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Resilient Governance, Functions and Services of General Interest in post disaster media discourses: Centro Region (Portugal) after 2017 wildfires

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Abstract: Governance systems, when addressing post-disaster action, play an important role in minimizing the community's vulnerability to future disruptive events. The literature describes how are post-disaster actions towards resistance-resilience measures often implemented, shifting to adaptive-resilience approaches as a second concern and disregarding resilience-transformative strategies. Two consecutive wildfires in the Centro Region (Portugal), in 2017, blocked the access to the Services of General Interest (SeGI) and knocked off-balance the socioeconomic territorial structure and identity (the main impact was 116 mortal victims). In this paper, it is analysed the media coverage of the phenomena during the 12 months following the disaster using a sample of 150 news articles published in two newspapers. The public discourses are indicative of the overall importance given to the impact and to the responses based on resistance-resilience measures. Moreover, it is discussed the theoretical and practical challenges for the policy design and organization of the governance systems in post-disaster contexts.

Keywords: post-disaster resilience; governance systems; services of general interest; resistance; adaptability; wildfire.

1. Introduction

The public services network determines the existence, structure, quality, and transformability of the territories. That is, network services create conditions to community's resilience. Any node in the settlement structure increases or strengthens its livability and attractiveness through the accessibility to essential (those that guarantee the minimum of living conditions) and qualified (those that stimulate progress opportunities) services. Through the SeGI, public entities can mitigate the risks of the market failures, avoiding situations where the communities' resilience capacity could collapse.

Along the post-disaster catastrophe of the wildfires in 2017, part of the SeGI systems in the rural areas of the Portuguese Centro Region (civil protection, water, electricity, telecommunications, radio and television, housing, road network, transport, health and education services), collapsed or were subjected to high levels of stress.

Using the conceptual framework developed in the studies of resilience, a set of approaches and relevant dimension come to debate to improve territorial systems planning, both in the short and long term (Batty 2013). In the current context, this type of study has become relevant because it allows assessing the communities' level of preparation in facing adverse situations (disruptions, crises and catastrophes). In addition, by characterizing the preparation status of territories, governance structures face the challenge of articulating multiple operative dimensions (such as human resources and time) to improve the territorial capacity in recovering when exposed to an extreme and unexpected situation (Cutter, Ash, and Emrich 2014).

This article is organized around the following objectives: i) to reorganize the resilience theoretical framework in order to incorporate the importance of the SeGI to minimize the vulnerability of territories; and ii) to apply this theoretical framework within a concrete situation of crisis/catastrophe. In the second phase, using qualitative content analysis, we will analyze the news stream about this disruptive phenomenon to evaluate, iii) the performance of the governance system managing the SeGI networks and, vi) how this contributed, or not, to increase the resilience (resistance, adaptability and transformability) of these territories.

2. Post-crisis, accessibility to SeGI and resilience

Territories, in extent and number, have become increasingly subject to the frequent occurrence of crises, extreme weather events and natural and technological disasters, which have resulted in high instability due to the destruction of resources and human victims (Ainuddin and Routray 2012).

Vulnerability and resilience are two core concepts for understanding the impact of social, political, economic, or environmental factors and therefore for managing mechanisms for risk mitigation. The socioeconomic conditions of communities, as well as the biophysical structures that support them, are not uniformly spatialized. On the contrary, precariousness patterns correlate with situations of greater vulnerability. Thus, the consequences of disruption tend to be more severe when they occur in territories that are more vulnerable. As mitigation strategies in vulnerable communities (more poor, with ageing population, with low population density) are more demanding and complex to implement, they are often neglected (Rapeli et al. 2017).

The SeGI systems play a key role in low-density rural areas, with the mission of ensuring minimum conditions of quality of life, by enabling access to health, education and social support (Costa, Palma, and Costa 2017; Garlandini and Torricelli 2017). These service networks are unalienable public goods,

even in territories where the costs of providing them are very high compared to the income generated by their provision; so, they assume, in many cases, redistributive functions associated with regional cohesion policies (Rodríguez and García 2017).

Catastrophes occur when risk, hazard and vulnerability are combined. Vulnerability is the propensity to suffer damage from exposure to hazards and it is not detached from the governance systems, that involve decisions, values, attitudes, and action, which combined reduce or increase the likelihood of exposure (Kelman et al. 2016). Therefore, it is considered that the decision-making pattern is determinant for the levels of vulnerability of the territories where natural disasters always have a relevant human dimension. Because of that, understanding governance systems and its contribution for deepening or improving the vulnerability status has a major importance.

Table 1. Definitions and criteria of post-crisis actions typology

Definitions		Criteria	Typology		
			Resistence	Adaptation	Transformability
Resilience	"The capacity of a social-eco- logical system to cope with a hazardous event or disturbance, responding or reorganizing in ways that maintain its essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation" (IPCC 2014, 127).	maintain essential functions	X		
		maintain identity	X		
		adaptation/learning		X	X
		transformation			X
	"is regarded as the ability of systems to return to their stable equilibrium point after disruption, whereas in the second view, resilience is the capacity of a system to adapt and adjust to changing internal or external processes" (Cartalis 2014, 260).	to return to	X	X	
		to adapt and adjust		X	
		to changing			X
Services of general interest	"Covering the arrangements, tasks and functions assumed to be of essential importance to citizen welfare, quality of life and participation, as well as to the general functioning of societies at a level of development and quality corresponding to Community visions and goals". (Breuer and Milbert 2013, 29).	essential functions to citizen welfare	X	X	X
		development, visions and goals		X	X
	"labour market services, education n, healthcare, childcare, social care, (social) housing and social assistance services; gas, electricity, postal services, transport, ICT and electronic communications as well as water and waste management (ESPON & Royal Institute of Technology 2013, 26).	access to essential services	X	X	
Governance	Good governance is a vehicle for authorities, both state and local, private sector and media, together with civil society to participate, contribute and articulate their interests, and priorities, reconcile their differences, and exercise their political rights and civil liberties, as well as their obligations and responsibilities. Contributes to the reduction of vulnerability, enables the development of mitigation and recovery methodologies, and empowers civil society to act on its own behalf (Garschagen 2016, 50).	reduction of vulnerability	X	X	X
		enables mitigation	X	X	X
		enables recovery	X		
		empowers civil society		X	X
	Adaptive governance is the bundle of formal and informal institutions and individuals who collectively come together across different scales (such as spatial and governmental) to envision collaborative sustain- able and resilient environmental outcomes (Vandergert et al. 2016).	collaborative sustainable and resilient environmental outcomes		X	X

Transformability is the capacity to create a fundamentally new system when ecological, economic, or social structures make the existing system untenable (Walker et al. 2004), is the capacity to cross thresholds into new development trajectories (Folke et al. 2010). Engineering resilience tries to return a system to its previous state after a disturbance (Qasim et al. 2016). "Adaptation is aligned with governmental goals of returning to 'normal' and maintaining the status quo" (Davoudi 2016, 19). Thus, adaptation is a response to perturbations in which the system components are regenerated (the coupling is reinstated), and the system's boundaries remain unchanged. In an adaptation mode, the system is attempting to compensate to stresses that have moved it toward the boundaries of its current capacity (Hoffman and Hancock 2017, 13).

While adaptation has been closely associated with the notion of path dependency (either in terms of positive or negative lock-in), there is a tendency, in the resilience literature, to define adaptability as a move away from path dependency. As if new growth paths are detached from their past, as if regions need to deviate from their past to achieve that, and as if path dependency will cause insurmountable problems of adjustment (Boschma 2014).

The resilience of a community resumes its ability to recover the vitality of its structural functions after a disruption circumstance (Carpenter 2015). In ecology, resilience defines the system's capacity in ensuring a set of functions in situations of stress or crisis. It also allows foreseeing the extent of changes in the functional structure that a disruptive phenomenon can cause, as well as the effects on the network of connections that support them.

Resilient communities develop organization structures that mitigate impacts and facilitate socio-economic regeneration when exposed to crises (Tobin 1999). Adger (2000) untangles social resilience from ecological resilience, defining the former as the ability of communities in dealing with pressure or breaking points imposed by social, political or environmental changes. Panarchy model, complex adaptive systems approach and the adaptive cycle are devices that Holling (2001) uses to outline the relations between natural/human systems and to find the competences useful for regions in crisis contexts.

The resilience of communities to natural disasters results from social skills (social capital) that allow the adoption of intentional actions before and after a catastrophe (Rapeli et al. 2017). In general, the resilience of a territory combines knowledge, learning experiences, sense of place, social networks and local infrastructures, diversity and economic innovation, as well as participatory governance (Maclean, Cuthill, and Ross 2014).

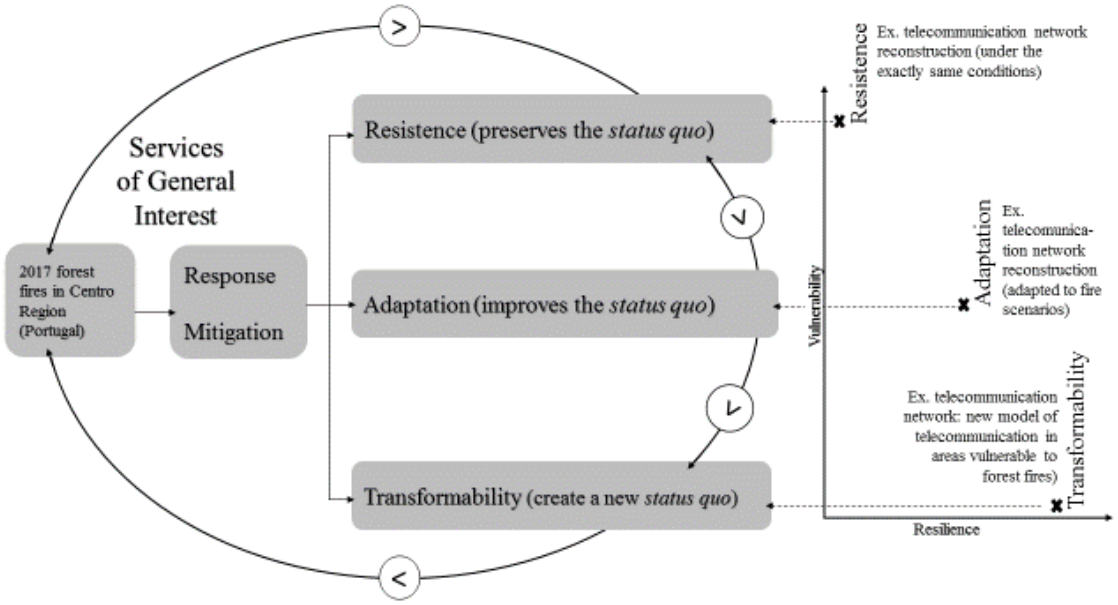
Post-disaster periods are always characterized by strong discussions involving governance systems (public administration, civil society and stakeholders), about managing the efforts that contribute for overall recovering. It is important to discuss:how to plan territories to be more resilient, socially just, economically dynamic, with better ecological resources and less vulnerable to future disasters? how to involve people in the planning of long-term solutions for their communities? how to mobilize policies that can reduce the number and extent of territories vulnerable to disasters? (Berke and Campanella 2006).

The resilience of communities decreases in contexts where the chain of decisions fostering recovery strategies is not consolidated, and actions are undefined (Bristow and Healy 2015). The range of decisions can be grouped into three types (figure 1): i) decisions focusing on resilience capital, by restoring normality; ii) adaptation decisions, which improve the system by; iii) or transformability decisions, when there is a restructuring of the function matrix and a new system is shaped.

3. Methods

Territories with structural vulnerabilities are more exposed to lasting post-disaster consequences, namely those related with the disruptions in the service network provision. This calls for the need of solid strategies to avoid the repetition of the phenomenon and to reduce the magnitude of the impacts.
The above-mentioned dimensions and criteria for defining post-crisis decision typology (Table 1 and Figure 1) establish the framework for the qualitative analysis that was developed. The relevance of such approach is shown by the analysis of a set of news about the wildfires in Portugal and the impact on the SeGI network. This paper contributes for a structured debate about the articulation of resilience, governance and accessibility to SeGI.

Figure 1. Interactions and typology of response and mitigation



The news contain discourses, which can be understood as the collective meaning of the phenomenon in analysis (Doulton and Brown 2009). Therefore, as presented in the next section, the main content shows the specific focus of the social media on the post-disaster response, referring actions resulting from the governance system. The Portuguese newspaper sources follow two typologies, as sugested by Araújo (2017): reference newspapers *(Expresso, Público and Diário de Notícias)* and ordinary newspapers *(Sol, Jornal de Notícias and Correio da Manhã).*
The selection of the newspapers source was based on the following criteria: to include systematic a follow-up of the crisis episodes under analysis, to present a multi-scale analysis (national, regional and local), to assume a more rigorous approach instead of a sensationalist focus, to allow access to online archives for one year period. As a result, two newspapers were selected: *Expresso* and *Público.* The keywords used matched with the designations adopted by the media to address this issue: *Pedrógão's fire*, *Pedrógão's wildfire*, *October's fire* and *October's wildfire*[1].
For a period of 12 months following the date of the catastrophes, the search returned 150 articles, later classified and coded using NVIVO software. The codification followed three steps: i) classification of

[1] In portuguese: "fogos Pedrogão"; "incêndios Pedrógão"; "fogos outubro"; and "incêndios outubro".

the main subjects based on the headline of the each news[2]; ii) analysis of the content of the news focusing on the impact of the wildfires; and iii) identification of response actions.

4. Case study description

Forest fires, particularly on the west coast of the USA and southern Europe, have become a destructive phenomenon of the human capital, biophysical and built environments, and socioeconomic structures. In 2017 in Portugal, in 2018 in Greece and Northern California, it assumed an exceptional impact, never felt before. In these wildfires, there were dozens of human victims and multiple destructions of dwellings, industrial and tourism areas, of equipment and service networks, as well as communities and landscapes.

The following Figure shows the affected area in the Centro Region of Portugal, by the wildfires in 2017, named Pedrógão's wildfire (P-W) and October's wildfire (O-W). In addition to climatic drivers, the catastrophic effects of these wildfires that caused 116 mortal victims are determined by the vulnerability characteristics. These include, for example, the extent and type of the main uses of the forest areas, as well as its speed of growth and spreading in a territory with a polycentric urban system, complemented by a constellation of small shrinking places (with declining and aging demography).

In this region lives 21,7% of the Portuguese population (2 231 346 inhabitants). It is a region characterized by a polycentric urban system with low density (79 inhabitants/km^2) and disperse settlements. According to 2011 data, this dispersion results in a very dense network of small settlements with less than 2000 inhabitants (Figure 1), which as a whole represent 65% of the population. On the other hand, only 28% of the population lives in urban agglomerations with more than 10 000 inhabitants and 31.3% of the residents are distributed through the regional urban system organized by 43 cities. Furthermore, this Region presents an aging demographic structure. In 2017, the ageing index corresponded to i) 147 in predominantly urban areas (50.6 % of the total population); ii) 202.5 in medium urban areas; and iii) 316.9 in predominantly rural areas (25.9% of total population).

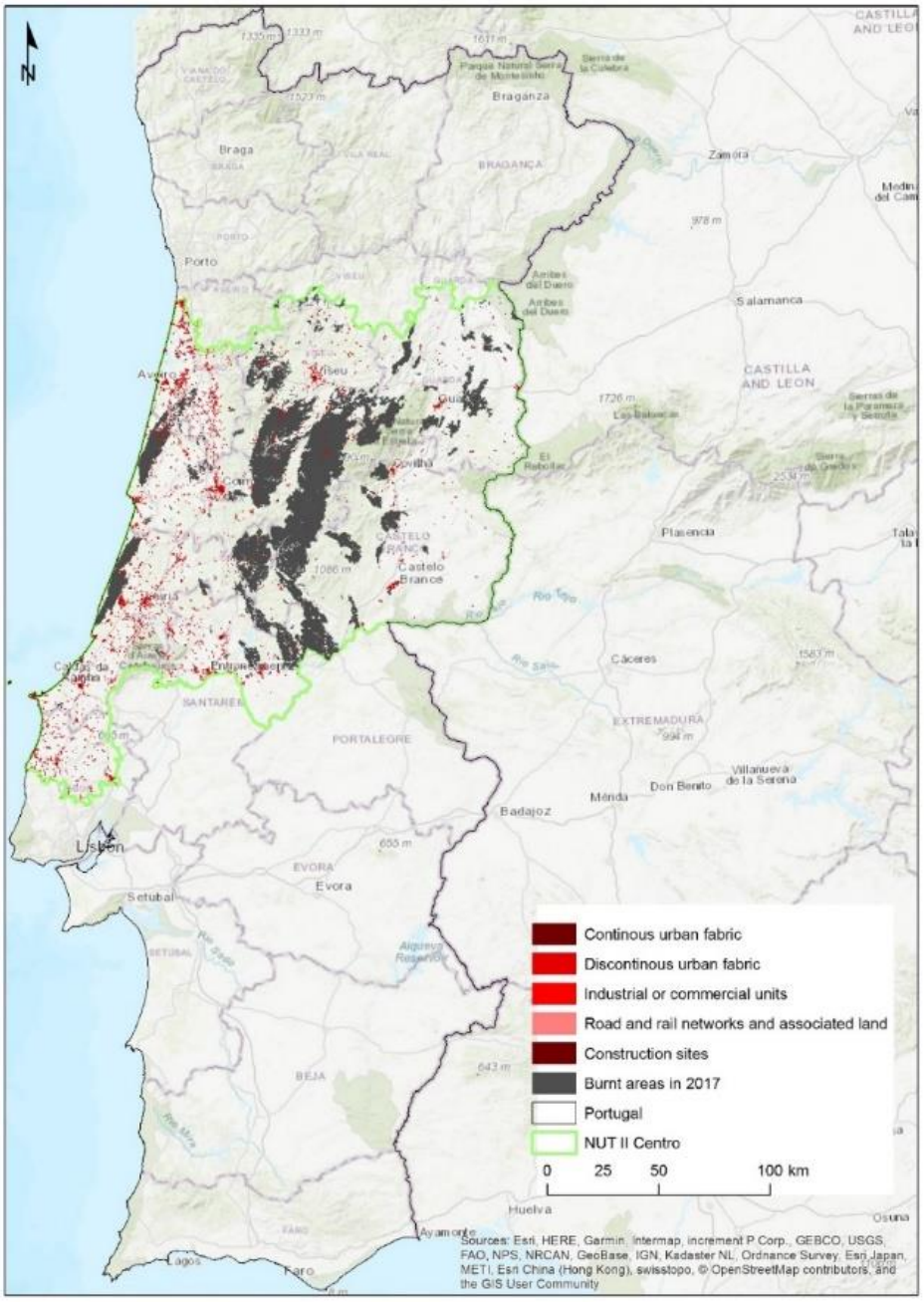
The P-W took place between June 17 and 24, leading to a burned area of 28913,6 hectares, over seven municipal areas[3]. Just in an hour, this fire caused 64 deaths in 20 different places in an area of about 20 km^2, having more than a half (34) been registered in only 300m of a municipal road[4]. The remaining victims died along the road network (52% inside their cars). In the following months the number of victims arose to 66 (Comissão Técnica Independente 2017a).

[2] Here are some examples of the coding rules assigned to the classification:
Social assets – mortal victims, financial support, social protection responses;
Telecommunication – telecommunication providers and infrastructure;
Housing – housing stock destruction, financial support, emergency action such as evacuation;
Health – immediate service supply (local health facilities and hospitals);
Energy: electricity network and infrastructure;
Infrastructure – road infrastructure and other equipment;
Civil protection – all resources involved in the firefighting;
Forest planning and management – forest land use, planning instruments;
Public funds – supranational funding;
Economy – enterprises, employment and financial support.

[3] Pedrogão Grande, Figueiró dos Vinhos e Castanheira de Pera, and other surrounding municipalities, as Sertã, Alvaiázere, Ansião and Penela.

[4] Estrada Nacional 236-1.

Figure 1. Burnt areas in 2017 and urban structure in NUT II Centro, Portugal



(b) Burnet areas withdrawn from Portuguese Institute for Conservation of Nature and Forestry (http://www2.icnf.pt/portal/florestas/dfci/inc/info-geo)

The second catastrophic situation (O-W), classified as a mega fire and occurred between the 14th and 16th of October (3 months after the P-W), was associated with the extreme climatic conditions intensified by *Hurricane Ophelia*. In this episode, 48 people died in 14 municipalities. In the following months, the number of victims rose to 50. The assessments carried out point to direct damages of 521 facilities of companies, estimated at around € 275 million, affecting, at least temporarily, more than 4,500 jobs over 30 municipalities (Comissão Técnica Independente 2017b).

SeGI such as energy and water supply, communications and transport, suffered severe damage. According to information collected by the tourism sector regional entity (Tourism of the Centre), 59 municipalities were directly affected, causing total or partial destruction of 38 tourism enterprises, resulting in the cancellation of 77% of hotel bookings.

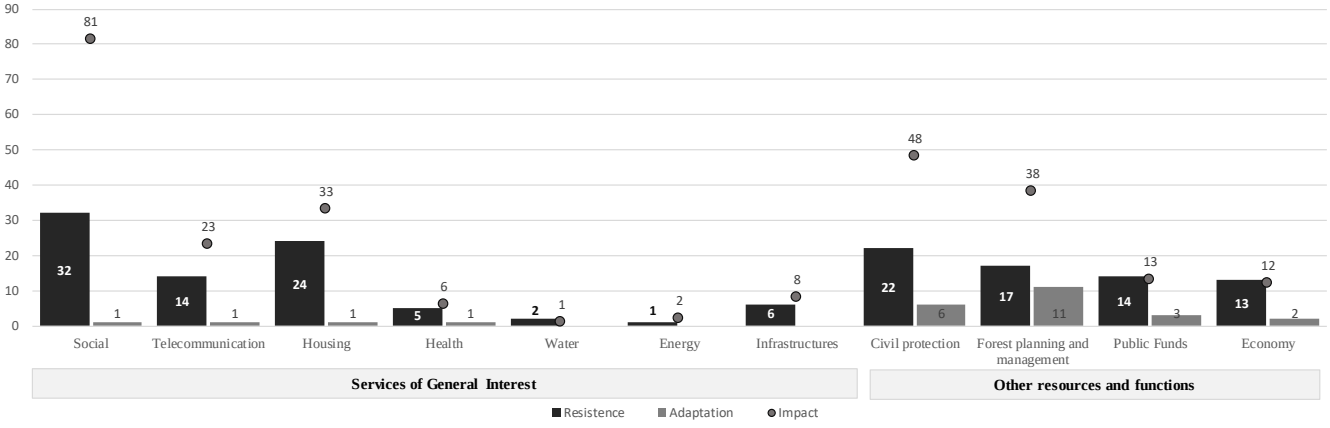
5. Results

This section focuses on the results of the analysis of the media coverage during the 12 months following the wildfire catastrophes, in the Centro Region of Portugal. The sample is composed of the 150 articles from the two reference journals (*Expresso* and *Público*). Following the criteria presented in section 3 (regarding the classification headlines of the news, and the identification of impact and response references within the content of each article) it is possible explain the media coverage and, therefore, provide a contribution for the debate around different types of post-disaster resilience.

5.1. News about impacts: main subjects and topics during the 12 months post-disaster

As mentioned, the sample of 150 news was coded using the NVIVO software. The codification followed three steps. The first concerns to the classification of the main subjects based on the headline, where was assigned to each news article one dimension related with SeGI's (including social assets, telecommunications, housing, health, water, energy and infrastructure and other functions, such as civil protection, forestry planning and management, public funds and economic activities. Then, analysing the text, were identified specific references on the impact of the wildfires on the SeGI', organizes in the above-mentioned topics. Each news article can include multiple references within the SeGI's topics. Throughout the 150 articles, there are 265 topic related references. The third step consisted in identifying response actions according to the type of resilience (resistance, adaptation, transformation), where, following the same logic as before, the total corresponds to 176.
The figure 4 shows the distribution of this classification within these steps. The SeGI related topics are slightly more represented (58% of topics covered in the news) than the other types of resources and functions considered in the analysis (42% of topics covered in the news). Given the identification of the main issues, impacts on social assets and civil protection match a substantial part of the news (43.3%). The remaining 36.7% are about three other categories (telecommunications, forest planning and management, and public funds).

Figure 3. Topics of the news by impact, and type of response



There is a substantial difference between the news that describe disaster impacts and those presenting references to responses. About impacts, it is important to stand out that cuts in the telecommunication

network, the destruction or limitations on infrastructures, and health related harms are recurrent analytic dimensions. However, greater emphasis is placed on social impacts (81 articles of 150), civil protection resources (48 articles of 150), followed by the analysis of the effects on forest resources (38 articles of 150) and problems caused by dwelling destruction (38 topics in the contents).

In addition to the differences of the impact topics covered in the contents, and the references to response actions, the behaviours between categories are different. In the case of social assets, although they are the most representative in the impact dimension (32% of total registrations), references on response actions are less frequent (18.8% of total registrations). This is, partially, explained by the several descriptions stating the impacts on human victims, which reached 116. In housing, for instance, the impacts appear in 33 articles (12.5% of total registrations) and 25 references point to responses (14.2% of total registrations). Two other examples are mentioned. In forest planning and management resources there is a smaller differential, 38 news classified with impacts in this category against 28 articles with actions identified. In the civil protection category, the differential between impact topics and response references is greater (48 topics and 28 references to responses).

The media coverage focus changed along the 12 months after the wildfires, namely within each SeGI or resources and functions, suggesting different roles for the governance structures. Concerning the social component, in the first six months following the phenomenon, the main content recalls to direct financial support to families. The link with the economic and housing dimension is evident, given the homes and facilities of companies destroyed that led to the relocation of families and the need to create jobs or to pay salaries. The descriptions on civil protection mainly relate to the management of the firefighters during the emergence stage. In the long term, responses point to the reform on the model of organization and operation of firefighters and to future integration with forest planning instruments. In the forest-planning domain, there is an obvious correlation with the reference of impacts, especially of the burnt area. In the medium and long term, the measures point to the management of land use, but also the rules allowing specific arboreal species.

In summary, as expect, the way in which the news were worked through social communication illustrates the monitoring of the phenomenon over time, and in some cases it is possible to link impacts with responses and results.

At a glance, it is visible that the principal topics on impact match with the news' main subject. Even though there is often a reference to impacts on news classified in another main subject, responses tend to be associated with the main area of the article. However, contradictory examples can be pointed out. This is the case of housing, which resilience actions are associated with an active involvement of civil protection for evacuation of population or temporary relocation, and with the financial support for recovery of the housing stock.

Moreover, in all categories, there is divergence between resistance and adaptation actions (85% correspond to resistance). From the 176 response references in the resource and functions categories, 22 concern to adaptation actions. For the SeGI, this disparity is more evident, as only 4 correspond to adaptation. No reference was made to transformative resilience actions.

Table 3. Integrated analysis matching the news' main subject, topics on impact and type of response

	News' main subject	Topics on impact		References about resilient action	
				Resistence	Adaptation
Services of General Interest	Social (32/150)	Economy	1/32	1/32	
		Public Funds	1/32	2/32	
		Housing	7/32	5/32	
		Infrastructure	1/32		
		Forest planning and management	8/32		
		Civil protection	7/32	2/32	1/32
		Health	4/32	4/32	1/32
		Social	25/32	20/32	1/32
	Telecommunication (20/150)	Economy	1/20	1/20	
		Housing	3/20	1/20	
		Infrastructure	1/20		
		Forest planning and management	2/20		
		Civil protection	3/20	2/20	
		Social	5/20		
		Telecommunication	18/20	13/20	1/20
	Housing (14/150)	Water		1/14	
		Economy	4/14	3/14	
		Public Funds	1/14	2/14	
		Housing	12/14	13/14	1/14
		Infrastructure		1/14	
		Forest planning and management	3/14		
		Civil protection	2/14		
		Social	8/14	4/14	
	Health (4/150)	Housing	1/4		
		Civil protection	1/4		
		Health	4/4	1/4	
		Social	2/4		
		Telecommunication	2/4		
	Water (2/150)	Water	1/2	1/2	
		Public Funds	1/2		
		Housing	1/2		
		Infrastructure		1/2	
		Forest planning and management	1/2		
		Civil protection	1/2		
		social	1/2		
	Energy (2/150)	Energy	2/2	1/2	
		Forest planning and management	1/2		
		Civil protection		1/2	
		Social	1/2		
	Infrastructure (1/150)	Infrastructure	1/1		
Other resources and functions	Civil protection (33/150)	Economy	1/33		
		Public funds		1/33	
		Housing	2/33		
		Infrastructures	3/33		
		Forest planning and management	5/33	1/33	
		Civil protection	31/33	15/33	3/33
		Social	20/33	1/33	
		Telecommunication	3/33	1/33	
	Forest planning and management (21/150)	Economy	1/21	1/21	
		Public funds	2/21	1/21	
		Housing		1/21	
		Infrastructures		1/21	
		Forest planning and management	12/21	13/21	10/21
		Civil protection	1/21	2/21	2/21
		Health	1/21		
		Social	9/21	2/21	
	Public Funds (15/150)	Economy	3/15	2/15	
		Public funds	8/15	6/15	2/15
		Housing	4/15	3/15	
		Infrastructures	2/15	3/15	
		Forest planning and management	4/15	3/15	1/15
		Civil protection	2/15		
		Social	7/15	5/15	
	Economy (6/150)	Economy	1/6	5/6	2/6
		Public funds		2/6	1/6
		Housing	3/6	1/6	
		Forest planning and management	2/6		
		social	3/6		

6. Discussion

The media overall coverage of the two episodes are indicators of the importance given to resources' destruction and to the degradation and disruption of SeGI. The types of response most valued by communities influence both communication strategies and post-crisis governance actions. This interactive process influences the media's priorities, which based on cultural, social, technical, and political values, balances the factual description of events with a communicational strategy (Miles and Morse 2007). The media coverage throughout the post-disaster period influences the notions of time and space in which they are experienced. Furthermore, the way the news are reported establishes the post-disaster discussion agenda, influencing the visibility of the phenomenon and the innovation capacity of response policies (Ashlin and Ladle 2007). Thus, the integrated analysis that crosses the news' main subject, impacts and responses (table 3) supports the debate on the governance systems, to provide insights on the influence the media coverage might have on the design and implementation of post-disaster strategies, and to shed light on the need rethink resilience actions. Regarding disruptive events and its mediatisation, there is a visible articulation with local social and political conditions, becoming feasible or blocking actions of Disaster Risk Reduction (DRR). When high involvement of communities is not compensated with actions of status quo reposition, according to (Van Belle 2015) it occurs the effect of disaster response exhaustion. The monitoring of the media coverage process is useful for assessing the effects of disaster response exhaustion and for considering the social costs of implementing risk reduction measures.

When analysing post-disaster response strategies, it is often difficult to explain why affected communities are not predisposed to adopt actions that reduce the risk of exposure to similar destructive phenomena. In fact, hostility reactions are common when attempting to integrate risk reduction in actions and recovery strategies. These positions advocate decisions such as re-establishing the same pre-crisis functions and economic activities in places affected by floods, mass movements or wildfires (Van Belle 2015).

The analysis of media coverage after the wildfires in 2017 in the Centro Region of Portugal aims at analysing how this type of communication motivates certain types of response. It contributes for the debate on the impacts and main aspects of resilience, most valued by communities, structures of governance and, therefore, more represented in the discourse of the media in the different phases of the phenomenon.

(Davoudi 2016) discussing the distortions that result from the incorporation of resilience in post-crisis public discourses and policies, argues that ideas play a very important role in changing attitudes. Collective discourses, and the ideas shared within them, are critical to how communities deal with disruptions, disasters, and crises. These discourses can foster resilience through resistance and flexibility, where it privileges the pre-existing balance before the crisis, based on conservative values for defending the status quo.

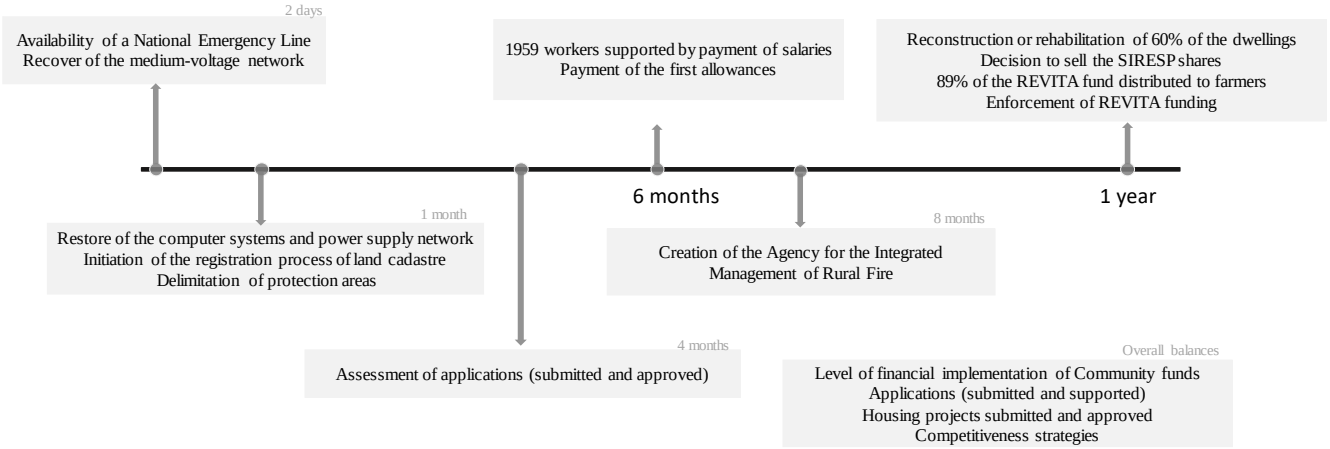
When this discourse occurs in the post-disaster period, it tends to assume vulnerability as an individual responsibility. Following this perspective, policies are the instrument to enable resilient individuals, improving their adaptation skills during crises, ensuring the restitution to normality. This collective discourse, when shared by the governance structure and disseminated by the media, is based on a set of technocratic principles advocating more adequate solutions to increase the resistance of the affected communities, in opposition to scenarios of greater evolutionary or transformative resilience. Such

approach discards a deep understanding of the causes of the crisis and of the main reasons of the communities' vulnerability.

The analysis of the post-disaster media discourse about the wildfires in 2017 in the Centro Region of Portugal is an example of the dominant discourse on resilience by resistance. At most, the discussion might contribute for the debate of relevant and potential adaptation actions. In the news sample, during the first year, there was no place for transformative actions. In other words, emergency policies immediate measures are facilitated at the same time adaptive and transformative pro-resilience governance strategies are blocked (Medd and Marvin 2005). A governance of preparedness logic must involve a complex network of institutions and actors (government departments, regional and local authorities, SeGI, public and private, communities, individuals and the media (Medd and Marvin 2005). Moreover, transformative resilience is based on strong institutional arrangements that learn from other crises, preparing the socio-ecological systems for future vulnerabilities to which they can be exposed. After disasters, the robustness of resilience strategies depend on how communities and territories share experiences, common needs, concerns, desires, aspirations, projects, plans, policies and actions (Vandergert et al. 2016).

The following figure summarizes the nature and direction of the response actions referred by the media during the first year post-disaster. In the first stage, emergency actions are the main answer to the communities' needs. Afterwards, in order to recover pre-disaster functions multiple actions refer to the socioeconomic drivers, through the financial support for families, households and companies. At a latest stage, matching to the end of analysed period, arise other measures for monitoring and evaluating resources and time associated to the response strategies previously implemented.

Figure 6. Post-Disaster synthesis of the nature and direction of the responses during the first year



In the second half of the year, the creation of a new institution with the objective of strengthening the governance system and implementing adaptation measures deserves special mention. It illustrates the efforts of adaptation, while stating some principles of transformability aimed at rethinking the socio-economic-environmental system affected by the catastrophe.

The results of the analysis to the post-disaster media coverage show the prevalence of news about impacts and, in smaller number, those that approach response initiatives. The discussion about the responses to the disaster situation is dominated by the resistance typology, aiming at recovering the functioning of the SeGI and restoring the resources and functions of the communities. The adaptation effort is slightly identified, while no transformative resilience actions are identified.

An interesting analysis could result by combining these results with those that would result from the analysis of official documents (plans, regulations), in order to discuss how do the decisions and media communication match.

7. Conclusions

The resilience framework is useful in planning and managing SeGI networks, resource and function systems that structure post-disaster communities, in minimizing the vulnerability of affected territories. The wildfires of 2017 that occurred in the Centro Region of Portugal created a catastrophic situation with consequences for the territorial system, exposing its vulnerability.

During and after this disaster, the governance multiple actors and stakeholders began to account for the impacts and started the implementation of response actions. The media, representing the public discourse, reported these efforts. The news articles developed during the 12 months after the disasters, allowed the monitoring of the disruptions in the SeGI networks, and in a minor extent, the limitations on the other resources and functions of the territorial system.

Impacts are far more important in the post-disaster discourse than the response strategies. These strategies organize itself around the rational of resilience by resistance. They, therefore, aim at restoring the functioning of the socio-environmental system to the conditions before the crisis. It is often discussed the resources and the time needed to implement short-term interventions.

The post-disaster debate, based on the media coverage, reports on the actions of governance structures and the main concerns on the affected communities with specific reference to emergency actions. Despite some progress towards adaptation, post-disaster planning (seen through public discourse) lacks on designing transformative resilience strategies. Indeed, the post-disaster here analysed is reported as an episode determined by laws of nature (in nature there is no reward or punishment, only consequences (Davoudi, 2016)) that produces impacts, which governance systems oppose (especially resisting), and favour actions that carry on the pre-crisis status quo.

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Conflict of Interest

"The authors declare no conflict of interest"

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