO	NO
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)		YES	YES	YES	NO	YES	YES	NO	NO
Local voluntary teams		NO	YES	NO	NO	NO	YES	NO	YES
Local entrepreneurs		NO	NO	NO	YES	NO	NO	NO	YES

 Table 44: Stakeholders identified in questionnaire of Tulcea. Communication and decision mode.



Figure 87. Stakeholders identified in questionnaire of Tulcea. Communication and decision mode..
	Tulcea Municipality	a Municipality Tulcea County Dobrogea-Litoral Emergency Situations Prefect's Office Water Branch "Delta Tulcea" (ISU Delta Tulcea)				Local entrepreneurs
	INTERACTION BE	TWEEN EACH OF THE STA	OLDERS IN THE ROW "TO	" (FROM> TO)		
то			FRO	м		
Tulcea Municipality		YES	YES	YES	YES	YES
Tulcea County Prefect's Office	YES		YES	YES	NO	NO
Dobrogea-Litoral Water Branch	YES	YES		YES	NO	NO
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	YES	YES	YES		NO	YES
Local voluntary teams	YES	NO	NO	YES		NO
Local entrepreneurs	YES	NO	NO	YES	NO	

Table 45: Stakeholders' interactions in flood risk managements. Tulcea

Communication flov	v (Interaction)	Communication aims		Content of communica	tion	Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks	
Tulcea Municipality	Tulcea County Prefect's Office	Recovery	all	Situational awareness		RADIO AND TV	TELEPHONE / FAX	MUNICIPAL WEB		
Tulcea County Prefect's Office	Tulcea Municipality	Prevention		Urban planning		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Tulcea Municipality	Preparedness		Emergencies planning		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Tulcea Municipality	Response		Citizen security, First aid		TELEPHONE / FAX	FACE TO FACE MEETING	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Dobrogea- Litoral Water Branch	Prevention		River bed maintenance		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Dobrogea- Litoral Water Branch	Prevention		Flooding studies		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Prevention		Public awareness		RADIO AND TV	TELEPHONE / FAX	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Local Inspectorate for Emergency Situations	Prevention		Technical flood defense		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		

Communication flov	v (Interaction)	Communication aims		Content of communica	tion	Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks	
	"Delta Tulcea" (ISU Delta Tulcea)									
Tulcea County Prefect's Office	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Preparedness		Emergency response protocols		TELEPHONE / FAX	FACE TO FACE MEETING	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Response		Decision making		TELEPHONE / FAX	FACE TO FACE MEETING	INTERNET, EMAIL,		
Tulcea County Prefect's Office	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Response		Operational coordination		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Local entrepreneurs	Tulcea Municipality	Response		Citizen security, First aid		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING		

Communication flov	v (Interaction)	Communico	ation aims	Content of communica	tion	Communication channels				
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks	
Dobrogea-Litoral Water Branch	Tulcea Municipality	Prevention		Recommendations		TELEPHONE / FAX	NEWSLETTER	INTERNET, EMAIL,		
Dobrogea-Litoral Water Branch	Tulcea Municipality	Prevention		Early warning		TELEPHONE / FAX	NEWSLETTER	INTERNET, EMAIL,		
Dobrogea-Litoral Water Branch	Tulcea County Prefect's Office	Prevention		Threats identification		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Dobrogea-Litoral Water Branch	Tulcea County Prefect's Office	Preparedness		Early warning alerts		FACE TO FACE MEETING	TELEPHONE / FAX	INTERNET, EMAIL,		
Dobrogea-Litoral Water Branch	Tulcea County Prefect's Office	Response		Info/data transmission		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING		
Dobrogea-Litoral Water Branch	Tulcea County Prefect's Office	Response		Risk assessment		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING		
Dobrogea-Litoral Water Branch	Tulcea County Prefect's Office	Recovery		Lessons learnt		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING		
Dobrogea-Litoral Water Branch	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Prevention		Recommendations		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING		

Communication flov	v (Interaction)	Communication aims		Content of communica	tion		Commu	nication chanr	nels
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communicatio	Remarks		
Dobrogea-Litoral Water Branch	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Preparedness		Coordination protocols		TELEPHONE / FAX	INTERNET, EMAIL,	FACE TO FACE MEETING	
Dobrogea-Litoral Water Branch	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Response		Emergency alerts		TELEPHONE / FAX	NEWSLETTER	FACE TO FACE MEETING	
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea Municipality	Prevention		Meteorological information		TELEPHONE / FAX	TELEPHONE / FAX	FACE TO FACE MEETING	
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea Municipality	Prevention		Early warning		MOBILE APPS	TELEPHONE / FAX	FACE TO FACE MEETING	
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea Municipality	Preparedness		Emergency response protocols		MOBILE APPS	TELEPHONE / FAX	FACE TO FACE MEETING	
Local Inspectorate for	Tulcea	Response		Early warning alerts		MOBILE APPS	TELEPHONE /	FACE TO	

Communication flo	w (Interaction)	Communico	ition aims	Content of communica	tion		Commu	nication chann	els
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the max 3 options)	case, choose	Remarks
Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Municipality						FAX	FACE MEETING	
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea Municipality	Recovery		Recovery protocols		TELEPHONE / FAX	FACE TO FACE MEETING		
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea County Prefect's Office	Prevention		Threats identification		TELEPHONE / FAX	MOBILE APPS		
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea County Prefect's Office	Preparedness		Emergency response protocols		MOBILE APPS	TELEPHONE / FAX		
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea County Prefect's Office	Preparedness		Early warning alerts		MOBILE APPS	TELEPHONE / FAX		
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Tulcea County Prefect's Office	Response		Info/data transmission		MOBILE APPS	TELEPHONE / FAX	FACE TO FACE MEETING	
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU	Tulcea County Prefect's Office	Response		Intervention management		MOBILE APPS	TELEPHONE / FAX	FACE TO FACE MEETING	

Communication flow	w (Interaction)	Communication aims		Content of communica	tion		Commun	ication chann	els
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks		n channels (if the a max 3 options)	case, choose	Remarks
Delta Tulcea)									
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Local voluntary teams	Prevention		Public awareness		FACE TO FACE MEETING	TELEPHONE / FAX		
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Local voluntary teams	Preparedness		Emergency response protocols		FACE TO FACE MEETING	TELEPHONE / FAX		
Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Local voluntary teams	Response		Action groups coordination		FACE TO FACE MEETING	TELEPHONE / FAX		
Local voluntary teams	Tulcea Municipality	Preparedness		Communication protocols		TELEPHONE / FAX	FACE TO FACE MEETING		
Local voluntary teams	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Prevention		Public awareness		TELEPHONE / FAX	FACE TO FACE MEETING		
Local voluntary teams	Local Inspectorate for Emergency Situations "Delta Tulcea"	Preparedness		Emergency response protocols		TELEPHONE / FAX	FACE TO FACE MEETING		

Communication flow	w (Interaction)	Communication aims		Content of communica	tion	Communication channels					
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)		case, choose	Remarks		
	(ISU Delta Tulcea)										
Local voluntary teams	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Response		Citizen security, First aid		FACE TO FACE MEETING	TELEPHONE / FAX				
Local entrepreneurs	Tulcea Municipality	Recovery		Essential services recovery		FACE TO FACE MEETING	TELEPHONE / FAX				
Local entrepreneurs	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Response		Citizen security, First aid		MEETING FAX FACE TO FACE TELEPHONE / FAX					

Table 46: Stakeholders' communication flows and communication aims. Tulcea.



Figure 88. Sociogram about relationships between stakeholders. Tulcea

Communication flo	w (Interaction)	Communi	ication aims		Public p	articipation Methods	;		
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.	Communicati	on channels (if t max 3 options	the case, choose)	Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)
CITIZENS	Tulcea Municipality	Prevention	Inform the local authorityes about specific problems that could have a negative impact one's personal property: dam distruction, overgrown natural vegetation, clottered drainage, etc.	TELEPHONE / FAX	HEARINGS	EMAIL		Self-management	Technical Expertise
CITIZENS	Tulcea Municipality	Preparedness	Announce the diassapearance of a person,	TELEPHONE / FAX	TELEPHONE / FAX			Collaboration	Explicit data collection
CITIZENS	Tulcea Municipality	Recovery	Request evaluation of the property damage and compensation for the loss	TELEPHONE / FAX	MUNICIPAL WEB	ADVISORY COMMITEE		Self-management	Technical Expertise
CITIZENS	Tulcea County Prefect's Office	Response	Present specific emergency situations in isolated places or request specific interventions- helicopter, special transportation of ill or deceased persons;	TELEPHONE / FAX	FACE TO FACE			Self-management	Technical Expertise
CITIZENS	Tulcea County Prefect's Office	Recovery	Request evaluation of the property damage (mainly in	ADVISORY COMMITEE	FACE TO FACE	TELEPHONE / FAX		Collaboration	Technical Expertise

Communication flo	w (Interaction)	Commun	ication aims		Public p	articipation Metho	ds		Communication 8	
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.	Communicati	on channels(if t max 3 options,	the case, choose)	Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)	
			agriculture). The evaluations activity is coordinated and monitored by the Prefect, in cooperation with the Agency for Payment and Intervention in Agriculture							
CITIZENS	Local Inspectorate for Emergency Situations "Delta Tulcea" (ISU Delta Tulcea)	Response	ISU Delta Tulcea unique number is first dialed in all types of emergency situations: 112	TELEPHONE / FAX				Self-management	Technical Expertise	
CITIZENS	Dobrogea- Litoral Water Branch	Prevention	Collect information regarding the water leves	RADIO AND TV	WRITTEN PRESS	INTERNET		Information	Implicit data collection	
CITIZENS	Local voluntary teams	Response	Request support in specific rescue actions	FACE TO FACE	TELEPHONE / FAX	CONSENSUS CONFERENCE		Self-management	Explicit data collection	
CITIZENS	Local entrepreneurs	Response	Request support in specific rescue actions	FACE TO FACE	TELEPHONE / FAX	CONSENSUS CONFERENCE		Self-management	Deliverable and Negotiate	

Table 47: Public participation procedures. Tulcea



Figure 89. Sociogram about public participation procedures. Tulcea

9.1.5 VILANOVA DE FAMALICAO

Stakeholders (short name)	Description of each stakeholder
ANPC	National Civil Protection Authority
CDOS	District Relief Operations Command
SMPC	Civil Protection Municipal Service
PSP	Public Security Police
GNR	Republican National Guard
РМ	Municipal Police
B.V.V.N.F.	Volunteer Firefighters from Vila Nova de Famalicão
B.V.F.	Firefighters Volunteers Famalicenses
B.V.Riba de Ave	Volunteer Firefighters from Riba de Ave
СНМА	Hospital Center from Midle Ave - Famalicão
HNF	Narciso Ferreira Hospital
USF - Famalicão	Public Health Unit of Vila Nova de Famalicão
Social_Act_Mun	Department of social action of the municipality of vila nova de famalicão
INEM	National Medical Emergency Institute
СМРС	Civil Protection Municipal Commission
Press_offi_Mun	Press Advisor of the municipality of vila nova de famalicão
IC_Electricity	Critical Infrastructure (Energy)
IC_Telecom	Critical Infrastructure (Telecomunication)
IC_Natural Gas	Critical Infrastructure (Natural gas)
Citizen	Citizen and General Public

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	Remar	Other p	ublic admin	istrations, agencies	organizat	ions and		tical serv tructure	ice and operators	Scientific experts and		Or	rganized civil so	ociety		Citize ns and
Stakeholders	ks	Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	gener al public
ANPC					YES											
CDOS				YES												
SMPC		YES														
PSP					YES											
GNR					YES											
PM		YES														
B.V.V.N.F.														YES		
B.V.F.														YES		
B.V.Riba de Ave														YES		
СНМА				YES												
HNF			YES													
USF - Famalicão			YES													
Social_Act_M un		YES														

	Stakeholders Remar	Other p	Other public administrations, organizations and agencies					Critical service and infrastructure operators			Organized civil society					
Stakeholders	ks	Local authoritie s	Provincial	Regional	National	Others (remarks)	Public	Private	Others (remarks)	and academic institutio ns	NGOs	Entrepreneurs	Neighbors organizations	Voluntary organizations	Others (remarks)	and gener al public
INEM					YES											
СМРС		YES		4												
Press_offi_M un		YES														
IC_Electricity								YES								
IC_Telecom								YES								
IC_Natural Gas								YES								
Citizen								•								YES

 Table 48: Stakeholders identified in questionnaire of Vilanova de Famalicao. Type of stakeholder.



Figure 90. Stakeholders identified in questionnaire of Vilanova de Famalicao. Type of stakeholder.

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
ANPC		YES					
CDOS		YES					
SMPC		YES					
PSP		YES					
GNR		YES					
РМ		YES					
B.V.V.N.F.		YES					
B.V.F.		YES					
B.V.Riba de Ave		YES					
СНМА		YES					
HNF		YES					
USF - Famalicão		YES					
Social_Act_Mun		YES					
INEM		YES					
СМРС			YES				

Stakeholders	Remarks	Self-management (Local communities, individual)	Delegation (community cooperatives, development trusts, local councils)	Collaboration through advisory groups	Consultation through workshops	Public hearings, conferences	Provision of information
Press_offi_Mun		YES					
IC_Electricity				YES			
IC_Telecom				YES			
IC_Natural Gas				YES			
Citizen							YES

 Table 49: Stakeholders identified in questionnaire of Vilanova de Famalicao. Authority & power.



Figure 91. Stakeholders identified in questionnaire of Vilanova de Famalicao. Authority & power.

		Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Participants with training and professional specialization (planners, rayulata, social workers and the like)	Participants deliberate to find out what they want individually and as a group. Process characterizated for the interaction and exchange of perspectives and experiences, that precedes any group choke. Participants in deliberation aim toward agreement with ane another based on reesins, arguments and principles.	Participants know what they want, and the mode of decision making aggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues are far less common.	Porticipants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc.	Participants receive information about some policy or project and they beer winkers to strugged between politicians, activists, and interest groups	Implicit data provision via social media, e.g. facebook, twitter, youtube, etc.
ANPC		YES							
CDOS		YES							
SMPC		YES							
PSP		YES	•						
GNR		YES							
PM		YES							
B.V.V.N.F.		YES							
B.V.F.		YES							
B.V.Riba de Ave		YES							
СНМА		YES							
HNF		YES							
USF - Famalicão		YES							

		Technical Expertise	Deliberation and negotiation	Vote and bargain for interests	Develop Preferences	Express Preferences	Explicit data collection (Human sensor)	Listen as Spectator	Implicit data collection (Social sensor)
Stakeholders	Remarks	Porticipants with training and profesional specialization (planners, regulatar, social workers and the like)	Participants deliberate to find out what they want individually and as a group. Process characterizated for the interaction and exchange of perspetives and experiences, that precedes any group choke. Participants in deliberation aim toward agreement with one another based on reasins, arguments and principles.	Participants know what they want, and the made of decision making oggregates their preferences into a social choice.	Participants can explore, develop, and perhaps transform their preferences and perspectives on public issues are far less common.	Participants can express their preferences to the audience.	Direct and intentional data provision, e.g. mobile, tablet, laptop, etc.	Participants receive information about some policy or project and they beer winness to strugged between politicians, activists, and interest groups	Implicit data provision via sociol media, e.g. facebook, twitter, youtube, etc.
Social_Act_Mun		YES							
INEM		YES							
СМРС		YES							
Press_offi_Mun		YES							
IC_Electricity				YES					
IC_Telecom				YES					
IC_Natural Gas				YES					
Citizen									YES

Table 50: Stakeholders identified in questionnaire of Vilanova de Famalicao. Communication and decision mode.



Figure 92. Stakeholders identified in questionnaire of Vilanova de Famalicao. Communication and decision mode.

			INTE	RACTION	BETWEEI	N EACH C	OF THE ST	AKEHOLD	DERS IN C	OLUMN "	FROM" I	NITH THE	STAKEHO	OLDERS II	N THE RO	W "TO"	(FROM	-> TO)		
										FRO	м									
то	ANPC	CDOS	SMPC	PSP	GNR	РМ	B.V.V. N.F.	B.V.F.	B.V.Ri ba de Ave	СНМА	HNF	USF - Famali cão	Social _Act_ Mun	INEM	СМРС	Press_ offi_M un	IC_Ele ctricit y	IC_Tel ecom	IC_Na tural Gas	Citizen
ANPC		YES	YES				YES	YES	YES											
CDOS			YES		YES		YES	YES	YES											
SMPC	YES	YES		YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
PSP			YES												YES					YES
GNR			YES												YES					YES
РМ			YES												YES					YES
B.V.V.N.F.		YES	YES												YES					
B.V.F.		YES	YES												YES					
B.V.Riba de Ave		YES	YES												YES					
СНМА																				
HNF																				
USF - Famalicão																				

			INTEF	RACTION	BETWEE	N EACH C	OF THE ST.	AKEHOLD	DERS IN C	OLUMN "	FROM" I	NITH THE	STAKEHO	OLDERS II	N THE RC	оw "то"	(FROM	> TO)		
		FROM																		
то	ANPC	CDOS	SMPC	PSP	GNR	РМ	B.V.V. N.F.	B.V.F.	B.V.Ri ba de Ave	СНМА	HNF	USF - Famali cão	Social _Act_ Mun	INEM	СМРС	Press_ offi_M un	IC_Ele ctricit y	IC_Tel ecom	IC_Na tural Gas	Citizen
Social_Ac t_Mun																				
INEM	YES	YES		YES	YES	YES	YES	YES	YES	YES	YES	YES								
CMPC	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES			YES	YES	YES	YES	YES
Press_offi _Mun																				YES
IC_Electri city																				
IC_Teleco m																				
IC_Natura I Gas																				
Citizen			YES											YES						

Table 51: Stakeholders' interactions in flood risk managements. Vilanova de Famalicao.

Communication flo	ow (Interaction)	Communicat	ion aims	Content of communi	cation		Commu	nication channel	5
Stakeholders (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Remarks	Non-exhaustive list of communication content (if the case, please add news in remarks)	Remarks	Communication channels (if the case, choose max 3 options)		Remarks	
ANPC	CDOS	Prevention		Early warning		INTERNET, EMAIL,			
CDOS	SMPC	Preparedness		Civil Protection Plans		INTERNET, EMAIL,	TELEPHONE / FAX		
CDOS	B.V.V.N.F.	Preparedness		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX		
CDOS	B.V.F.	Preparedness		Emergency response protocols		INTERNET, EMAIL,	NEWSLETTER		
CDOS	B.V.F.	Preparedness		Emergency response protocols		INTERNET, EMAIL,	TELEPHONE / FAX		
SMPC	СМРС	Response		Operational coordination		INTERNET, EMAIL,	TELEPHONE / FAX		
SMPC	Press_offi_Mun	Prevention		Public Information		INTERNET, EMAIL,	TELEPHONE / FAX	FACE TO FACE MEETING	
Press_offi_Mun	Citizen	Prevention		Recommendations		MUNICIPAL WEB			
SMPC	Citizen	Prevention		Early warning		TELEPHONE / FAX			

Table 52: Stakeholders' communication flows and communication aims. Vilanova de Famalicao.



Figure 93. Sociogram about relationships between stakeholders. Vilanova de Famalicao.

Communication flo	ow (Interaction)	Commu	nication aims		Public pa				
Citizen environment (FROM)	Stakeholders (TO)	(Prevention, Preparedness, Response, Recovery)	Describe in detail the aim of the communication from de citizens to the rest of stakeholders.		Communication channels (if the case, choose max 3 options)		Remarks	Participation method (authority) - (See table 3)	Communication & Decision Mode - (See table 4)
CITIZENS	SMPC	Prevention	recommendations related to floods	TELEPHONE / FAX	EMAIL	FACE TO FACE		Information	Express Preferences
CITIZENS	SMPC	Response	flood incidents	TELEPHONE / FAX				Self-management	Explicit data collection
CITIZENS	SMPC	Recovery	helps, subsidies	TELEPHONE / FAX	EMAIL	FACE TO FACE		Self-management	Aggreagate and Bargair
CITIZENS	B.V.V.N.F.	Response	Assistance	TELEPHONE / FAX				Self-management	Aggreagate and Bargair
CITIZENS	B.V.F.	Response	Assistance	TELEPHONE / FAX				Self-management	Aggreagate and Bargain
CITIZENS	B.V.Riba de Ave	Response	Assistance	TELEPHONE / FAX				Self-management	Aggreagate and Bargain
CITIZENS	GNR	Response	Assistance	TELEPHONE / FAX				Self-management	Aggreagate and Bargain

Table 53: Public participation procedures. Vilanova de Famalicao.



Figure 94. Sociogram about public participation procedures. Vilanova de Famalicao.

10 APPENDIX IV: Questionnaire of conclusion of each pilot cases and technical partners

GENOVA.
BILBAO.
BRATISLAVA.
TULCEA.
VILANOVA DE FAMALICAO.



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Figure 95. Front cover of questionnaire of conclusions.

10.1.1 PILOT CASES

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Figure 96. Table of the questionnaire of conclusions related to pilot cases (check table)

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Figure 97. Table of the questionnaire of conclusions related to pilot cases (template, table to complete)

10.1.2 TECHNICAL PARTNERS



Figure 98. Table of the questionnaire of conclusions related to technical partners (template, table to complete)