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Framing Forest Fires and Environmental Activism: a Storytelling Contest about Human Intervention in Nature

Abstract

This article focuses on the processes of sense-making of forest fires in a Mediterranean context. The authors use a textual approach to compare media framing with activist organizational storytelling. The authors conducted a frame analysis in two major daily newspapers in Catalonia (*La Vanguardia* and *El Periódico de Catalunya*) during three summers and compared the results with the stories from four leading activist and volunteering organizations that came out of in-depth interviews with their members, one focus group and published materials. The results identified up to five major mainstream media frames, among which were stories focusing on agricultural risk, climate change and weather conditions; imprudent and negligent attitudes; inappropriate fuel management and woodland conditions; and arson. The natural self-regulatory frame was present as part of the discourse of resilience but almost residual. Some journalism focused on the spectacular nature of the events and their dramatic impact, which led to some degree of mediatization of wildfires. The organizations problematized these frames and discussed about the appropriateness of human intervention to prevent forest fires. The results also revealed that activists observed the issue from a broader complexity, replicating frames on "structural responsibility" instead of "individual responsibility" allocation. The authors point out that if wildfires are to be better understood and dealt with more in-depth knowledge is required of different stakeholders' approaches to preventing forest fires.

Keywords
Organizational storytelling, wildfire prevention, framing nature, risk communication, wildfire mediatization, environmental activism.

1. Theoretical approach

The way we understand our social relationship with nature, and specifically with woods and forests, changes over time. The processes of making sense take one direction or another depending on where the stories "happen." In the case of the prevention and mitigation of forest fires, these processes have been undergoing a complete transformation in recent years for many reasons: for example, some fires are intractable (the so-called super fires) and others are occurring in such unexpected regions as north European countries, Canada or even

Russian Siberia. A wide range of social groups and stakeholders –from farmers to private landowners, from firefighting brigades to policymakers, from private companies to scientific community, from media and journalists to civil society– treat the causalities and remediation of fire very differently. What causes forest fires? How can we prevent them better? Who is responsible for taking action in this regard? This article aims to compare media frames with environmental organizations and activists' understanding of the issue in Catalonia, a region that belongs mostly to the Mediterranean basin. The research question (RQ) is, do environmental activists replicate these frames or do they offer, throughout their storytelling, alternative understandings to the issue?

The approach relies on the sociological roots of framing theory, and specifically on qualitative perspectives that attached framing to sense-making processes through human experience (Goffman, 2006, 1974). Vlieghenhart and Van Zoonen (2011, p. 112) claimed that current research should recover these sociological perspectives and critizized those analists not considering cultural and social context in framing building. This is a particularly relevant affirmation, especially because the early research on media framing focused on the idea that frames are, above all, a social construction that "holds together and gives coherence and meaning to a diverse array of symbols" (Gamson *et al.*, 1992, p. 384).

Researchers have done considerable efforts to look for systematic approaches to measuring frames in the media (e.g. Aalberg *et al.*, 2012; Esser *et al.*, 2012; Van Gorp, 2005). Robert Entman (1993) identified four sides of a frame deployed in a story: (1) the definition of a problem; (2) its causality; (3) a moral evaluation and (4) a suitable solution. This scheme was useful to different quantitative frame research, but the approach has also its limits for framing analysis –see here the different between frame and framing previously noted by Vlieghenhart and Van Zoonen (2011)–. To consider frames as cultural constructions that are shared within and between communities (Van Gorp, 2007) is central to go beyond quantitative frame analyses, because we may reduce the complexities of storying about specific issues. That is the case of wildfires, a complex issue that can be narrated and framed by several perspectives and actors. So, a qualitative insight on making-sense processes should not limit the consideraton of frames as a "canned discourse" but as a moving account of social issues that promote a certain action (Castelló, 2019, p. 44-52). Finally, the research design avoided a media-centred approach to framing research, which, according to Lidia Valera (2016), is one of the main shortcomings of frame research, especially in Spain. This means that framing is a very wide "meaning machine," which includes not only media accounts on social issues, but also political discourses, all sorts of stakeholder (activists, social groups, etc.) and civil society at large.

Research on wildfires with a narrative, discourse or storytelling approach has some tradition in the US. This media-centred literature has already discussed how the media conceives and covers fire prevention and mitigation. Bengston *et al.* (2004) stated that media accounts between 1980 and 2001 shifted from more anthropocentric stories about the exploitation of woods to narratives on environmental values. The increasing focus on environmental explanations about forest protection matches the research on natural disasters. Houston *et al.* (2012) analysed newspapers and broadcast news stories, and concluded that, between 2000 and 2010, natural disasters –including the 2007 California fires– were mainly approached from an environmental perspective. The episodes of violent wildfires in US between 1999 and 2003 provoked intense media coverage, with competing accounts about how to fight the problem more efficiently. Morehouse and Sonnett (2010) focused on the narratives of major press dailies in this period and concluded that climate conditions and fuel reduction were among the most important topics.

In the Mediterranean area, studies in this field are less numerous. Hovardas interestingly related the coverage of Greek wildfires in 2007 to the editorial positioning of newspapers. In his view, inefficient action politicized the wildfire and the accounts underestimated the

socioeconomic implications of rural abandonment (Hovardas, 2014, p. 702). Francisco Seijo (2005, 2009) analysed campaigning and peoples' understanding of the fire problem, especially in Galicia (Spain), where the socio-economic conditions lead the author to talk of a ritualized form of political resistance against public policies. This author, who pioneered frame analysis on the issue in Spain, identified three major frames: the official, the environmental, and the rural. He explored the concept of counter-framing in the light of the existence of two frames countering state messages: (1) environmentalist urban elites and (2) rural peasant arsonists. The first frame partially succeeded with official campaigns labelling that 'fire was the enemy' (Seijo, 2009, p. 115). This particular conception of fire episodes contrasts with the scientific approaches to forest fires in the Mediterranean basin, which tend to consider them as natural processes that need to be dealt with taking into account the interdependencies between human activity and ecosystems (EFIRECOM, 2016; Moritz *et al.*, 2014).

Some perspectives have considered stakeholders, other than media, such as landowners or civil society at large. In an approach from psychology, Burns and Cheng (2007) used a Q-method to study the framing of wildfire mitigation and forest health restoration in Northern Colorado (US) and the diverging positions on the need for active management. Their results revealed three different approaches: one that actively supported managing the forest – reducing fuels and using mechanical thinning or prescribed burning if necessary–, another focused on the process by which this should be done and how it should respect existing laws, and a third that stressed the need for a long-term approach and in-depth studies and public subsidies. The research showed that stakeholders can adopt a wide variety of frames, and that context determines what type of frame is the most suitable. As well as forestry and risk analysis, research has been carried out on community understanding of wildfire protection and there is now greater insight into the diversity of frames used to cover the issue. Williams *et al.* (2012) acknowledged that there is no single best frame for managing wildfires, but their research detected that some –particularly those used by local communities– are more likely than others to implement best management practices (BMP). In their research on 13 case studies across US, which involved focus groups and interviews like ours, the authors conclude that a frame "protecting lives and properties was often a good starting point for engaging community residents in the CWPP[1] process" (Williams *et al.*, 2012, p. 419). Also outside media-centred research, Wilson *et al.* (2012) surveyed up to 310 individuals in their frame analysis to evaluate actions such as prescription fire to mitigate risk. Their results indicated that "presenting prescribed fire as a tool to restore native species and natural processes may provide a more effective way to communicate the need for management and increase tolerance for short-term risk (Wilson *et al.*, 2012, p. 340). Indeed, in the US, Paveglio *et al.* (2011) have noted that in a fire episode in 2006 in two Western states, the media paid a great deal of attention to private land damage and its impact on property owners, treated the land as a site of cohesion because the reports depicted the owners and local community working together with the external actors (firefighting and security professionals), and focused on complaints from local owners that the property was also a site of conflict. Within these three frames, the authors criticized the focus on private property as a primary concern and suggested a broader coverage that also highlighted the responsibility of those "who choose to live in fire-prone areas" (Paveglio *et al.*, 2011, p. 48–49).

There are other advances in media discourse and coverage research on wildfires that help us to understand media framing and frame sponsoring of the issue. Fabra and Rojas (2015) showed that official sources are predominant in media accounts about wildfire, while other stakeholders such as farmers, landowners and scientists had less impact between 2009 and 2012. This research noted that official sources are usually dominant for news on wildfires and forest issues in Spain, with particular focus on Madrid-based newspapers and with regional

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[1] Community Wildfire Protection Planning.

governments playing a major role. Added to this, Delgado-Aranda and Vicente Mariño (2019) recently focused on the on-line media coverage of forest fires in Galicia. Their research noticed that the stories put special focus on the causes of the fires –what is consistent with our own detection of them as a key-frame marker. The authors also evidenced a political use of media coverage and recommended a more technical approach as well as an environmental perspective of the issue.

But even more relevant for our research is González-Hidalgo *et al.* (2014) research, that identified three hegemonic discourses on woods and fires in Catalonia: the capitalist, the green and the rural idyllic. Thought not using a strict frame approach, it is convenient to identify these "discourses" under the light of framing building processes. The media mostly echoed the capitalist discourse, by focusing on property and the natural capital. Environmental organizations, natural park institutions and conservationists fueled the green discourse. The rural idyllic narratives are embedded in local communities and are a sort of activism that looks back at "the good old days." According to the authors, after the tragedy of the fires in Horta de Sant Joan, in which several firefighters were killed while on duty, a fourth discourse was emerging: resilience. The resilient discourse was particularly espoused by GRAF and embodied in expert figures like Marc Castellnou.[2] Some of its features grew out of the friction created by the first three and it claims that ecosystems are "socio-ecological systems with inherent uncertainty and risk" (González-Hidalgo *et al.*, 2014, p. 1024). The increasing impact of the frame of resilience in Catalonia suggests that experts and scientists are adopting a new vision, which is accepted by environmentalists. Accordingly to González-Hidalgo *et al.* (2014, p. 1027), the "obsession" on personal stories sorrounding fire episodes shifts the attention from broader reasons attached to management and decision-making at a political level. This "obsession" not only diminishes stories' complexity, but also fits with agenda urgencies and journalistic routines, usually focused on conflicting frames and narratives (Castelló, 2012).

2. Method and contextual notes

Our media research made a prospective analysis of all items –including news, reports and opinion articles– containing the word *"incendio"* (fire) in the two best-selling newspapers in Catalonia –*La Vanguardia (LV)* and *El Periódico de Catalunya (EPC)*– during three periods from the first of June to the thirty of September in 2015, 2016 and 2017. Throughout that time, important fire episodes took place not only in Catalonia but also in other regions of Spain and worldwide. We collected all the items about fires*,* as well as reports on prevention and wood management. For *LV* we accessed printed pdfs and for *EPC* we gathered the materials from the on-line site because accessing printed files was not an option. While selecting the material, we filtered and discarded the pieces about different types of fire or non-relevant use of the keyword (for example, in urban contexts or industries, metaphorical use of *"incencio,"* etc.). We scrutinized a corpus of 122 items and sorted out the frames. To identify them we considered those attending to their presence and the use of a package of items – including lexical uses, images or metaphors–. Explanations about causalities and suitable solutions to the fires were especially relevant to identify and define the frames.

We conducted an interpretative approach on qualitative storytelling contestation within the organizations. To answer the RQ, we used ethnographic techniques based on recommendations made by previous research (Boje, 2001; Czarniawska, 2004). Identifying mainstream media frames and then facing them within the storytelling produced in interviews and focus groups result in a fruitful output. The organizations participating in the in-depth interviews are the following: Agrupació de Defensa Forestal (ADF, 2 July 2018 in

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[2] Castellnou is an internationally renowned expert on fire management heading the GRAF or Grup de Recolzament a les Actuacions Forestals, a specialized body belonging to the Fire Brigades in Catalonia.

Manresa); Grup d'Estudi i Protecció dels Ecosistemes Catalans (GEPEC, 4 July 2018 in Reus); Associació per la Defensa i l'Estudi de la Natura (ADENC, 4 July 2018 in Sabadell); Institució Altempordanesa per a la Defensa i Estudi de la Natura (IAEDEN, focus group conducted 6 July 2018 in Figueres). A total of 16 informants participated in the interviews and the focus group. A total time of 6 hours and 27 minutes of recordings were then analysed, and stories with a direct impact on the observed frames were extracted. The stories were collected after the members of the activist organizations had been exposed to mainstream media frames. With this design we were able to record their reactions, counterproposals and contestations. All the organizations were NGOs, but with different approaches to nature and their own features. The ADF is an important group of volunteers who help to combat fire in the terrain and collaborate closely with official campaigns, where fire can easily destroy material and personal belongings and which some authors are focusing on to better prevent wildfire risk (see the challenges stated by Gill & Stephens, 2009). On the other hand, GEPEC, ADENC and IAEDEN are environmental groups operating in southern, central and northern Catalonia, respectively. Despite their different histories and characteristics, they are all well-established organizations with volunteers and activists who organize activities ranging from teaching and the defense of nature to rural development and the protection of natural species. We finally analysed several issues of their publications, like *Ecoadenc* (the ADENC journal), or the *Butlletí* of IAEDEN. Last but not least, in order to include a wider range of materials we also proceed to a close reading of the Greenpeace (2018) report on forest fires, that has been particularly important for the discussion and conclusion section since it supports one of the claims of our results, as we shall see. All these materials completed the research corpus.

3. Results

3.1. *Media frames*

In the analysis we detected up to five major media frames in the newspapers, and one that was emerging but still not fully developed. The first three are quite clear and more present than the second three, which are more residual. The causality of the fire episode is a predominant marker to identify frames (e.g. agricultural risk or arsonists) while in others the indirect causality of the fire is expressed and highlighted (e.g. climate change or wood management). Therefore, there are direct causes of fires and causes of propagation, but when a particular story puts the emphasis on one aspect or another it deploys a specific "problem definition" and suggests that there are "solutions." Consequently, we treated them as separate frames. In order to be consistent, we divided the frames into two categories: "personal responsibility allocation" frames and "structural responsibility allocation" frames (Table 1).

Table 1: Distribution of media frames.

Personal responsibility allocation	*Structural responsibility allocation*
Agricultural risk	Global warming and weather conditions
Imprudent and negligent behaviours	Wood management, fuels and species
Arsonists and criminal causes	Natural processes and resilient landscapes*

* Emerging frame. Source: Own elaboration based on the research.

Following the scheme, media and institutional frames can be organized around two types. The first is "personal responsibility allocation." This type can be defined as that which focuses on individual action as the cause of wildfires. For example, in the agricultural risk frame, wildfires are caused by farming activities; in the imprudent and negligent behaviour frame, fire is caused by the general public; and, finally, in the arsonists' causes frame, wildfires are caused by individuals introduced as criminals or perturbated. These kinds of frame, the ones

most frequently found in the media, do not explain the phenomena from a structural point of view. The second type is "structural responsibility allocation." It gives a more complex explanation about the causes of wildfires: the global warming and weather conditions frame is a kind of holistic and general frame that explains the background (or the logics) of the other structural frames. Because of global warming woods need to be managed better and natural processes need to be better understood. Structural causes require structural responses, so here there is room for forest management policies.

3.1.1. Agricultural risk

The data available shows that agricultural activities are the main cause of forest fires in the region. Farming-induced fires, pasture burning, and agricultural machinery are some of the primary negligent and accidental reasons (Montilla, 2015), and between 2000 and 2010 there were more fires of this type than intentional anthropogenic fires (Greenpeace, 2018, p. 6). These stories are often found in newspapers and the frame defines the problem as follows: Agricultural practices such as farmers burning fuels or using machinery near wooded areas are a major cause of fire episodes. In the drier periods of the year burning vegetation waste or even using machinery is already prohibited. Therefore, a logical solution to this problem would be more control over farming fires, carry out more inspections and surveillance, and provide more training about how to use machinery or prevent uncontrolled fires as a result of fuel reduction.

Some examples can be given. During the major fires in Òdena in 2015, several pieces mentioned that the fire started "presumably during cereal harvesting" and even the pictures showed firefighters working in the fields (Sierra & Cerrillo, 2015).[3] Meanwhile other stories remarked that the fire started accidentally because of a stalk grinder (Navarro, 2015). This frame was the one used by an editorial in *LV,* which stated the same causes and put special emphasis on the call from the Catalan government to farmers to be extremely prudent because of the especially dry summer (*La Vanguardia*, 2015).

Agricultural risk emphasises the farmers as major actors in the prevention of fires. It does not shame them, but it does acknowledge that they have a major role. The frame sponsors of this discourse are usually the authorities. Accordingly, we can include these stories within the category of "personal responsibility allocation." As we shall see, there is also a counter-story that argues that farmers play an important role because they keep crops in good condition and mitigate the danger of fire by engaging in fuel reduction and surveillance, warning about smoke or other perils, and keeping paths clear and open.

3.1.2. Global warming and weather conditions

Weather conditions are among the indirect causalities of wildfires and, more properly, propel forest fires and escalate their dimensions. During 2016, the Spanish Mediterranean region experienced record temperatures after a dry year, with some registers above 40°C near the coast. Scientific evidence on global warming and the bad conditions of the woods contrasts this frame with other aspects related to the risk of wildfires. Given the increasing temperatures, the story is successfully used to "explain the fires," but global warming and weather conditions also have other features that make the frame attractive: responsibility is not so readily identifiable and solutions are complex and global. It can clearly be classified as "structural responsibility allocation," in the sense that agency by any stakeholder is diminished. Therefore, it is "less conflictive" than the frame that points directly to the landowners or the politicians, for example.

Because of the extreme temperatures, the weather was a newsworthy issue during the summers. It was easily related to the risk for the woods and the countryside, and the issue

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[3] Translations by the authors.

tended to encourage the use of metaphorical language. Therefore, the high temperature got headlines like the following: "El tsunami térmico convierte a España en un polvorín" (The thermal tsunami turns Spain into a powder keg) (Cerrillo, 2017b); "Catalunya entra en alerta per tres incendis simultanis i el risc d'altes temperatures" (Alert in Catalonia because of three simultaneous fires and the risk of high temperatures) (EFE & Sellart, 2016). In 2017, the superfires in Portugal also prompted a reflection on the climate. *LV* published an op–ed by the writer Gabriel Magalhães (2017) which contained a highly illustrative sentence: "Pedrógrão, the biggest fire in Portuguese history, confirms that climate change is serious. Very serious." In a literary style, the text emphasised the challenges for the Portuguese people after the catastrophe.

Climate change and extreme temperature is a frame that is often used by official sources because, as we shall see below, high temperatures and dry conditions are often the trigger for putting the general public on alert. A special article in *LV* also focused on the cost of climate change (2016a), and regarded fires to be just one more consequence, like migrations or floods.

3.1.3. Imprudent and negligent behaviours

In this frame the problem is defined in the affirmation that negligent and imprudent behaviours like dropping cigarette ends, organising barbecues, leaving rubbish or letting off firecrackers are serious problems for forest fires. At this level, solutions are in the field of more campaigns to foster sensitivity to forest uses and to restrict access to areas at risk during major dry episodes at peak hours, etc. This frame is also part of the mediatization of forest fires, because sometimes "the how" of the causes of fires is newsworthy. The frame is also part of the "individual responsibility allocation" discourse, in the sense that it focuses on forest users.

We will illustrate this last idea with the subheading of a piece about a serious fire in La Palma (Canary Islands) where 2,000 hectares were scorched and one fireman died in 2016. The news piece highlighted that the "burning of toilet paper" was the "recklessness that caused the fire" (Fernández, 2016). In 2015, a cigarette end was regarded as the "suitable cause" of a fire near Girona (*El Periódico &* ACN, 2015), and, in 2016, also of a forest fire in Empordà (Girona). In the latter incident, the farmers were called to help in putting the fire out (*La Vanguardia*, 2016b). The *LV* editorial (2015) also emphasised the recklessness of throwing cigarette ends out car windows and made specific mention of "smokers" and "hikers." On top of this, mainstream newspapers also informed about restricting access to woods when the authorities closed down some areas during 2016 because of the extreme conditions (*El Periódico*, 2016b). This was regarded as a prudent solution or prevention as frequenting these areas could be dangerous or cause fires.

Cigarette ends are not among the most important issues mentioned by Greenpeace in their exhaustive report on forest fires in Spain (2018), however they are a relevant factor in fires: in 2015 official data indicated that 40.59% of fires were started by negligent behaviour, 6.51% started by "smokers" and 9.9% by "other malpractices" (Montilla, 2015). Again, this frame puts the blame on civil society and forest users, tends to depoliticize the wildfire issue and has also been used by official campaigns to target the general public. On the other hand, it is an attractive frame for local communities because it focuses on what, in the popular culture, are known as "the others": the weekend visitors, the people from the city (mostly greater Barcelona) who come to the countryside and small villages and have no respect for nature and the rural way of life.

3.1.4. Wood management, fuels, and species

This frame brings us to a secondary range of stories in the mainstream media. The news and reports that focus on the bad conditions of the woods because of the excess of fuels and lack of vegetation, ready access to tree populated areas or the existence of inappropriate species

are of less importance than others. These stories deal with wood management and, therefore, with policies. Consequently, responsibility falls in the realm of politics, but at the same time can be classified as "structural responsibility allocation," and solutions are sought in the medium and long term. The solutions and actions proposed are many and range from fuel reduction to the recovery of native species that are more resistant to fires like the kermes oak (*Quercus coccifera*). The measures to keep the amount of vegetation down also range widely, from positions that see the woods as a natural resource from which to obtain biomass (usually businesses and political actors), to the use of prescriptive fires (the Catalan Fire Service) and alternative methods like encouraging the presence of goats and other local species (which can also produce traditional cheese) (Xortó-Borràs, 2016).

In this frame, the *LV* editorial is explicit: "Summer fires need to be extinguished in winter, with an appropriate forestry policy" (*La Vanguardia*, 2015). This frame requires expert assessment. In 2017 Miguel Ferrer, the coordinator of CSIC in Andalusia, wrote in the newspaper about the need for an intervention in Doñana National Park, where a huge fire took place that year. Among the proposals he discussed about clearing the pine woods, creating smaller areas of trees so as not to have "a continuous vegetation mass," and encouraging diversity (Cerrillo, 2017a). That year, and because of the superfires in Portugal, *LV* published an editorial pointing at the responsibilities of the landowners (which is not very usual). The text urged the owners to keep their land clean and tidy, and to avoid waste and dead vegetation (*La Vanguardia*, 2017). Indeed, this argument replicated the official request by the Catalan government to the landowners to remove dead vegetation or diseased trees (Cedó, 2017). Since 2015, *EPC* has also called for better vegetation management after the great Òdena fire, pointing out that the "wood clearing is still a pending task in Catalonia" (*El Periódico*, 2015). Finally, we must mention the issue of inappropriate tree species, which is part of wood management policies. This was the focus of an article entitled "La bomba del eucaliptal luso" (The bomb of the Lusitan Eucalypti) (Lugilde, 2017), which emphasised the problem of this particular species with a strong metaphor.

3.1.5. Arsonists and criminal causes

The media reply criminal stories when available and it is a true expression of the mediatization of forest fires. Arsonists are not always pyromaniacs, but people who purposely set fire to woods because reasons that can range from psychological illness to illegal interests. This frame is the favourite of politicians who arrive at the site of a fire where the fire brigades are working and they find themselves in front of the TV cameras with information that technically allows them to blame "foolish people," an "evil person" and so on. It is a frame that shifts responsibility from the political to the legal sphere, so it is very attractive for populist styles. It also has a language all of its own and can be classified as "personal responsibility allocation."

This is the case of two news pieces in 2016 about forest fires in Galicia and Alicante. In the first, the president of Galicia (Partido Popular), Alberto Núñez Feijoo, pointed out that "criminal activity goes on," thus putting the emphasis on the intentionality of the fires which had a variety of foci (Lugilde, 2016). The president of the Valencian Country (Socialist Party), Ximo Puig, reacted in a similar way when there was a dangerous fire in Xàbia that summer, by blaming a "bastard who took advantage of the situation to cause the fire" (Enguix, 2016). Among the lexical choices used by politicians to refer to these criminal activities Puig opted for "environmental terrorism" (*El Periódico*, 2016a).

The arsonist frame deploys a depoliticized discourse on forest fires and fire prevention. Although data shows that arson is not a major cause of fire, the mainstream media are always keen to reproduce criminal stories with the police if they have any clues or evidence, and they tend to replicate politicians' statements against "evils," which at the same time are out of control. Only criminal prosecution seems to be a solution for the problem defined in this way.

This mediatization always focuses on particularities and even such rare though newsworthy anecdotes as the fact that a single person caused up to fifteen fires (*La Vanguardia*, 2017) or that he/she was a schoolchild (Poch, 2017).

3.1.6. Natural process and resilient landscape: an emerging frame?

The discourse on the resilience of the landscape and wildfires as a normal, natural process has gone almost unnoticed by the media. This frame mostly relies on scientific sources and builds a new language to define forest fires. The mainstream press is not used to talking in these terms and the message is appropriate not for short news items, but for deeper reports on the true consequences of fire. The frame is developed around the "discourse of resilience" discussed above and first described by González-Hidalgo *et al.* (2014).

We detected this frame in only two texts (Sáez, 2017; Vilalta, 2017), both of which were from daily newspapers. The first was a two-page, in-depth report bordering on scientific communication. The text consists of several pieces which state that fire "is an essential, natural component," like water or wind. The text also discusses research published in *Science*, about "beneficial" wildfires that can regenerate natural resources. One of the sources is Marc Castellnou, president of the Pau Costa Foundation and head of the GRAF, who provides an illustrative metaphor when he states that "low-intensity fires are a vaccine for high-intensity fires" (Sáez, 2017). This frame also articulates concepts like "ecologically sustainable fires to avoid the unsustainable ones."

This discourse was finally expressed in the text published in *EPC* by Oriol Vilalta (2017), director of the Pau Costa Foundation, and an expert on forest fire prevention and mitigation. He believes in the need for a far-reaching change in the approach to wildfires, which should put more attention on the policies of forestry management, he denounces the huge costs of fire extinction and he advocates "creating a resilient landscape" and fostering a "rural economy." This renewed and powerful discourse is still residual in the mainstream media; it comes from a mixture of research, alternative perspectives and traditional knowledge and tries to find common ground for all the stake holders, from landowners to local communities, from weekend visitors to farmers, so that mutual consensus can be reached and medium-term solutions found.

3.2. *Stories from activism and counter-framing*

3.2.1. Global warming: an undesirable context, not a frame

Unlike media framing, the stories emerging from activist organizations are more complex and usually highlight "structural responsibility allocation." Despite this, there are considerable differences between organizations, and even within the same organization because of the diversity of its members. As in the media, the Global warming frame is not central here but acts as a background that every association recognizes in one way or another. The approach taken to global warming tends to be similar and accepts that weather is a threat. However, given that in this frame organizations have almost no agency, global warming is something they cannot control and becomes a sort of contextual background to all other frames.

> We are facing what is called the sixth-generation fires. They have a mix of causes... Insufficient forestry management, lack of infrastructures, lack of whatever... and all this is affected by climate change, which is causing forest fires that we cannot control with our current mitigation systems (ADF02)[4].

Global warming is considered to be a determinant. Anyway, the climate is an uncontrollable agent that makes things worse within other rationales. For example, when activists display stories about "fight against global warming" (GEPEC01) or this "battle" (ADENC02) they

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[4] Translations by the authors.

associate the problem with the "wood management, excessive fuels and inappropriate species" frame, or "the natural processes and resilient landscapes" frame, respectively. Therefore, generally speaking, global warming is a context that is taken for granted and wildfire activism has not adopted a well-defined position. For example, an editorial by ADENC (2017) states that we are already living in the Anthropocene, and links climate change with fatal summer wildfires "at home." Despite this, there is not a specific solution correlating them: warming is here to stay.

3.2.2. Activism stories and the "wood management" frame

The Wood management frame was very important in the conversations with all the groups, but approaches depended on the nature of each group and their positioning on the issue of human intervention in environmental systems. For example, environmentalists at ADENC or GEPEC took the more traditional-romantic approach to non-human-intervention. They were far more reluctant to accept the concept of "management."

> Woods need management. But what does 'management' mean? Managing woods from a fire fighting approach is not the same as from a biodiversity approach that takes into account the conservation of the ecosystem. Here we usually face many contradictions (GEPEC01).

The main difference in the understanding of this frame is the role that the various actors give to the "forest": is it a potential danger to the general public that must be controlled or is it a value that must be preserved. The more pragmatic stories regard the forest as something that must first be controlled and then preserved. This position, which is reflected in fire-fighters' arguments, accepts measures such as controlled burns or path cleaning. In this context, campaigns for cleaning the areas around isolated houses in rural landscapes (Greenpeace, 2018; ADF02) are central: "It is not that there are too many woods; they just have to be managed" (ADF01). This view argues in favour of better management of the woods, including fuel suppression. On the other hand, a more romantic discourse focuses on biodiversity and highlights concepts such as "preservation," "conservation" or "protection." For environmental activists, human intervention should be avoided and controlled burns rejected. Even though they acknowledge that by doing so the risk of fire is greater (GEPEC01), it is usually an argument attached to nature self-regulation.

In this regard, organizations such as IAEDEN had internal discussions and confronted storytelling. While some of their members agreed with the more pragmatic arguments others were more reluctant to implement such measures as controlled burns. This prevention tool is thought by some to be unnecessary, while others believe that it is the only protection woods require.

> Controlled burnings are good. What are useless are the firewalls, but the burns, if they are well done, they work (IAEDEN04).

> The problem is that they [technical staff] do not know how to do them [the controlled burns], and they kill a lot of things unnecessarily. There are alternatives (IAEDEN08).

It is particularly interesting to note that in its bulletin, IAEDEN talks of the importance of grass cutting and the "agrarian custody." Still, they do not make straight connections between these activities and fires but with "biodiversity," "conservation," and "protection": "The abandonment of these seminatural meadows also implies the loss of biodiversity" (IAEDEN, 2017, p. 10). There are different attitudes about how the paths into woods are kept clear and open. According to some, they are often cleaned without taking into account more sustainable alternatives. In fact, both IAEDEN and GEPEC organized several actions to prevent firefighters from preserving natural paths, where both associations had open issues with the local authorities. In the opinion of one participant, the public authorities are "more concerned with political consequences than with the environment" (GEPEC01).

When these organizations use the Wood management frame, they have things in common. They are all very critical of the decisions of the authorities taken in the offices, far from reality (IAEDEN05; ADF01). This frame, scrutinizing the administration, is common to all activist discourses, and it is especially concerning when referring to wood management. There are three central arguments: the improper way in which woods are managed by companies, without a proper environmental criteria (IAEDEN 06, GEPEC 01 and GEPEC02); the role of the forest owners, "completely lost" or "protected by the administration" (IAEDEN02 and IAEDEN03, GEPEC 02); and the authorities' decisions respecting to what species must be planted to reforest (ADF01), sometimes with insufficient scientific base or with outdated premises (ADF01 and ADF02). The main solution to the problems discussed in the Wood management frame is related to the following and last frame analysed, which acts as a shared narrative in which most of the activist actors agree and there are few differences.

3.2.3. Natural Processes and Resilient Landscapes

This was a consensual frame within activist organizations and has several key points. On the one hand, its conception of wildfires is different. Unlike the frames predominantly used by the media –within the personal responsibility allocation category– this advocates a better understanding of the natural processes of the forest, especially in the Mediterranean basin. The organizations talk of "wildfires as part of the natural process" (ADENC 01), or in the words of another activist:

> In the Mediterranean basin we have to consider that fire is a system for regenerating forestry mass. It is and will be (GEPEC01).

The frame not always advocates human intervention because it "distorts everything" (GEPEC 01). This distortion, however, is not an individual responsibility. So, farmers or the general public are not considered to be a risk. Agricultural risk is minimized although farmers are not necessarily regarded as an ally. For activists, structural causes are more important than human intervention or forest use, and they point out the need for protection policies and a new management culture:

> The principal cause of wildfires is the region's agricultural and forestry model. It is a real powder keg (IAEDEN02).

A few activists mentioned publishing recommendations for hikers (ADENC02) or giving support to institutional campaigns against cigarette ends in the forest (ADF01), but these campaigns are regarded as secondary to more structural solutions. The main is the creation of resilient landscapes by administering the "agroforestry mosaic." At this point, IAEDEN members recognize that the conservation of specific agricultural zones, to which they actively contribute, is one of the suitable solutions:

> [The solution] is not to clean the woods in any way but managing them by looking for a framework of consensus. Everybody agrees that the agroforestry mosaic is a good way forward (IAEDEN03).

This consensus on organizing landscapes in areas with a mixture of forest and cultivated land establishes a link between tradition and scientific knowledge. It involves farmers, landowners, ecologists and firefighters (IAEDEN 05). In this emerging frame, the farmers' traditional knowledge acquires new value. Some of the activists talked about recovering "cultural activity" in rural areas (IAEDEN 08) in order to create resilient landscapes. Thus, despite remaining reluctancy among the urban-environmentalism, farmers are growingly seen as part of the solution, what problematizes the main frame in the media. In this regard, some organizations are now using the legitimacy of scientific discourse and are working with farmers to find sustainable ways of farming.

> We are working with farmers to find ways to sustainably manage crops, creating balanced and resilient environments (GEPEC02).

Among these new/old techniques, some activists proposed introducing "certain types of goat or cows" that graze in the forest to "clean" and "order" the excessive fuels, thus keeping the forest "clean" naturally (IAEDEN 08, GEPEC 02 and ADF 02), a measure studied by Xortó-Borrás (2016). Although the activists are aware of the cost of these structural measures, the contact point between environmentalism, traditional farming and the scientific discourse shows a new consensus in which the various actors do not have conflicting discourses. However, as previously seen, this consensus has yet to be reflected in the mainstream media.

It is, therefore, an environmental storytelling that accepts human intervention as something that has to be dealt with and not fought against. This is of particular importance in the "resilient" frame, not only in terms of the need for consensus with farmers and the agroforestry mosaic, but also in terms of the housing estates springing up in forest areas. Although activists are very critical of these property owners and consider that they should not be there (IADEN 08, GEPEC 01), their discourse does not have a "moral" or "idealistic" tone. Administering the "rural-urban interfaces" (ADF 01 and 02) is a major issue in the discourses on preventing wildfires. The responsibility of house owners is fundamental if the "mosaic" is to be maintained and the area around the house must be kept completely clean to avoid or stop wildfires.

> Property owners need to be managed and made responsible for cleaning the perimeter between the house and the wood (ADF01).

This pragmatic position shows that the Natural processes frame, which is to some extent idealistic or romantic, is progressively becoming more flexible and adopting the idea of resilience, which includes more actors in the consensus. This discourse of a resilient resembles that of Greenpeace (2018), which drew up a special report on the issue. It claimed that there was a need for "the socioeconomic dynamization of the rural environment, creating prosperous and resilient communities," as well as "the promotion of initiatives and projects among the population to better protect people, properties and services in a future that will require greater self-protection and resilience" (2018, pp. 37-38). It is a growing frame in tune with the fostered by institutions such as the Pau Costa Foundation, which has gathered knowledge and expertise from many different actors, and research projects like EFIRECOM (2018) to define three strategic actions: focus on prevention, self-protection and better information.

4. Discussion and Conclusion

In this article we have discussed the main results of activists re-storying the media frame on wildfires in Catalonia. Our research suggests that this complex issue should be dealt from many different viewpoints that include all agents. The policies that are designed for the better management of woods should bear in mind all the new perspectives that are arising from discussion. We would like to point out that, among the limitations of our research, important are the number of people who took part; informants are not representative of the whole Catalan environmental movement. However, we provided a broad treatment of the issue.

The answer to our RQ is affirmative. Environmental organizations articulate an alternative story about wildfire prevention and mitigation; a story that problematizes media frames. The mainstream media put particular attention to "personal responsibility" discourses, while activists and volunteering organizations suggest that causes are more structural. Media framing is not just related to an increasing depolitzation, as already pointed by González-Hidalgo *et al.* (2014), but also a process of mediatisation due to journalistic determinants like spectacularization, agenda urgencies or professional routines. The choice of focusing on the responsibility allocation showed an impact in both, the mediatisation of

wildfires and the depolitization of the issue. This depolitization does not imply that fires are not used by politicians or isolated from the political struggles. They are, but they are depolitizised when noticing that mediatisation of the issue brings it far from considering "policy prevention," or a more complex "public manage of the issue."

By the other side, "structural responsibility allocation" of wood management caused controversy about the appropriateness of human intervention in natural environments. Activists are still digesting the idea that woods are to be actively protected but, given the no-return point in terms of forest degradation, added human-driven actions are considered. The work done by Greenpeace, the scientific community, and experts attached to the GRAF and the Pau Costa Foundation is notably influencing environmental discourse on fire prevention and mitigation. The traditional-romantic discourse on nature is shifting to a more rational-realistic one that includes the management of environmental landscapes in some way or another. In regard to the discourse of resilience noted by González-Hidalgo *et al.* (2014), our research adds that it has permeated the environmental spheres. This was especially evident not only in the Greenpeace (2018) report but also the storytelling articulated by activists and volunteers. The results show that the resilient discourse has all the characteristics of a single and by now isolated frame, because it focuses on the definition, causes, moral treatment and solutions. Despite this, we have identified the resilient frame in only two major media reports. This type of agent is still underrepresented in the news media.

Criticism from environmental movements is mostly aimed at policymakers and property owners, while farmers, scientists and villagers are seen as potential allies for improving the situation of the woods. The research also revealed a wide variety of opinions within each organization, which reflect the many different profiles of their members. Consistently, it would be a mistake to understand storytelling on wildfire as a unique and homogeneous socio-natural issue; and at the same time, it would be worthy to explore how could every actor and role contribute to a collective action against such an acute problem.

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