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Are Bush Fires and Drought ‘Natural Disasters’? The Naturalisation of Politics and Politicisation of Nature in New Caledonia

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Abstract: Based on long-term doctoral fieldwork on bush fires in New Caledonia, this paper aims to explore the double assumption that bush fires were shaped as a public issue through specific categorisations of human and natural elements, and that this work resulted in negative outcomes as far as the environment is concerned. This paper will address the question of mediation between human agency (colonial history, population distribution and development choices) and the production of ‘bush fires’ as an event category and as a ‘public problem’ calling for a policy solution. More specifically it will address the validity of the definition of bush fires as a ‘disaster’. While this phenomenon is both a discursive creation rooted in colonial imagination and a consciously forgotten strategy used by administrators and settlers to control land and dominate indigenous people, its growing importance today is related to the emergence of environmental concerns. However one must not forget other issues obscured by the smoke of bush fires, namely a declining cattle farming sector and its lasting environmental impacts on drought (also considered a ‘natural disaster’ in New Caledonia by inhabitants, local administrations, and scientists) and biodiversity loss. Addressing this issue leads to more general questions about the manner in which policy-makers, naturalists and environmentalists conceptualise and morally address environmental (natural and man-made) phenomena through time in a colonial/postcolonial setting.

Keywords: Bush fires; natural disasters; politics; colonialism; New Caledonia

Are Bush Fires and Drought ‘Natural Disasters’? The Naturalisation of Politics and Politicisation of Nature in New Caledonia

Introduction¹

Since the end of the violent political confrontations of the 1980s – a period known locally as the ‘*Evènements de 1984-1988*’ – the French Pacific territory of New Caledonia has been engaged in a ‘negotiated decolonisation’ process. This decolonisation process has already seen the progressive transfer of sovereign powers from the French state to local administrations – represented by three Provinces and the New Caledonian Government.² It also leads to a self-determination referendum on November 4, 2018 where Caledonians were to choose if they wanted to access full sovereignty and complete independence. In a much smaller proportion than predicted, a majority of voters said no to independence (56.4%), raising separatist hopes.³ Alongside these political developments, New Caledonia has been recognised as a biodiversity hotspot – a concept developed in the late 1980s by Norman Myers to define a biogeographic area possessing rich biodiversity particularly threatened by human activity (Myers et al. 2000; Mittermeier et al. 2004). For almost twenty years, New Caledonia has been attracting attention for its exceptional biodiversity, forcing local administrations to develop environmental policies to protect its natural environment.

In this recent context of growing political contestation and environmental concern, bush fires constitute a recurrent phenomenon and a focus for serious debate in New Caledonia. Every year thousands of hectares of endemic vegetation and pasture lands are consumed by fire. Before the establishment of a fire and rescue operational center in 2007 and the creation of a database, there was no reliable fire census in New Caledonia. The first satellite-based analyses (MODIS), carried out as part of the INC project, reported 940 fire departures for the period 2000-2009 (Dumas et al. 2013; Hély-Alleaume 2012). But these satellite analyses appear to underestimate fire impacts, due to the low spatial resolution of the MODIS data, as the local Civil Safety agency has identified 700 treated fires for the 2009/2010 season alone (Dumas et al. 2013). Since 2015, fire inventories have improved. According to Civil Safety, there were 770 recorded fires, which burned almost 11,849 ha in 2015, 516 recorded fires which burned 6,619 ha in 2016, and 432 fires which burned 12,979 ha in 2017.

Long before this ‘plague’ was properly measured, citizen associations and NGOs had come together to denounce the impacts of these fires on endemic vegetation and biodiversity loss, encouraging officials and politicians to take action against what they called a ‘natural disaster’. What does the term ‘natural disaster’ mean when applied to bush fires in New Caledonia? As observed in other contributions to this special issue, there are no ‘natural’ disasters; all disasters are shaped by complex processes of definition and categorisation according to specific and variable representations of what ‘nature’ or a ‘natural state’ might be.

This assertion holds true for bush fires in New Caledonia, for which a variety of definitions exist, varying according to specific historical contexts and the points of view of different actors. Bush fires, and the term ‘bush fire’ itself, are complex phenomena whose immediate roots can be found in colonial history, and which are closely related to the nature of colonial domination. More precisely, bush fires were formerly a common social fact, and have not always been designated ‘natural disasters’, or even as ‘disasters’, except by Indigenous Kanak when bush fires were used to dispossess them from their lands. The recent re-definition of bush fires as a ‘natural disaster’ appears to be a specific discursive construction emerging as environmental concerns grow. Finally, the smoke from bush fires tends to obscure another phenomenon, drought, for which the term ‘disaster’ might be more appropriate. Addressing this issue will lead to more general questions about the manner in which policy-makers, naturalists (scientists and keen citizens) and environmentalists conceptualise and morally address environmental (natural and man-made) phenomena through time in a colonial and post-colonial setting.

This paper aims to explore the assumption that bush fires and drought have been shaped as public issues through their categorisation as human and natural phenomena.⁴ More specifically it addresses the characterisation of bush fires and drought as ‘disasters’ and the way they have been conceptualised historically in New Caledonia. As drought and fire can both be labelled ‘natural’, because they involve natural processes, I explore how people have contributed significantly to framing them in this way. Drought and fire can also be seen as unnatural phenomena dependent on human deployment. They are created by social agency and then characterised as ‘natural’: they are ‘naturalised’. I first explore how and when the term ‘bush fire’ appeared in New Caledonian discourse and the various uses to which it was put during the early colonial period (1853-1945).⁵ Then I show how its definition progressively shifted from its original sense to become mostly about a ‘poor habit’ of Kanak

people, aligning with prevailing racial prejudices. In the contemporary context of growing environmental concerns, bush fire has been framed increasingly as a ‘natural disaster’ by environmental associations and NGOs, while the racial bias of its origins have been subject to a political and strategic amnesia. Finally, I investigate drought, which is closely linked to the occurrence of bush fires and is also considered a ‘natural disaster’ in New Caledonia. In many respects, the impact of this phenomenon seems to result mostly from development choices and colonial processes: from human processes rather than from natural events. Here again, the contemporary conception of the phenomenon relies on amnesia regarding the dramatic transformations of New Caledonia’s landscapes under the colonisation process, in which colonial bush fires played a major role.

Bush Fires: A Single Term for Many Uses

Colonial descriptions of ‘wild fires’ in New Caledonia are rare and dispersed in the literature, but more importantly they reflect the viewpoints of their authors. In 1774, when Captain Cook discovered New Caledonia, he and his companions described the ‘grass fires’ set by Kanak people (see Captain Cook’s tale in Pisier 1974, 70-71: and Sparrmann’s version in Pisier 1974, 149-150). Then, explorers and naturalists described ‘grass fires’ at various times up until the late 19th century (La Billardière 1799; Vieillard and Deplanche 1863; Balansa 1873; Garnier 1901). Three categories of fires existed according to these colonial narratives: ‘war fire’ (or ‘punitive fire’), which was used as a tool of destruction during colonial conquest; ‘clearing fire’, which was used by settlers to clean the bush; and ‘forbidden fires’, which were all the fires that Kanak were forbidden to use by the colonial *Indigénat* regime (Merle and Muckle 2019). Throughout colonial history one term – ‘bush fire’ – was commonly used to refer to those fires. But thereafter, just one of these types of fire, namely the Kanak use of fire for agriculture, increasingly became the only recognised cause of bushfires, thus justifying its ban by colonial administrations.

‘War Fire’ as a Tool of Destruction During Colonial Conquest

‘War fire’ was used as a tool of destruction, by both Kanak and French militaries. Fire had been used formerly by Kanak warriors to destroy enemy gardens, coconut trees and houses. Descriptions of such fires are scarce and fragmentary. They are usually described as a generic cultural aspect of the ‘race’ (Sarasin 2009, 39), and thus necessarily ‘ferocious’ or ‘savage’

(Leenhardt 1930, 45), but were neither related systematically to specific events nor described in detail. Oral tales contained memories of such fires but no systematic study has been conducted on this topic. Archives show that fire was used to destroy settler and missionary houses on several occasions during the colonial period. But it was also extensively used by the French military as a ‘tool of domination’. Just after France annexed New Caledonia in 1853, some Kanak groups began to revolt (Dousset-Leenhardt 1970, 1976; Saussol 1979). Around this time, the French military imported a particular form of ‘bush war’ developed in another colony, Algeria, called ‘*razzia*’, which involved the systematic destruction of villages and gardens. Michel Naepels has called this tactic a ‘terrorist politic’ which aimed to ‘inspire terror in order to affirm French sovereignty’ (Naepels 2013, 32). The technique of *razzia* was applied for the first time in 1856 on the east coast of ‘Grande-Terre’ (the main island of New Caledonia) just three years after France took possession of the territory (Douglas 1990; Naepels 2013; Saussol 1979).

Throughout the process of conquest, Kanak groups revolted against colonial forces with the same tragic result each time: using fire, French troops destroyed everything, including houses, gardens, and the surrounding bush. For example, in 1865 when Governor Guillain organised a repressive assault against the Kanak chief Poindi-Poitchili in the northern centre of Grande-Terre, the soldiers burned almost every village they found in what they called a ‘war of the bush’ (*‘guerre des broussailles’*) (De La Hautière 1869). Then in 1867-1868 in Pouébo, Lieutenant Commander Mathieu defeated Kanak insurgents by burning several houses and villages (Saussol 1979, 117-118). Large numbers of hamlets were also destroyed by fire all along the West coast from La Foa, to Bourail up to Poya during the repression of the Great Kanak insurrection of 1878 (Dousset-Leenhardt 1970; Saussol 1979). Commandant Rivière recounts in detail the systematic burning of Kanak hamlets (Rivière 1881). The last episode in this history of military campaigns occurred in the centre of the New Caledonian mainland or Grande-Terre at the beginning of the 20th century and has been called the ‘1917 war’, an episode of colonial repression that has remained silenced and minimised for a long time (Bensa et al 2015; Muckle 2012). Here, the destruction of Kanak hamlets and gardens by fire was again systematic, as related by the surveyor Nicolas Ratzel in his memoirs (Ratzel 2006, Vol.1, 362). We can assume that these ‘war fires’ left their mark on the land, leaving devastated landscapes and destroyed hamlets. After the destruction of their hamlets and gardens, Kanak people were usually dispossessed of their lands, which were given to French settlers, leading to further profound changes in vegetation cover and landscape use.

The ‘Clearing Fire’ Used by Settlers to Clean the ‘Bush’

After Kanak hamlets were deserted, the best lands were given to French settlers who tried to develop agriculture and cattle farming in what were then perceived as promising pastures underused by Kanak people. Cook was the first to describe the existence of vast plains covered by grasses, useless to all appearances for an Indigenous population that had no cattle (Pisier 1974). Several early observers recommended the development of cattle farming on those grasslands in order to develop the colony’s economy. Before the annexation of New Caledonia, the Marist missionary Guillaume Douarre suggested the development of cattle farming in a letter in 1844 (Girard 2008) and the marine officer Pigeard recommended it in his reports in support of colonisation in 1848 (in Brainne 1854, 287). A few years later the botanists Vieillard and Deplanche (1863) made the same recommendation. The importation of the first cattle is attributed to the British sandalwood trader James Paddon, one of the first ‘free’ settlers established in New Caledonia immediately before annexation in 1853 (O’Reilly 1953, 29-30; see also Dauphiné 1987; Shineberg 1973). Inspired by the Australian experience, cattle farming was well suited to the social and political context of the new French colony: it allowed for the attribution of vast lands to settlers with limited means and labour (Pillon 1989, 245; Saussol 1979, 195). Inexperienced in either agriculture or cattle farming, most settlers struggled to manage their new lands, whereas convicts sent to this penal colony were forced to do so (Merle 1995).

Described as impenetrable, the Caledonian vegetation – called ‘the bush’ (*‘la brousse’*) – was particularly difficult to traverse. Rapidly contradicting the first explorers’ descriptions, the pasturelands revealed themselves as particularly inappropriate for cattle (Balansa 1873, 116). As the settler frontier advanced, fire was used widely to clear the vegetation. Numerous observers noted that bush fires were actually lit by prospectors to uncover potential mine veins (Benoit 1977, 18; Guillaumin 1953, 83; Valette 2006, 90-91), from the outset of mining exploration in the 1860s, and by settlers trying to improve pastures and make them more suitable to cattle (Balansa 1873, 122; Bonnet 1887, 60, 253; Vallet 1905, 39-41). Some of them even recommended using fire to improve pasturelands (Garnier 1901, 367; Lemire 1884, 43; see also Vieillard and Deplanche 1863). In 1899, noticing that the cattle were malnourished and the pastures impoverished, the Caledonian agricultural union recommended the use of fire and the introduction of new species of grass (Union agricole calédonienne 1900, 75). This practice of lighting bush fires to improve pastureland persisted among settler

descendants until at least the 1950s (Dugain 1952; Sarlin 1949, 396). According to Forest Service archives, the use of fire in pasturelands may even have persisted until the 1970s, though its use had substantially decreased as the rural administration supported the development of mechanisation (Toussaint 2018, 201-205). As they probably were for Kanak before colonisation, bush fires used to be a tool for settlers to clear land, to control and shape the vegetation to make it useful for them and adapted to their needs. But it was also a tool to make the landscape conform to their own representation of what ‘Nature’ was and should be.

‘Forbidden Fire’ Used to Discipline Kanak People

As the French military and farmers progressively took possession of Kanak lands, Kanak people were pushed back to poorer lands delimited by the colonial administration (Sausso 1979), losing access to complex horticultural systems they had built over centuries (Sand 2002); in particular their specialised irrigated taro fields were destroyed by the settlers’ cattle (Barrau 1956, 1980; Sand et al. 2016). In addition to losing their lands and their permanent and semi-permanent agricultural structures and being forced to change their horticultural practices, they were also strictly forbidden to use fire.

Following the annexation of New Caledonia by France and the establishment of a colonial government in 1853, the colonial administration briefly tried to ban the use of fire for clearance. A specific decree was published in 1859 in order to regulate the fires set by the ‘colony’s owners’: the settlers. A French inspector from the national Forest Service visiting New Caledonia in 1882-1883 also strongly recommended the application of fire regulations, especially regarding the disastrous use of fire by settlers and miners (Bonnet 1887, 60, 253). But these regulations were never applied as there was no administrative apparatus to enforce forest laws, under which fire regulations were listed in French territories, until the 1950s (Toussaint 2018). However, fire effectively became a forbidden practice with the implementation of the *Indigénat* in 1887. The *Indigénat* regime consisted of a set of exceptional measures specifically designed to control people defined as *indigènes* or ‘natives’ (Merle 2004; Muckle 2012; Merle and Muckle, 2019). First developed in Algeria in 1881, the *Indigénat* regime was then extended to other French colonies (Merle 2004). The interdiction of fire use, which was an exceptional measure imposed on Kanak, was an element of a strongly disciplinary regime applied by police officers and combined with the confiscation of vacant lands and the prohibition of moving outside the *reserves* (Toussaint 2018, 151-152).

Consequently, Kanak were strictly forbidden from using fire, whereas other people, especially settlers and those exploiting mines, were allowed to use it. The Kanak could no longer employ fire as they always had used it: for swidden cultivation, or specific slash-and-burn practices. At more or less the same time as Kanak were forbidden to use fire, the meaning of the term 'bush fire' began to subtly change, becoming more and more entangled with Kanak practices, and progressively acquiring a strictly negative connotation.

The Changing Meaning of 'Bush Fire' in New Caledonia

The word 'bush' (*brousse*), as it is used in New Caledonia, may have two different origins. '*Brousse*', derived from the Provençal dialect in France and referring to thick and impenetrable vegetation, was first used in 1847 to describe the vegetation of what was then Dahomey (now Benin) (Juhé-Beaulaton 1995, 4). The term 'brousse' then spread across the French empire, disseminated by French soldiers and settlers, from the 1850s to 1870s, to describe different kinds of thick vegetation but also by extension the vegetation in which Indigenous insurgents hid. This vocabulary is likely to have reached New Caledonia with annexation in 1853, and to have spread in the wake of the conquest of the Grande-Terre. Another possible origin may derive from the analogy with the 'Australian bush' and by extension the Australian cattle farming model, which strongly inspired the development of cattle farming in New Caledonia. The French engineer and explorer Jules Garnier, who travelled in New Caledonia from 1863 to 1869 and participated in military expeditions against the Kanak, was the first to make a full description of the Caledonian bush (*brousse*) in the double meaning of an impenetrable vegetation and as a specific way of life (as opposed to life in the capital city of Nouméa) (Garnier 1901, 142-144). In particular, he described the development of cattle farming, its organisation and its vocabulary which was at the time largely composed of English words (such as 'paddock', 'livestock', 'bushmen'; Garnier 1901, 142-144). The explorer Ulysse de la Hautière also noted the use of the English word 'bush' in its original meaning of 'shrub' and referring by extension to 'empty or non-cultivated lands' and pointed out that it had been imported from Australia (De La Hautière 1869, 48). Whatever their origins, the terms '*brousse*' and 'bush' were in widespread use in New Caledonia by the 1860s-1870s.

More interesting is the fact that Garnier was also the first to describe a ‘pasture fire’ (*‘feu de prairie’*) set by two Kanak escorting him through the bush, and referring to it as ‘a bad habit’ (Garnier 1901, 157–64). Nevertheless, he never uses the expression ‘bush fire’, which appears some years later in the writings of the French colonial administrator Charles Lemire regarding a fire which occurred in 1874 near Dumbéa, in Southern Grande-Terre, and which killed a European woman and destroyed a settler’s farm (Lemire 1884, 40). His definition of a bush fire was similar to Garnier’s ‘pasture fire’ except that he disapproved of it morally. During the same period, the term seemed to refer to various fire uses, whether lit by Kanak or settlers, but never to the ‘war fires’, which were never mentioned by authors such as Garnier or Lemire who took part in colonial repression of the Kanak. Therefore the term ‘bush fire’ seems to have appeared in New Caledonia in the 1870s (becoming more common in the 1880s) following the development of cattle farming along the west coast of New Caledonia, which expanded from 1862 and reached a first peak in 1877 (Saussol 1979, 195), as well as the colonial repression which continued until the great Kanak revolt of 1878.

But as the term spread, it became more and more associated with Kanak practices. In the late 19th century, the local penitentiary officer and amateur ethnographer Gustave Glaumont described bush fires as a result of Kanak agricultural burning (Glaumont 1897, 41-42), whereas earlier descriptions distinguished between the use of fire to burn grasses and to prepare fields for cropping (Rozier [1846] 1990, 161; Vincent 1895, 79-80). This shift in meaning is confirmed in the writings of Reverend Lambert, who merged the two practices and strongly approved a fire ban for the Kanak (Lambert 1900, 220). In 1917, the Swiss naturalist and ethnographer Fritz Sarasin broadened the definition of fire as a compulsive characteristic of a supposed Kanak ‘nature’ and mentality (Sarasin 2009, 39). At the same time, fire was again being used extensively by the French military to suppress the last great Kanak revolt (Bensa et al 2015).

Over time, the ‘bush fire’ phenomenon was discursively reframed as an ethnic attribute and forbidden as part of the *Indigénat* disciplinary regime, thus progressively erasing the reality and the diversity of the colonial uses of fire. War fires and clearing fires set by settlers disappeared from discourses and memories, as if they never existed, thus ethnicising ‘bush fires’ as a purely Kanak practice. But, for Kanak, the bush fires set by settlers and militaries were truly dramatic, as they destroyed their natural habitat and many hamlets. Survivors were confined in small *reserves*, in villages delimited by the colonial administration, and their former lands were given to the colonists, and colonised by farmers, cattle and new species of

grass. Commenting on the Cèmuhî-language narratives relating to the last great Kanak war against French colonists (1917) that report the systematic burning of many hamlets, the French anthropologist Alban Bensa said that for the Kanak of the Cèmuhî area it was no less than a ‘natural cataclysm’, and specifically a ‘natural disaster’ (Bensa et al 2015). The bush fire phenomenon constituted a disaster for the Kanak but not for the settlers and French administrators who, while disdaining to recognise the value of Kanak fire practices, rejected outright any control over their own fire practices.

Constructing Fire as a Public Problem: The Recent Redefinition of Fire as a ‘Disaster’

At the end of December 2005, a huge fire occurred on the ‘Mountain of Sources’, a natural reserve situated on a mountain mainly covered by ultramafic shrubland (so called ‘*maquis*’), in the south of New Caledonia, near the capital of Noumea. The fire burned for almost ten days and destroyed more than 4,500 hectares of endemic *maquis*. This fire was the starting point of a new narrative around bush fires, their impacts, and their representation as a threat. The fire of the Mountain of Sources was widely covered by public media and commented on by environmental associations. The French branch of the conservationist NGO World Wildlife Fund (WWF) was particularly involved both in the fire fighting alongside professional fire fighters, and in the process of public characterisation of this event. It was thus described as a ‘massive ecological disaster’ and as a ‘real ecological catastrophe’. One of WWF’s local members declared that:

We have to face reality, bush fires have dramatic effects on natural environment, [they are a] threat for biodiversity by destroying unique animal and plant species. (WWF-NC representative, interview published in *Tazar* magazine, 2006)

After the fire, WWF started to engage in events trying to alert people to the danger of bush fires. In order to draw the attention of Caledonians to the dramatic effects of bush fires, WWF then organised restoration plans, involving local citizens, to replant the ‘Mountain of Sources’. The ‘fire of the Mountain of Sources’ became a sort of mythic narrative that is ritually invoked every year at the beginning of the dry season (from July to December) to demand the reinforcement of forces fighting against fire.

This definition of bush fire as a natural disaster is in fact rooted in the recent local history of the definition of environmental problems, which only truly began in the 1970s. The first actors to alert civil society and Caledonian administrators were French scientists or naturalists (professional or amateur) working in public administration in the 1950s, such as F. Dugain (1952), Robert Virost (1956) or André Guillaumin (1953). But the new environmental formulation of the ‘bushfire problem’ really began to emerge locally with the mobilisation of the first Caledonian environmental associations, in particular the Caledonian Society for Ornithology (*Société Calédonienne d’Ornithologie* – SCO, created in 1965) and the Association for the Protection of Nature in New Caledonia (*Association pour la Sauvegarde de la Nature en Nouvelle-Calédonie* – ASNNC, created in 1971). By invoking the long history of fire fighting in France, they tried to alert Caledonian society to this specific issue, arguing that bush fires endangered the beautiful nature they enjoyed during recreational times (Toussaint 2018, 337-338). From this date, bush fires have regularly been featured as a threat for nature and vegetation. In the 1990s, scientists began to study forests and ‘discovered’ that some endemic formations, such as the Sclerophyll forests (often called ‘dry forests’) and endemic species (such as *Pittosporum tanianum*) were threatened with extinction (Bouchet et al 1995; Jaffre et al 1997). Drawing on the writings of naturalists from the 1950s, those scientists defined bush fires as one of the principal threats for sclerophyll forests, as summarised in the following extract:

However the *coup de grâce* to the sclerophyll forest comes from uncontrolled fires that sweep across the lowlands of New Caledonia each year during the dry season. Traditionally, fires were lit to clean overgrown cultivated fields before a new season of crops is planted, and this practice is still used, even when the justification of crop plantation often does not exist. Fires were also lit by hunters in grassland and open savannas to enhance the growth of new grass for deer, when it is not simply to facilitate access through the bush and introduced thorny herbs (sensitive plant, lantana, etc.). But lighting fire has also become an expression of protest from young rural unemployed males. It is no exaggeration to write that fires plague New Caledonia, west and east coasts alike, from July to December. (Bouchet et al 1995, 420)

Bush fires then appear as dramatic phenomena due to human activity that has been occurring since the arrival of the first inhabitants of New Caledonia 3,200 years ago.⁶ However, in the international context of the definition of ‘biodiversity’ and the recognition of ‘biodiversity

loss' (Myers 1990; Myers et al. 2000; Mittermeier et al. 2004), bush fire has been reframed as a threat to biodiversity, as it was following the fire of the Mountain of Sources. From the 1970s through to the present, the same pattern has played out repeatedly: each time a huge fire occurs in New Caledonia, environmentalists are mobilised in order to denounce what they have defined as a 'public problem'.

This re-positioning of bush fires as a 'public problem', often called a 'natural disaster' in New Caledonia, is the result of a particular process of definition. Following the sociology of public problems, we can see the definition of the 'problem' of bush fires as the result of the mobilisation of specific actors – 'cause entrepreneurs' – who work to construct a specific issue as a 'problem', to render it public and thus encourage public administration to take measures to fight against this 'problem' (Cobb and Elder 1972). In other words, cause entrepreneurs 'fix their attention on a situation, and work to make it perceived as problematic' (Neveu 2015, 41). The use of a dramatic lexical field (such as the term 'disaster') to label a phenomenon deemed problematic (such as 'bush fire') helps cause entrepreneurs to mobilise people and political actors around their cause. Since the 1970s, several environmental actors (differing from one period to another but mostly composed of Europeans interested in nature) have mobilised around this specific issue of bush fires and contributed to the 'publicisation' of this problem, resulting in the progressive reinforcement of laws against bush fires and of the capacity of fire-fighting forces (Toussaint 2018). However, this categorisation of bush fire as a 'natural disaster' is in fact relatively new in the history of New Caledonia.

Characterised as an 'ecological disaster' or an 'ecological catastrophe', the bush fire phenomenon is nowadays considered largely 'natural', because it is a disaster concerning 'nature' in the first instance. In many respects however, and in contrast to 'real' natural phenomena such as tsunamis or droughts, bush fires are not 'natural disasters' because they are rarely ignited 'naturally', by lightning for example. They are more often initiated by humans, either accidentally or voluntarily. What is particularly striking is the fact that bush fires became a 'problem' in the 1970's when they became largely abandoned by cattle farmers with the implementation of strict regulations banning fire by forestry officers at the same period of time, but continued to be used by Kanak for agriculture (Toussaint, 2018).

Fires have also been set by Kanak activists protesting against colonial oppression: Boucher et al (1995, 420) refer to 'young rural unemployed males'— which is code for young Kanak, who are a major component of the rural population and are often unemployed — using fire to demonstrate their claims to land. The authors refer here to the major fires that have taken

place since the mid-1970s on private pasture lands and private and public forests and reforestation sites. Although it is rather difficult to estimate how many fires occurred in this period, it seems that their number increased as acts of arson to promote anti-colonial political claims became increasingly common (Kohler 1984, 138; Toussaint 2018, 207-208). But, as Boucher et al were writing in the early 1990s, the authors might also have been referring to fires that have occurred since the beginning of the land reforms following the signature of the Matignon (1988) and Nouméa (1998) political agreements; these fires were lit by Kanak to clear the ‘bush’, to open new food gardens, to build new houses, to hunt, or do whatever they might have done on their retrieved lands in order to build ‘*Kanaky*’ (Leblic 1993). Nowadays fire is still used by Kanak for agriculture, especially to prepare food gardens. In a recent study of Kanak agriculture conducted in 2011 among 1,786 Kanak households, or 12.4% of the Kanak households living in tribes (Apithy et al. 2016; Guyard et al. 2013), almost 80% declared that they still use fire to prepare crop gardens (Séverine Bouard, private communication 2018). Fire is also used to clear the bush on lands that have been recovered by Kanak for various activities such as hunting, maintaining specific landscapes, keeping cattle, deer and pigs away from their crop gardens, or reviving the memories of lost hamlets (Toussaint 2018).

Fire is thus an essential tool for everyday life in rural Kanak communities which depend strongly upon an agricultural subsistence system, even if this dependence is poorly understood or documented, as this subsistence system remains economically informal (Apithy et al. 2016; Guyard et al. 2013). Similarly, there is no clear evidence that there were fewer fires before the recent periods of political claims and Kanak development, nor documentation of the extent to which fire has been used by settlers for clearing for almost a century. Regardless of the various uses of fire throughout the colonial era, which seem to have disappeared from discourses and memories, young Kanak were (and still are) often blamed for initiating fires. The current debate around bush fires in New Caledonia is often oriented toward the control of fire by users blamed for their ‘lack of control’ or ‘lack of knowledge’, and even sometimes for their ‘lack of care’ for ‘nature’ (Toussaint 2018).

When environmentalists define bush fires as a disaster, in line with their own understanding of nature, what they call a disaster is in fact the growing importance of Kanak agriculture and management of their expanding landholdings. Bush fires are thus considered ‘natural disasters’ due to the poor use of fire by Kanak, but this new categorisation of bush fires as ‘disaster’ relies on the ‘naturalisation’ of a social phenomenon identified as endangering

‘nature’. In doing so it perpetuates, in a rather unconscious way, the ethnicised conception of bush fires and their causes inherited from the colonial period, along with its logic of racial distinction and segregation.

Drought, a ‘Natural Disaster’ Obscured by Bush Fires?

In New Caledonia the issue of bush fires is combined with another issue, drought, that can much more straightforwardly be called a ‘natural disaster’: in a sense, it seems to be mostly a natural issue in which certain groups are exposed as both vulnerable and powerless, rather than a direct result of human action and intention. These two issues are also closely tied up with, and dependent on, a natural phenomenon occurring in the Pacific Region, which is the El Niño Southern Oscillation (ENSO). In New Caledonia, warm ENSO events seem to be associated with drier conditions, thus potentially reinforcing the effects of drought and bush fires on the natural environment (Barbero et al. 2011; Barbero and Moron 2011). Although drought and bush fires are two important and possibly closely-related environmental issues, their impacts differ. As we have seen, bush fires tend to endanger forests and natural vegetation, threatening New Caledonia’s biodiversity (Jaffré et al. 1997). However, drought has additional important impacts on rural activities, especially on cattle farming. When drought occurs, pasturelands dry out, there is no more hay to feed the cattle, and water access is drastically threatened. This ‘natural disaster’ is thus qualitatively different from bush fires. Where bush fires endanger vegetation and biodiversity, thus threatening human activity in the long run, drought may have immediate and dramatic effects on the livelihoods of cattle farmers. Bush fires may then exacerbate the effects of drought by eliminating endemic species and lead to important changes in vegetation cover. This is also true of rural activities to a large extent, especially those such as created pasturelands that involve important changes in vegetation cover.

If threats to biodiversity are a recently identified issue in New Caledonia, drought is a ‘disaster’ that has mobilised colonial administrations since cattle farming was first developed in the colony. From the first descriptions by explorers of New Caledonia, the west coast of the mainland has been characterised as drier than the east coast. Fairly swiftly, however, it was established that the grasses were relatively poor fodder for cattle, and pests (such as grasshoppers) and drought also began to discourage settlers. Faced with the mobilisation of

cattle farmers – a powerful group of landowners – the colonial authorities sought to manage this drought phenomenon from the end of the 19th century, providing particular support to cattle farmers (Pillon 1989). Initially, they gave them lands taken from the Kanak. Then they tried hard to improve pastures to make them productive and nourishing for cattle by introducing new species of grass and shrubs (Guillaumin 1953), and by allowing them to use fire and clear-felling to open new pasturelands. In this way they tried to exterminate indigenous grasses which were judged inedible for cattle, even though they were used by Kanak people for building houses.

More recently, in order to help farmers to face this ‘natural disaster’, the Government of New Caledonia created specific forms of assistance through a special agency, the *Prevention and Compensation Agency against Rural and Natural Calamities* (APICAN, ‘Agence de prévention et d’indemnisation des calamités agricoles et naturelles’). Assistance consists of financial compensation for drought and the construction of water facilities. Cattle farmers can receive payment for damages if cattle die, or obtain hay and grain from the government to feed their cattle. The construction of water facilities is also combined with the creation of fire-fighting facilities. For example, the construction of flood defence structures is designed as a water reserve for cattle and a water supply for water bombing planes and helicopters as well as fire trucks. Compensation for drought is thus enmeshed with the implementation of fire-fighting facilities, thereby linking drought and fire in specific policies against ‘natural calamities’.

Questioning the emergence of the ‘problem’ of drought through the colonial history of New Caledonia raises questions about drought as a ‘natural’ phenomenon. Is drought more ‘natural’ a disaster than bush fire? Although APICAN and cattle farmers clearly identify drought as a natural disaster, the colonial history of bush fires and cattle farming suggests that there is more to the definition of drought than natural processes such as lack of rain and El Niño episodes. In many respects, cattle farming has been and still is one of the more significant components of the rural economy in New Caledonia (Sourisseau et al. 2010). However, colonial administrations and cattle farmers have struggled to make a poor development choice into a ‘success story’. In the very process of ‘improving’ conditions for cattle farming, they may have created the conditions for more dramatic droughts: through the widespread and often indiscriminate use of fire, extensive cattle farming and introduction of new grass species that have spread out of control and are now labelled ‘invasive’ by scientists and environmentalists (Guillaumin 1951; Hequet et al. 2009). Yet, the drought phenomenon is

never conceived as resulting from human activity, because defining it as ‘natural’ supports political interests.

What is happening today with the provision of support measures for cattle farmers and the development of fire-fighting, differs little from the segregation process visible in fire bans implemented since the colonial period. Professional cattle farming is overwhelmingly the domain of the descendants of settlers, with minimal engagement from Kanak who struggle to access governmental support for their involvement (Djama 1997; Guyard et al. 2013). In this context, the emergence of environmental issues, such as biodiversity loss or climate change, offers an opportunity for one category of the population – the descendants of settler – to maintain some of its advantages. Environmentalists, who are also largely French in origin and not Caledonians (people born in New Caledonia whatever their ethnicity), are thus engaged in a process that can be considered as a continuation of colonial strategies of domination.

Conclusion: Naturalising Politics and Silencing the Transformation of the Colonial Landscape

Throughout the colonial era in New Caledonia, ‘nature’ has been described and named by French colonists according to their own varied representations of what is or is not natural, as well as what might be identified as a ‘disaster’ and what might not. Throughout the colonial history of New Caledonia, we can track the emergence of bush fire and drought as ‘natural disasters’. Questioning whether bush fire and drought should be considered ‘natural disasters’ leads us to consider the politics of categorisation. Obviously, bush fires are today a real problem for environmentalists, mostly French people living in New Caledonia, whereas they were not a problem at all when they were used to dominate Kanak people in the early colonial process. The definition of what constitutes a ‘natural disaster’ thus relies on a ‘politicisation’: a process whereby events, natural or otherwise, are defined as political objects by a set of mobilised actors seeking to render them public and/or calling for policy change. This process can be seen in the case of bush fire as a phenomenon; bush fires were not a problem during colonial times but then became an important environmental and political issue from the 1970s. It is also visible through the case of drought, which was constituted as a ‘natural disaster’ through its impacts on cattle farming – an activity which might more properly be considered an inappropriate for New Caledonia’s natural environment. The variability of

these definitions is also clear in the distinction made between free settler fires and banned Kanak fires. The categorisation of these phenomena is made according to who is performing them. In each case, the definition of a phenomenon as a disaster reflects specific political views and positions.

Depending on the context and on the people talking about bush fires or drought, these phenomena can be defined very differently. We might best regard this process as a ‘naturalisation of politics’, which means that environmentalist as well as administrative discourses tend to naturalise these phenomena. Indeed, as Kanak from the Cèmuhi area have observed, in reflection on the 1917 war, the colonisation process figures as a disaster for them, as it was for all Caledonians, because it wreaked irreparable damage on New Caledonia’s ecosystems. But this perspective also reflects a particular and partial moral and political point of view. In the present context of New Caledonia’s decolonisation, this politics of ‘naturalisation’ is perhaps more laden with significance and more fraught than ever.

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Notes

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² The three Provinces have been created in 1988, following the signature of the Matignon Accords. The Southern province is run by loyalists (attached to France) whereas the Northern and the Loyalty island provinces are run by separatists (*'Indépendantistes'*).

³ 18,000 votes apart on an electoral body of 175,000 registered and for a total population of 270,000. Under specific circumstances, at least two more self-determination referenda may be programmed.

⁴ This paper is mainly based on a long-term doctoral fieldwork conducted in New Caledonia from February 2011 to June 2015, on the topic of 'bush fires', their representations and their management. The fieldwork was conducted at three study sites, with the tribes of Gohapin, Bopope, and Tiouaé, and among institutional actors. For this paper I also use data collected through archival and bibliographical research on the colonial use of fire and for a case study on an important fire event – the 'fire of the Mountain of Sources' which occurred in 2005-2006 –, and data gathered through media and interviews on the topic of drought. The word 'tribe' refers here to contemporary Kanak villages and is used as the *emic* denomination of those villages in the contemporary Caledonian context and does not refer to any kind of supposed Kanak 'traditional' political organisation or institution. Contemporary 'tribes' are a specific production of colonial reorganisation of Kanak political structures and lands: they refer more or less to the 'reserves' delimited by the colonial administration from 1887 and the lands progressively recovered ever since through successive land reforms (see Bensa, Goromoedo, and Muckle 2015; Monnerie 2018; Leblic 1993).

⁵ The administrative history of New Caledonia is usually divided in three main periods: the early colonial period (1853-1945), the territorial period, when New-Caledonia became a *Territoire d'Outre-Mer* (1946-1988), and the decolonization period initiated with the Matignon Accords (since 1988 – see Sourisseau et al. 2010).

⁶ In many regards, the New Caledonian's experience regarding bush fires presents many similarities with Australia's, such as a same history of western inability to understand indigenes engagement towards environment especially in the case of fire use (Gammage 2011). But they also present very essential differences regarding fire use because of the so-called Melanesian origin of New Caledonia first inhabitants which slightly differs from Australia's (Haberle et al. 2010; Kirch and Hunt 1997; Sand 2002). Until recently, New Caledonia's first inhabitants were thought to have been horticulturists practicing an extensive slash-and-burn which would have led to deforestation (Sand 2002; Sand et al. 2008). New studies suggest a more complex history where forest cover must have been rather important, thus excluding the hypothesis of a massive deforestation by fire (Dotte-Sarout 2010; 2017). The place of fire in this complex history, and more specifically in the 'traditional Kanak cultural complex' (Sand 2002), has yet to be better defined as it appears plausible that the horticultural system was more or less based on careful uses and plantations of trees than on an extensive use of fire (Dotte-Sarout 2010). Thus, fire must have been used for different purposes: for slash-and-burn practices on semi-permanent horticultural structures (such as big yams fields and wet taro fields) but also as part of a specific form of fire-stick farming used to maintain, rather intentionally, *Melaleuca* savannas (mainly composed of Niaoulis *Melaleuca quinquinervia* and grasses such as *Imperata cylindrica* – Barrau 1980).