

Shelter

Sustainable Historic Environments
hoListic reconstruction through
Technological Enhancement &
community-based Resilience

**Extract of D6.3 Adaptive Governance
Schemes Mapping**

Galicia Organigraphs

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Glossary

Acronym	Full name
AG	Adaptive Governance
AGSF	Adaptive Governance Scheme Framework
CA	Consortium Agreement
CCA	Climate Change Adaptation
CH	Cultural Heritage
CHM	Cultural Heritage Management
D	Deliverable
DoA	Direction of Action
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
DoA	Description of Action
EC	European Commission
ICCOMS	The International Council on Monuments and Sites
ICCROM	The International Centre for the Study of the Preservation and Restoration of Cultural Property
IUCN	The International Union for Conservation of Nature
IoG	Institute of Governance
SFDRR	The Sendai Framework for Disaster Risk Reduction
T	Task
OL	Open Lab
OLC	Open Lab Co-ordinator
UN	United Nations
UNESCO	The United Nations Educational, Scientific and Cultural Organization
WHS	World Heritage Sites
WHO	World Health Organisation
WP	Work Package

1 Executive summary

Across academia, policy and practice, the perceptions and understanding of cultural heritage (CH) are changing as experts seek to manage CH more sustainably to better withstand the effects of climate change. Naturally, this has led to a mushrooming of contemporary research and practical work exploring the role of CH as a critical aspect of resilience and sustainability. One research topic within this broader paradigm shift is the integration of CH into disaster risk management (DRM) governance. Both academic and international organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) and International Council on Monuments and Sites (ICOMOS) emphasize the importance of this theoretical integration through a lattice of interacting articles, reports, papers, frameworks, and guidelines. However, one key document championed at aiding in the practical integration of CH into Disaster risk reduction (DRR) and DRM is The Sendai Framework for Disaster Risk Reduction (SFDRR) (UN, 2015).

The SFDRR forms a critical global policy framework that aims to reduce disaster risk and losses in lives, livelihoods, and health. As well as the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries (UN, 2015). The SFDRR is comprised of seven targets and four priorities to prevent new and reduce existing disaster risks. Importantly within the context of this deliverable is Priority 2 of the SFDRR. Priority 2 is entitled '*Strengthening disaster risk governance to manage disaster risk*'. At its core, Priority 2 emphasizes the importance of governance in effectively and efficiently managing disaster risk. As a result, practitioners and policymakers engaging with the SFDRR are encouraged to consider contemporary DRM governance and its role in DRR. As well as proactively facilitate the integration of CH stakeholders into pre-existing DRM strategies and associated governance structures.

However, to date, the integration of CH into DRM is in its infancy. The concept of CH is inherently complex, with highly subjective and unique societal values. Making it difficult to quantify those values accurately and effectively bring all necessary stakeholders together. Furthermore, the interactions between CH stakeholders and decision-making processes are often implicit and reactive. The implicit nature of these decisions can make it challenging to develop clarity around CH governance. Highlighting this challenge within the broader paradigm shift and growing international importance pinpoints a timely and critical research opportunity. In which, there is a need for an academically robust and practical approach that can 'map' DRM governance structures within CH sites. It is within this research opportunity that this work is focused. In short, this deliverable outlines in detail supporting literature, an innovative research approach and all raw data collected in the adaption and subsequent implementation of a semi-empirical research approach to map the DRM governance structures across the five SHELTER Open Labs (OLs). Each of the SHELTER OLs included individuals from public and private organisations that have a common interest in improving the management of CH into the broader governance. However, after preliminary discussions with the coordinators of these Open labs (OLC) in December 2019, it became clear that mapping the governance within the SHELTER

OLs required a more comprehensive approach. Furthermore, very few (if any) empirical studies explicitly attempt to map governance structures across academic literature within the context of DRM and CH.

As a result, the work within T6.3 went beyond mapping DRM governance for the OL and attempted to establish an innovative and collaborative methodological approach that could be replicated by other experts outside of the SHELTER Project. The innovative methodological approach had to be carefully designed, thoroughly researched, and justified to ensure that it fulfilled the requirements of the SHELTER Project and, just as importantly, provided the OLs with a platform and tool to continue exploring their DRM governance in the long term. Despite the limited amount of academic literature attempting to map DRM governance, one valuable exception was found in the European Commission-funded project entitled "Benchmarking Regional Health Management II (Ben RHM II)". In which Tiliouine *et al.* (2018) developed a toolkit designed to help experts map governance structures around medicine distribution in the context of human health and well-being using a technique called The Organigraph technique. This toolkit formed an essential inspiration and resource for adapting the Organigraph technique within the SHELTER Project.

Building upon the toolkit provided by Tiliouine *et al.* (2018), the research team at ULIEGE believed that the value of Organigraphs went beyond its ability to map governance structures. Using a semi-empirical qualitative research approach, the Organigraphs provided the basis for enhanced stakeholder engagement and collaboration, individual and group social learning, proactive self-diagnostics by local experts, and cross-national, cross-scale and cross-issue peer learning. With this in mind, an iterative four Phase methodology was created to explore, co-produce, and fine tune detailed OL specific Organigraphs within the SHELTER OLs. This report is structured around these four phases and can be briefly outlined as follows.

First, Phase 1 created a robust conceptual framework underpinning the methodological approach by exploring the relevant literature around the concept of governance. Phase 2 focused on drafting the OLs Organigraphs by consolidating the pre-existing material with each OL and involving key stakeholder groups. The draft Organigraphs created within Phase 2 were co-produced through, focused developmental meetings and iterative feedback. Phase 2 also led to the refinement of the standardized key that outlines the common 'building blocks' used in developing the Organigraphs. Phase 3 aimed to fine-tune and validate the Organigraphs through 12 collaborative stakeholder workshops. In which 94 stakeholders across the five OL were invited to critique and validate their OLs Organigraph. Finally, Phase 4 aimed to encourage peer learning between the OLs using the finetuned Organigraphs to share knowledge and expertise. This was achieved through a digital interactive workshop in collaboration with WP7. This Phase encouraged the OLCs to present their Organigraph to other experts and use the SHELTER project as a platform to illicit cross-national discussions.

Notably, because of the iterative and co-productive nature of the four Phases, a myriad of raw data was collected in various methods and platforms. These inputs contained

valuable insights into how the OLCs, and stakeholders perceived their DRM governance. This report attempts to capture this huge amount of raw data and presented it alongside the fine-tuned Organigraphs. The outputs developed through the semi-empirical approach covers a wide range of topics, including the strengths, weaknesses, opportunities, and threats of current DRM governance within CH sites across the SHELTER OLCs. Practically, this deliverable provides practitioners with five detailed contemporary examples of DRM governance within CH sites. As well as a series of tailored recommendations to help enhance the resilience of these sites to the effects of climate change. However, this research had a great deal of value beyond the SHELTER Project. Throughout the research, there were several significant findings with implications beyond the SHELTER Project.

First, from a practical perspective, the Organigraph technique provided a platform to develop an innovative and collaborative tool to present the key stakeholders, responsibilities, and interactions within the DRM governance. Furthermore, the Organigraphs provided the stakeholders with a unique opportunity to perceive their position in the context of the broader DRM governance strategy. With the ability to identify the essential functions and responsibilities of both themselves and other stakeholders within the DRM response. Building upon this, the Organigraphs provided an accessible platform for self-reflection, facilitating discussions between different stakeholders (including CH stakeholders) to identify strengths, weaknesses, opportunities, and threats in their DRM before the event of a disaster. This provides an opportunity for proactive decision-making encouraging DRM experts to identify weakness in their DRM governance in the preparedness stage of the DRM cycle. In part shifting the DRM governance from 'reactive' to 'proactive' by encouraging experts to critique their own DRM governance and improve their preparedness for disasters. However, the current version of the Organigraph technique also had limitations that couldn't be fully addressed in the scope of Work Package 6 (WP6) and would require further research and development. For instance, the stakeholders pinpointed a negative correlation between the complexity of the Organigraphs and their accessibility. Essentially stating that the more detailed the Organigraphs become, the less they can be understood and used in practice. The stakeholders also lamented that the Organigraphs in their current form could oversimplify the complexity of the DRM governance structures, which can be more nuanced than those defined in a 'fixed' DRM governance map. Interestingly, the stakeholders also appeared to overlook the role of the Organigraphs as a tool for self-reflection and instead considered their contents more literally, as explicit guidelines for what they should do in the event of a disaster. Furthermore, one individual stated that the contents of the Organigraphs is what happens in theory and not necessarily an accurate representation of what happens in practice—opening a much broader debate about effective DRM governance and our ability to map it.

Second, from a theoretical perspective, the semi-empirical transdisciplinary research approach was integral to the development, refinement, and subsequent publication of the Organigraphs. The four Phases of the approach provided an academically robust foundation for adapting the Organigraph technique to DRM governance. Also, the approach facilitated greater degrees of social learning amongst the stakeholders and

Open Lab Co-Ordinator's (OLCs) in each SHELTER OL. In which the experts requested to continue using the Organigraphs in their own decision making and ongoing work. The process of co-producing the Organigraphs allowed them to reflect on their governance and create their solutions with minimal intervention from the facilitators enhancing the probability of the solutions being effective.

Furthermore, upon deeper reflection of the five fine-tuned Organigraphs, several interesting findings were observed and are worthy of greater discussion in the context of the broader academic debate. First, despite the apparent differences between the five SHELTER OLs, the Organigraphs shared a great degree of similarity, especially regarding the position of different stakeholders and the types of relationships linking them, hinting at the fact that there are methods of best or established practice in DRM governance, regardless of context.

Also, stakeholders in the OL reinforced the pivotal role local stakeholders play at ALL phases of DRM. However, the DRM governance at the local spatial scale remains implicit, unclear, and often outside of the pre-existing legal frameworks. In response, the Organigraph provides a tool at the disposal of experts to begin mapping these implicit relationships and better integrate these stakeholders into the explicit DRM strategy. Furthermore, all the Organigraphs developed within the SHELTER Project demonstrated a clear pertinence towards a hierarchical governance structure. In which, critical decisions, policy, plans, resources, and solutions are developed and implemented at the national (or most relevant highest spatial scale) and then filtered down towards smaller spatial scales. On the one hand, the pertinence towards hierarchical governance structures is understandable. The consequences of a disaster event on CH can be irreparable and require precise coordinated management which must be conducted by an overarching entity. However, on the other hand, broader academic literature reiterates the critical role of local communities in shaping and implementing such DRR and response and highlighting that what we should see in the Organigraphs is a series of feedback loops between the national, regional and local spatial scales. Still, for the most part, this was not the case and based on the findings of T6.3 the establishment of such mechanisms is still a challenging and difficult issue for DRM governance in CH sites.

In part, this work highlights the persistent disconnection of stakeholders at different spatial scales and the challenges practitioners face when integrating local community groups into DRM governance. Building upon the above observations, the local communities are often perceived as stakeholders to be saved rather than resources that can be mobilized into action and guide more effective DRM responses. Importantly, in reaction to this observation through the development of the Organigraphs, the OLCs, research team, and stakeholders attempted to pinpoint specific topics of improvement within each OL which have been framed as adaptive governance proposals. These adaptive governance proposals included missing connections or stakeholders, challenging ingrained behaviors, overcoming siloed working, highlighting implicit relationships and connections, and adapting new policies and plans to facilitate the inclusion of missing stakeholders. Furthermore, as a collective of experts in T6.3 we attempted to take this one step further. We attempted to draw connections between the

tools being developed in the SHELTER project to foster more adaptive governance approaches and increase the likelihood of their long-term uptake.

In short, this deliverable consolidates all the work that went into the development, adaptation, and execution of the Organigraph technique to mapping DRM governance for five case studies. It highlights the value of the Organigraph technique in providing an innovative, collaborative, and attractive technique for mapping DRM governance structures. With the capacity of enhancing the implementation of the priorities of the SFDRR by giving practitioners a tool to develop clarity around DRM. When accompanied with a multi-phase semi-empirical research approach, it can provide a platform for self-critique, social learning and cross-issue, national and scale discussions. Ultimately leading to improved preparedness to disaster through greater clarity and the identification of weakness and bottle necks before a disaster event. Resulting in great resilience and more effective DRR response.

This report provides a precedent for using the Organigraph technique to map DRM governance structures within CH sites. And finally, it highlights the value of further research into the Organigraph technique as a tool for enhancing the resilience of CH internationally.

2 The refined Organigraphs for each SHELTER OL

The Organigraphs co-produced within T6.3 were too large and too complex to be included in this A4 document. The final versions, separated into distinct spatial scales, have been provided at the end of the document within Appendix.

2.1 Identify aspects of each OL DRM governance to strengthen and propose potential areas to enhance adaptive governance across the OL.

It is essential to reflect upon the various outcomes, discussion points, comments and conversations that arose across the four Phases of the semi-empirical approach. This was done to develop a series of adaptive governance proposals that draw both on the outcomes of the Organigraphs and draw upon the wealth of raw data collected throughout the entire semi-empirical approach. The following section outlines the specific adaptive governance proposals for each of the five OL within the SHELTER Project. For ease of reading the key salient messages in each proposal is highlighted with bold text.

2.1.1 Serra Do Xurés Natural Park in Galicia

Following the development of the Organigraph within the Galicia OL, several strengths, weaknesses, opportunities, and threats were identified within the OLs DRM governance structure. The stakeholders and the OLC who participated in the co-production of the Organigraphs raised an array of discussion points across the four experimental phases. These discussion points consolidated from across the four experimental phases have been briefly encapsulated below. They have been used to guide the development and research around adaptive governance proposals outlined in the following section.

- The experts within Galicia outlined a comprehensive list of tools at various stages of DRM. However, these tools are not 'formally' part of the Organigraph and are arranged in a list format along the side of the document.
- The governance structures at the local communities to DRM governance and the challenges in reaching/engaging with them.
- The changes associated with the inclusion of CH stakeholders into the broader DRM governance structures and the need to better integrate these individuals.
- The potential for utilizing the local community in the delivery of specific DRM tools.
- Within the Galicia OL, the issues related to climate change are highly influenced by several anthropogenic drivers. These play an essential role in the DRM governance and potential resilience of the DRM governance structure.
- Between the different 'General Directorates' at the regional scale, informal communications are essential to coordinating the DRM governance structures but are not explicitly underpinned by a governance mechanism.
- The OLC discussed the pattern of institutional siloed working in which many governmental departments do not communicate or share resources outside of their perceived competencies.

2.1.1.1 Continuing to develop clarity around the DRM governance structures, especially at the local spatial scale, and exploring more in-depth stakeholder identification and engagement processes.

Unlike many of the other OL within the SHELTER Project, the mapping of the DRM governance using a form of organization charts was not new to the OLC and stakeholders within the Galicia OL. In fact, in the most recent version of the PLADIGA organisational charts are used to define many of the different organization and in fact the refined version of the Organigraph represents public administrations whose specific structures and powers are officially published by decree in the corresponding official journal and, therefore, are explicitly defined and publicly accessible.

As a result, unsurprisingly the OLC involved quickly began to coalesce around a defined DRM governance structure. They were able to effectively describe the key entities involved in the DRM processes. Initially, this would indicate that the experts with the Galicia OL have an apparent understanding of their DRM governance structures and their major components.

However, accompanying the high level of clarity, some experts also highlighted distinct areas of the DRM governance where **greater clarity and understanding was needed. At the Local spatial scale, the experts could not map the DRM governance structures in detail but were confident in their ability to explore these relationships in the future. As a result, as part of the Organigraphs development, key stakeholders’ groups were explored and discussed; these were subsequently highlighted in the Organigraph and can be seen in Figure 41.**

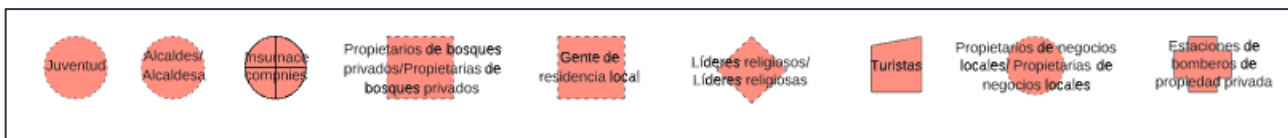


Figure 41 – The Mixture of key stakeholder groups identified at the local spatial scale within the Galicia OL.

Building upon this preliminary identification, the experts within the OL have actively started to develop strategies to engage local stakeholders to enhance the resilience of the DRM. In fact, the local objective within SHELTER was actively updated to account for the importance of this issue and highlighted a three-pronged approach. The first was a context analysis developed within a series of local stakeholder workshops focused on developing a shared understanding between different departments and different administrations. Secondly was to develop a more comprehensive map of the local stakeholders, building upon the essential work done in the Organigraphs. Finally, the experts within the Galicia OL hired an outside consultant to conduct a series of interviews with local stakeholders to identify opportunities, gaps and approaches to enhance the

capacities of the local stakeholder groups and enrich this aspect of the Organigraph. For more information on the development and implementation of these strategies, further information can be found within the Galicia OL.

2.1.1.2 Exploring the role and responsibilities of different stakeholders' groups within the comprehensive list of tools outlined in the Organigraph

Organically as part of the Organigraphs development, the OLC in responses to a prompt by the researcher in the earlier phases of the Organigraphs development. The OLC created a series of boxes on the document's right-hand side, as demonstrated in Figure 42.

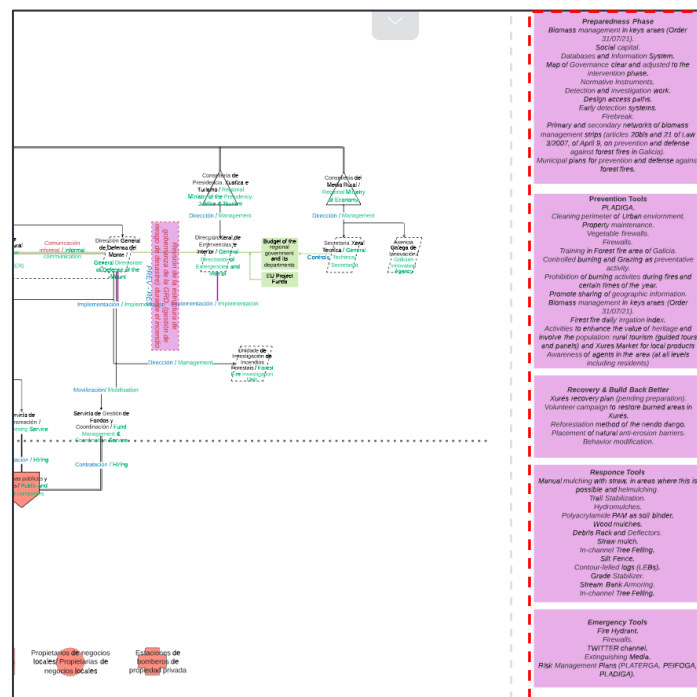


Figure 1 – The series of pink boxes arranged on the left-hand side of the Organigraph that encapsulate the myriad of tools in the DRM governance structures of Galicia

On the one hand, the breakdown of these boxes shows the array of established tools within the Galicia OL. It also demonstrates where their tools are used at different phases of the DRM cycle, which is highly informative and very useful. However, on the other hand, the arrangement of tools like this implies that they are separate from the DRM governance structure, and it also fails to highlight who is responsible for maintaining and implementing those tools. According to the OLC the roles and responsibilities of these tool is clearly defined in the administrative and regulatory documents that have been reflected in the Organigraph. As a result of the limitation with the Organigraph itself rather than an accurate representation of the DRM governance within Galicia.

However, during the development of the Organigraphs, there were some unrelated comments around the implementation of these tools at the local spatial scale, particularly the use of local volunteer groups as a mechanism for distributing seeds from the Germoplasma Seed bank in the recovery phases of DRM. **Building upon this, there may be distinct value in exploring and critically reviewing who is responsible for these tools and, if so, how these responsibilities can be enhanced or better supported to enhance the resilience of the DRM governance structure.**

2.1.1.3 The importance of horizontal connections in the enrichment of the DRM governance structure and regional competencies and overcoming aspects of siloed working

This proposal attempts to bring together two essential outcomes that arose during the semi-empirical approach. Namely, the importance of the implicit horizontal connections within the Galicia DRM governance structure which were highlighted as 'Informal communications' Which has been encapsulated in Figure 38. As well as, the subtle comments around the siloed working between different entities within the Galicia OL.

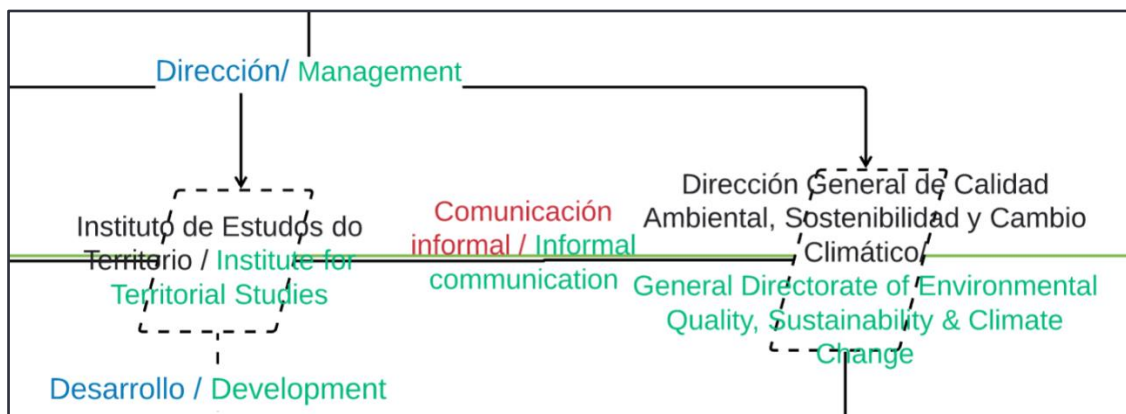


Figure 2 – an example of the informal communication that exists between the different general directorates within the Galicia OL.

First, it became increasingly evident throughout the semi-empirical approach that the implicit communication channels between the different general directorates was a powerful mechanism in overcoming siloed working and facilitating more effective and 'richer' DRM governance solutions. In practice these informal communication channels represented internal exchanges between staff and experts on issues, in which experiences, knowledge and advice were shared between experienced individuals. However, the OLC acknowledged that these relationships are extremely difficult to translate it into an organization chart and depend on the relationships between the staff and the context of the situation. Never the less, the explicit identification of these informal communication and the acknowledge of their importance was an important outcome from the Organigraphs development and therefore it is essential to explore its

implications in greater detail. The existence and implications of informal and formal governance arrangements are an active avenue of research with scholars such as; Ayres (2017) Exploring the concept and purpose of informal governance mechanisms in decision-making processes. Ayres (2017) defines informal governance "*as a means of decision-making that is un-codified, non-institutional and where social relationships and webs of influence play crucial roles.*" Which accurately describes the informal communication that occurs between the different departments. Furthermore, within the Galicia OL, these informal communication channels between the different entities are facilitated because these departments are in the same physical building and can quickly and easily exchange information and resources on an Adhoc basis. Therefore, **the question around this proposal is how effective these informal communication networks are attempting to overcome the siloed working and whether these mechanisms benefit from more formal governance mechanisms or a 'legal framework'. Or alternatively, should they be left as informal governance mechanisms.**

In response the OLC and associated experts Stated that the Plan of prevention and defense against forest fires in Galicia (PLADIGA) is the key instrument that defines the DRM response across Galicia. Therefore, if such legal framework was necessary to underpin this inform communication, then it would feature in the PLADIGA. The PLADIGA in and of itself is the result of many years of work and experience in the field of fighting fires across Galicia. It involves all departments, clearly determines responsibilities, provision of resources and specific action protocols based on the seriousness of the situation. The PLADIGA aims to establish the organization and procedure of action of the resources and services whose ownership corresponds to the autonomous community of Galicia, of those that may be assigned to it by the General State Administration, as well as those that could be facilitated by other public or private entities to deal with forest fires within Galician territory. **As a result, the informal communication relationships that exist between the different general directorates within Galicia is important to the resilience of the DRM governance structure. But these cannot be mapped. Great understanding of these mechanism and potential the need for formal governance mechanism such as the PLADGUA to facilitate the development of these kind of relationships.**

2.1.1.4 Potential exploration of cross-national collaborations with experts in Portugal

Finally, another potential proposal explored during the Organigraphs development, and the peer-learning workshops was the potential collaborations with DRM colleagues in Portugal. Serra Do Xurés Natural Park forms a cross-border area listed as Biosphere Reserve Geres-Xures. Which extends between Galicia Spain and Peneda Geres National Park in Portugal. Naturally, the development of wildfires within the region does not respect the national boundaries, and quickly fires can spread between the countries across the national park. As a result, this proposal focuses on enhancing the transboundary collaborations between these two countries and the potential to establish a formal mechanism to facilitate this transboundary collaboration.

In practice, there is already a precedent for exchanging resources and collaborations between Portugal and Galicia in the event of wildfires through formalized institutional agreements. The OLC and experts within the Galicia OL highlighted that The Galicia-North of Portugal Work Community was established on October 31, 1991 under the Constitutive Agreement, drawn up by virtue of the 1980 European Framework Agreement on Cross-Border Cooperation between Communities and Territorial Authorities of the Council of Europe, with the support of the Spanish, Portuguese and European Union Administrations. In which the Xunta de Galicia and the Comissão de Coordenação e Desenvolvimento Regional da Região Norte de Portugal have been the promoters of this process.

At present, the Constitutive Agreement of the Work Community was adapted in 2006, to the provisions of the Treaty between the Kingdom of Spain and the Portuguese Republic on Cross-Border Cooperation between Entities and Territorial Instances of October 30 2002, which entered into force on January 30, 2004. The Work Community was created to promote a dynamic of regular meetings between Galicia and the North of Portugal. The aim is to deal with matters of common interest, exchange information, coordinate initiatives and examine the possibilities of solving common problems or contributing to their solution through agreements, decisions aimed at a coordinated solution, or recommendations and proposals to the competent authorities, as well as the preparation and presentation of cooperation projects.

The constitution of the Work Community supposes the consolidation of a fruitful stage of relations between Galicia and the North of Portugal, both at the level of 6.3 Review of the governance proposals. Currently, This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 821282 Cross-Border Community Initiatives and at a broader level that includes interregional relations.

The Work Community is currently made up of 9 Commissions; Four Sector Commissions (Sustainable Development and Planning, Economic Development and Tourism, Innovation and Energy Efficiency and Citizenship), Four Territorial Cooperation Communities (CTC of Val do Miño, CTC of Val do Limia, CTC of Val do Tâmega and CTC of Val do Cávado) that bring together institutions from both sides of the border.

One potential proposal that could enhance the work of the Work Community brought forward in the Organigraphs development during the peer learning phases was the function of the ISRBC and the formal governance mechanism that underpins this transdisciplinary entity. Of particular interest is the development of The Framework Agreement on the Sava River Basin (2004) (FASRB) (Sava Commission, 2004). This framework from the central governance mechanisms reinforces the transdisciplinary collaboration between the countries of the Sava River basin and can be seen in Figure 41. The framework works because the countries of the Sava River basin sign and agree to uphold the articles within the document. The establishment of such a document is not easy. Experts from the Sava OL highlighted that the development of the ISRBC was

initially created around a core issue of 'navigation' and the topics of flood prevention, water quality developed from that.

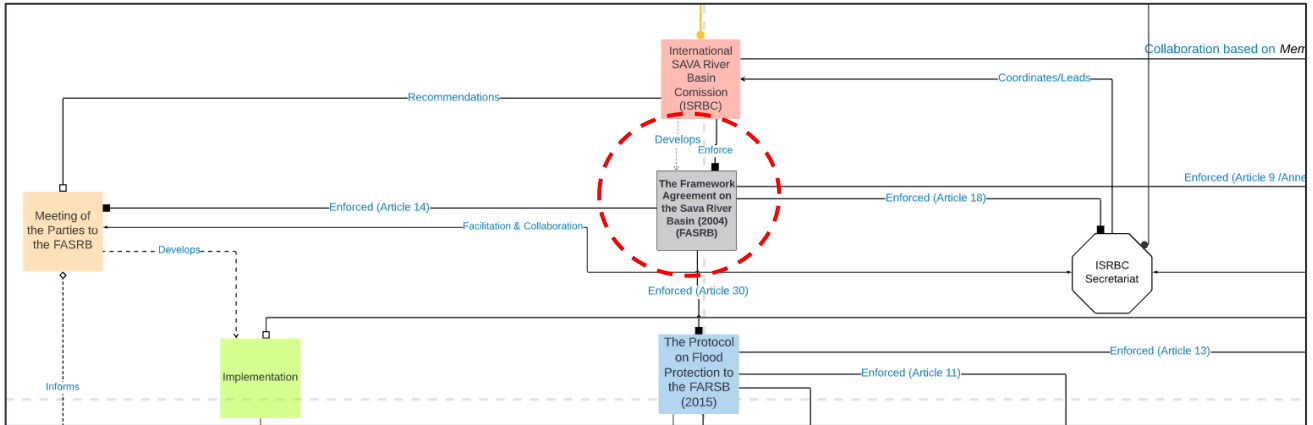


Figure 3 – The Framework Agreement on the Sava River Basin (2004) (FASRB)

The exploration and potential development of such a document may help reinforce the cross-national collaboration between experts within Portugal and Galicia through several means. First, it provides an explicit legal basis for each country to provide support in the event of a wildfire. Secondly, a framework would provide explicit instruction on the different aspects of collaboration between the two countries.

3 Appendices

The refined Versions of All OL Organigraphs as printable PDF Documents split by 'Layers' According to the OL specifications (Phase 4)

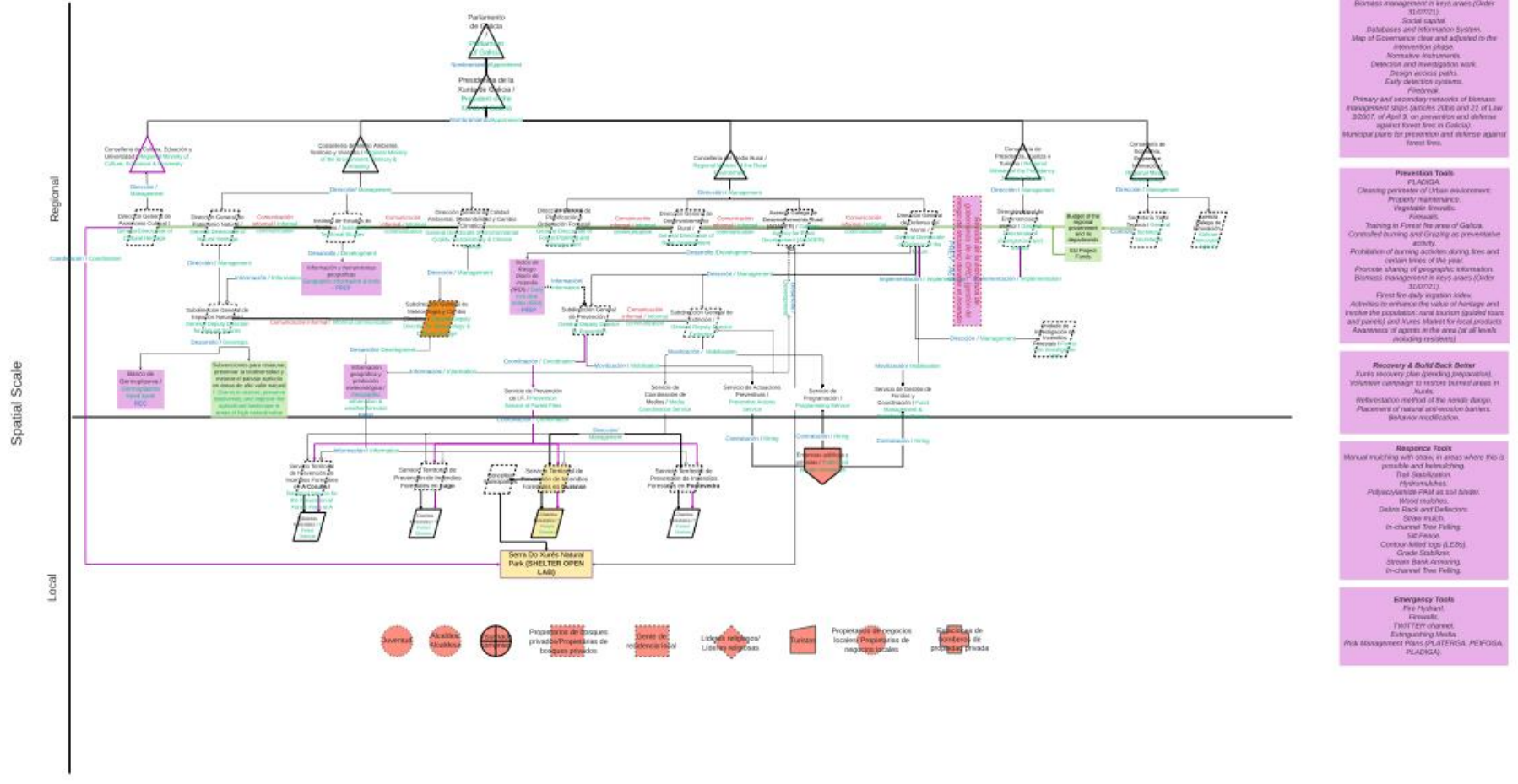
The Following Appendix includes all fine-tuned Organigraphs after the completion of the semi-empirical research approach.

Serra Do Xurés Natural Park in Galicia OL



SHELTER Project
Open Lab - Serra Do Xurés Natural Park in Galicia
Key riskpolicy issue - Fires

DRM Organigraph - Serra Do Xurés Natural Park in Galicia



- Preparations Phase**
 Business management in key areas (Order 31/07/21).
 Social capital.
 Databases and information system.
 Map of Governance clear and adjusted to the intervention plans.
 Normative instruments.
 Detection and investigation work.
 Design access paths.
 Early detection systems.
 Firebreaks.
 Primary and secondary networks of biomass management strips (articles 20bis and 21 of Law 3/2007, of April 3, on prevention and defence against forest fires in Galicia).
 Municipal plans for prevention and defence against forest fires.
- Prevention Tools**
 PLADIGA.
 Cleaning perimeter of Urban environment.
 Property maintenance.
 Vegetable firebreaks.
 Firebreaks.
 Training in Forest fire areas of Galicia.
 Controlled burning and Grazing as preventative activity.
 Prohibition of burning activities during fire and certain times of the year.
 Phytosanitary management of key areas (Order 31/07/21).
 Forest fire daily vigilance plans.
 Activities to enhance the value of Heritage and involve the population: rural tourism (guided tours and panels) and Xurés Market for local products (Awareness of agri-food in the area (at all levels including residents)).
- Recovery & Build Back Better**
 Xurés recovery plan (pending preparation).
 Volunteer campaign to restore burned areas in Xurés.
 Rehabilitation method of the burnt design.
 Placement of natural anti-erosion barriers.
 Behaviour modification.
- Resilience Risk**
 Manual matching with show, in areas where fire is possible and identifying the Qualitative Indicators.
 Polydispersion PMR as soil binder.
 Mixed matches.
 Debris Rack and Deflection.
 Stone match.
 In-channel Tree Felling.
 Sit Fences.
 Concrete barrier logs (LEBS).
 Grade Guidelines.
 Stream Bank Anchoring.
 In-channel Tree Felling.
- Emergency Tools**
 Fire Alarm.
 Firebreak.
 Firefighter channels.
 Extrajurisdiction Media.
 Risk Management Plans (PLATERGA, PEFOGA, PLADIGA).