Blaming Active Volcanoes or Active Volcanic Blame? Volcanic Crisis Communication and Blame Management in the Cameroon

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Abstract

This chapter examines the key role of blame management and avoidance in crisis communication with particular reference to developing countries and areas that frequently experience volcanic episodes and disasters. In these contexts, the chapter explores a key paradox prevalent within crisis communication and blame management concepts that has been rarely tested in empirical terms (see De Vries 2004; Brändström 2016a). In particular, the chapter examines, what it calls, the 'paradox of frequency' where frequency of disasters leads to twin dispositions for crisis framed as either: (i) policy failure (active about volcanic blame on others), where issues of blame for internal incompetency takes centre stage, and blame management becomes a focus of disaster managers, and/or: (ii) as event failure (in this case, the blaming of lack of external capacity on active volcanoes and thereby the blame avoidance of disaster managers). Put simply, the authors investigate whether perceptions of frequency itself is a major determinant shaping the existence, operation, and even perceived success of crisis communication in developing regions, and countries experiencing regular disaster episodes. The authors argue frequency is important in shaping the behaviour of disaster managers and rather ironically as part of crisis communication can shape expectations of community resilience and (non)-compliance. In order to explore the implications of the 'paradox of frequency' further, the chapter examines the case of the Cameroon, where volcanic activity and events have been regular, paying particular attention to the major disasters in 1986 (Lake Nyos Disaster - LND) and 1999 (Mount Cameroon volcanic eruption - MCE).

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1 Introduction

Many parts of the world today suffer from a combination of high vulnerability to, and frequency of, natural hazards. In some instances, this is because geological factors, such as the existence of tectonic plate lines, result in repeated occurrence of earthquakes, tremors, or volcanic eruptions. In the Philippines, for example, the complexity of geographical and geological factors prompts a 'diversity of hazards' from earthquakes, volcanoes, tsunamis, to typhoons and flash flooding. Yet, any frequency of recurring natural hazards does not automatically lead to efficient and successful emergency planning or disaster management. Even the experienced can be caught out by the unexpected, leading to public and media blame, and accusations of 'incompetency', amidst government claims of insufficient capacity or 'incapacity' (Wooster et al. 2005). Within this mix, developing effective crisis communication remains a constant challenge, especially in the management of expectations, and the avoidance of blame (Brandström 2016a, b). Indeed, debates about incompetency and/or incapacity are often heard in economically developing countries, and thus were resilience capacity is still evolving (Cutter et al. 2008).

The chapter examines three aspects. First, it explores the key relationship between crisis communication and blame avoidance and management in the context of volcanoes within developing countries and regions. Second, it introduces the concept of a 'Paradox of Frequency'. Thirdly, it discusses the case study of Cameroon where a major geological volcanic line, characterized by active and comparatively regular volcanic and gas activity has clearly evidenced issues of crisis communication, blame management and the 'Paradox of Frequency'.

2 Crisis Communication and Blame Management: Balancing Meaning Making, Framing and Blame Games

2.1 Meaning-Making

As Boin et al. (2005: 82) argues, *meaning making* in crisis and disasters 'is not just a matter of following existing contingency plans or implementing strategic choices at the outset of a crisis. It entails intuitive and improvised public communication by leaders who are suddenly cast into the hectic pace of crisis reporting'. Disaster managers and their political masters must develop integrated 'framing' of crisis communication that successfully embodies, on the one hand, response and recovery imperatives with a strategy for the restoration and continuity of economic activity, and on the other hand, business and national interests.

A frame is then a shared construction of reality, and likewise, framing activity covers both the use and the impact of frames. As Boin et al. (2005: 88) highlights, framing represents 'the production of facts, images and spectacles aimed at manipulating the perception and reaction to a crisis', and typically involves selective exploitation of data and arguments. In addition, framing seeks to build (public) confidence in 'more or less standardised sequences' and processes so that participants feel part of disaster planning working towards their own key interests (Boin et al. 2005).

Meaning making can also, however, involve 'masking' where disaster managers conceal and/or downplay aspects of a disaster (to reduce the long term impacts) during and after crises. Above all, the outcome of successful meaning making should be avoidance, limitation, and control of 'blame games' representing the

'struggle between protagonists inside and outside government about the allocation of responsibility for negative events' (Brändström et al. 2008: 114).

2.2 Blame-Gaming

Blame management is often seen as being about blame avoidance or at least managing and controlling blame-gaming. Blame games can be seen as situations where leaders (but could be extended to entities) protect their own self-interests by projecting negative aspects of the crisis onto other actors. The attribution of blame can be a major occupation of disaster managers and their policy leaders during a disaster, seeking to avoid or shape future accountability. Boin et al. (2010: 706) argues 'something or somebody must be blamed—for causing the crisis, failing to prevent it, or inadequately responding to it', pointing to the fact that the 'tragedy' of disaster as an 'Act of God' or 'beyond management' is no longer seen as a publically or socially acceptable explanation for a crisis. There has to be allocation of blame (Brändström and Kuipers 2003: 291).

For disaster managers, the incentive to inflate or diminish blame could be incentivized by a perceived threat of future demotion or dismissal or even by future progression and promotion (Boin et al. 2009: 99; Hood 2001: 8). This can be particularly true in developing countries, where disaster management frameworks may not be that well developed or resourced, and the pressure upon individuals may even be more intense.

According to Brändström (2016a: 34), blaming theory assumes that the blaming behavior of disaster managers and policy leaders is often determined by three factors—namely (i) the wider institutional and political conditions under which blame games occur, (ii) the blame management strategies that actors employ and, (iii) the skills used to apply these strategies in the public arena. In developing countries, the conditions affecting disaster management are quite challenging—with finite resources, immature institutional arrangements, unstable political conditions, and intense competition between governmental priorities. In other words, disposition towards blaming can be heightened principally because of the very institutional and political conditions that pertain in developing countries.

Moreover, the skills of disaster managers can also be influential, not least because a disaster provides opportunities to bring out the worst in people who seek to identify scapegoats in order to allocate blame (Ewart and McLean 2015: 169). It may also bring out the best in people and their entrepreneurial skills at times of crisis (see Miles and Petridou 2015; Miles 2016). Certainly, within the realms of crisis communication, disaster managers and policy leaders will be skillful at arming themselves with plentiful explanations to avoid blame (McGraw 1990: 119). Ewart and MacLean (2015: 168), for instance, catalogue six forms of identifiable explanations, from blaming lack of resources; the event itself; previous administration(s); the number of people and agencies involved; the delegated agency; or claiming ignorance to unforeseen consequences.

2.3 Framing

A critical feature within crisis communication is thus for disaster managers 'to position themselves in relation to what caused the event' (Brändström 2016a: 118) and distinguishing between framing causality as caused by internal (policy/political) or external (operational or other) factors. Often an external frame requires arguing 'credibly that the events may or may not have been foreseeable' and also challenge certainty that events were preventable or controllable once they had occurred. In particular, events affecting vulnerable disaster zones in developing countries can be portrayed as 'forces of nature'—where disaster managers argue that they 'cannot prevent them from happening and rarely are able to control them when they do' (Brändström 2016a: 118). Equally, opponents and critics will attempt to link operations to the internal workings of disaster planning, policy and politics.

While there are numerous models for understanding blaming behavior and impacts

(Brändström and Kuipers 2003; Brändström 2016a) certain aspects seem especially relevant for this chapter. First, there is political/policy failure (highlighting internal causes, and examples of individual or multiple mistakes or missed signals) which can be broadly equated with 'incompetency'. Second, there is systemic failure in relation to external factors—where the disaster management system cannot cope with the magnitude of the external event and thus there is 'incapacity' or 'incapability' to act effectively against such 'forces of nature' (adapted from Brändström 2016a). In this way, blame and accountability are either internalized or externalized. Frames indicating whether the events were foreseeable and controllable internalize accountability, meaning the blame is allocated to identifiable individuals and their policies. Whereas frames externalising accountability allow for disaster managers and policy makers to avoid blame and policies remain unchanged (Boin et al. 2009).

Balancing meaning making, framing, and blame gaming are therefore important for understanding crisis communication and dealing with the question of frequency of disasters also. In addition, managers framing the implications of the frequency of disasters in specific ways may lead to delegation to local actors in developing countries. Rather ironically, blame management may, directly or indirectly, facilitate narrative(s) of resilience in developing countries, where there is a bigger role for local communities and individuals doing more when confronted with ineffective or reluctant governmental action. In this way, the pressures of meaning making, framing and blame management facilitate official, and often unofficial, delegation of disaster management to others.

3 Paradox of Frequency: Policy Failure as 'Incompetency' and Event Failure as 'Incapacity'

The 'paradox of frequency' highlights how frequency can be framed within crisis communication, and in particular, as a paradoxical situation where frequency of disasters facilitates twin dispositions for crisis framing.

First, there is the frame where the frequency of disaster leads to a stress and expectation on learning and competence building. Disaster managers, faced with a regularity of events, should be able to learn and hone their competencies in handling such events to a high level. They can internalise this competency within their emergency planning and policies, and even increase their own accountability in terms of blame management. Conversely, when things go wrong, the focus will be on *blame management of 'incompetency'*. Blame will often focus on not meeting expectations of competency and thus *policy failure* being strongly associated and framed as '*incompetency*'. Thus, policy failure in volcanic crisis communication could be seen as *being active about volcanic blame on disasters managers* and others responsible for community resilience. Ironically, the existence of learning leads to assumptions that subsequent inadequacy to respond equates to incompetence (in not getting on top of problems) which build on rising, and at times unrealistic, expectations that successive disaster experiences internally and proportionately enhance resilience. In this case, the frequency of disaster events leads to ever more active volcanic blame management.

Second, there is the frame where the frequency of disasters leads to a stress on the magnitude, size and regularity of the event and on blame avoidance on the grounds of 'incapacity'. In this context, the ramifications of the disasters are so regular and/or so large that they require society and individuals to treat resilience towards disasters as part of their normal activities and as 'business as usual'. They need to do the best they can at these often frequent, but challenging times, resulting in limited expectations on government, and beliefs that recovery times may be long given the frequency of successive events. Expectations on government, agencies and disaster managers should therefore be constrained since there is only so much capacity (or incapacity) that can be provided in handling such frequent external occurrence. The dominant frame then is constructed around blaming the

active volcanoes and not the disaster managers or policy leaders or even system. Hence, when things go wrong, it can be framed as simply 'system failure' where the frequency and size of disaster as an external event overwhelms the capacity of the disaster management system in place. In simple terms, *an event based failure where there is blame avoidance on the grounds of 'incapacity'*. Given this line of reasoning, the frequency of events means that disaster managers emphasise the importance of blame avoidance on them since, in operational terms, dispositions are firmly centred on blaming the frequent activity of the respective volcano.

This paradox is all the more important since in terms of crisis communication, disaster managers face a key challenge before, during and after disasters. There is, for example, a tendency for government agencies to want to both 'own the message' and 'be the messenger', especially as disasters, by definition, exceed the capacity of affected communities and thus the public will look to national or regional leadership for assistance. There is therefore a high propensity for such agencies—by adopting this approach—to be open to both blames on grounds of *incompetence* and *incapacity* simultaneously.

4 Communication Challenges in the Context of Volcanic Crisis Management

In theory, disaster managers should do their best work at crisis communicating in the period before a disaster, particularly when focusing on informing, educating and concentrating on themes such as risk reduction and disaster prevention. Campaigns often use printed leaflets (Bird et al. 2010), village elder gatherings (Cronin et al. 2004) and radio broadcasts and typically include schools' disaster awareness (Ronan et al. 2010), elderly or disabled social outreach, and early warning systems (Garcia and Fearnley 2012). Nevertheless, despite such public awareness campaigns, communities often remain reluctant to engage with government communication agendas. This may be a result of mistrust from previous inadequate government actions or reactions to earlier disasters leading to an abiding cynicism and uncooperative attitude to subsequent public communication strategies (Haynes et al. 2008). As a result, future disaster related communications are perceived simply as government propaganda to protect reputation. It is arguable then whether governments should always be the sole owner of 'the message'. Crisis communication officers are thus faced with the twin challenges of not only having the right message but also employing the right messenger (McGuire et al. 2009); it may be necessary to think about incompetence and incapacity dynamics both in terms of *messaging* and in terms of the *messenger* when it comes to blame.

Crisis communication in volcanic crisis management is particularly challenging because volcanoes are highly complex scenarios scientifically, socially and politically with potential dire consequences to human, financial, social, physical and natural capital if not handled properly. This is critical for volcanic crises management in developing countries because action is required in uncertain circumstances where several gaps prevent efficient volcanic risk management. These include lack of adequate human resources and weak response structures; lack of understanding of the vulnerability of exposed elements; lack of assessment of vulnerability and community resilience or the capacity to recover after a catastrophe; lack of understanding of the vulnerability of exposed elements and generally weak disaster risk management frameworks (Bang 2014; MIAVITA 2012).

This complexity in communication (Fig. 1) is not made any easier by the fact that undertaking volcanic risk, hazard and vulnerability assessment ideally requires engagement of scientific agencies with diverse expertise (Brändström 2016a; Smale 2016; MIAVITA 2012; UN 1995), as well as the integration of information flows from stakeholders at the local, regional and national levels. Significant gaps remain in communication and information flows in volcanic crisis management in many parts of the world, including the Cameroon, which are prone to volcanic hazard risks. One commonly

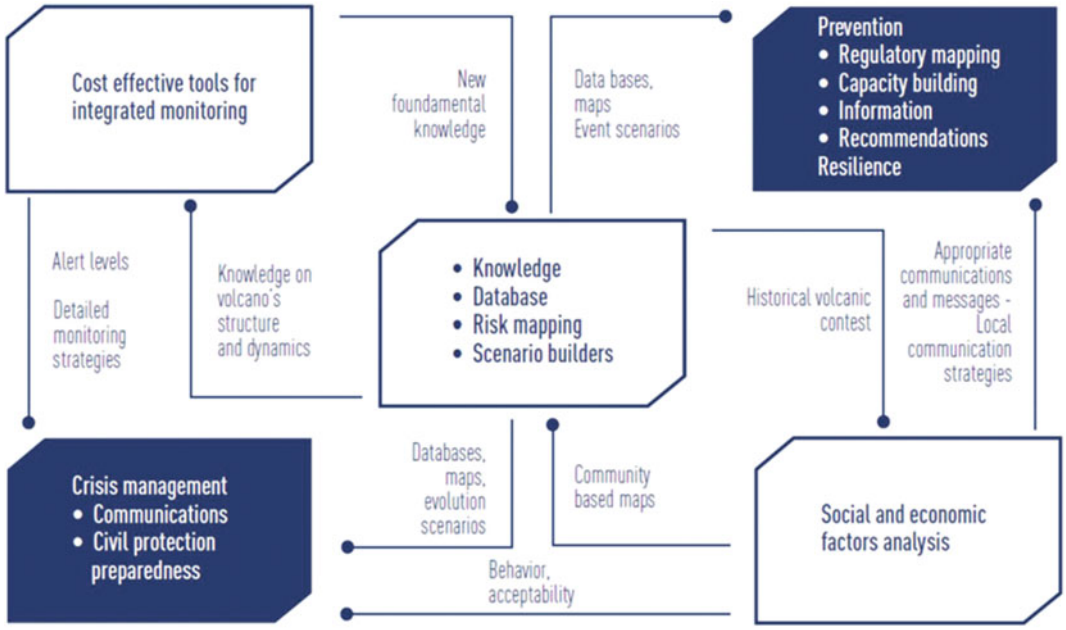

Fig. 1 Methodological framework with related information flows for managing volcanic events. *Source* MIAVITA (2012: 17)

identifiable problem remains the *transmission and translation of scientific early warning and monitoring*, whereby: (i) scientific monitoring is regular, providing not only constant information about the hazard to disaster managers or decision-makers, but: (ii) critical assessment that also feeds into key public communications, warnings and/or instructions on the level and kinds of actions to be taken (Volcano Observatory 2016; Smale 2016). Arguably, the former is well developed for a few hundred of the world's active volcanoes (Simkin and Siebert 1994; UN 1995), while the latter is often poorly developed or absent, inadequate and/or ineffective (Sanderson 1998; Clay et al. 1999; Kokelar 2002).

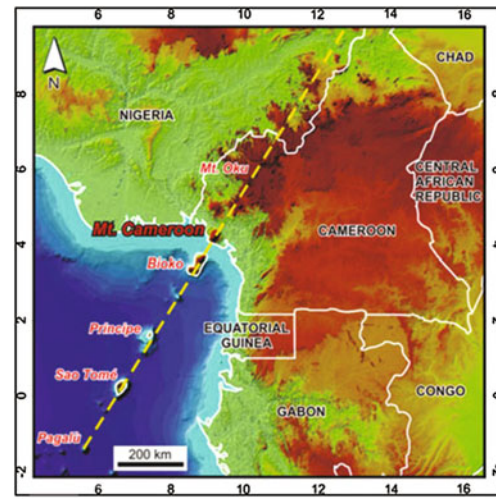

Fig. 2 The Cameroon Volcanic Line (*dashed yellow line*). *Source* Favalli et al. (2012: 424)

5 Volcanic Hazards in the Cameroon

Cameroon is prone to natural hazards mainly due to a geologic/topographic feature in the country known as the Cameroon Volcanic Line (CVL) (Fig. 2). For this chapter, the 1600 km long CVL also fits the criteria of frequency, with regular occurrence of landslides, floods, earth tremors, toxic gas emissions (as happened in 1984 and 1986 in Lake Monoum and Lake Nyos respectively) and frequent volcanic eruptions. Located on the CVL, is Mt. Cameroon/Fako, the largest, most active volcano in West and Central

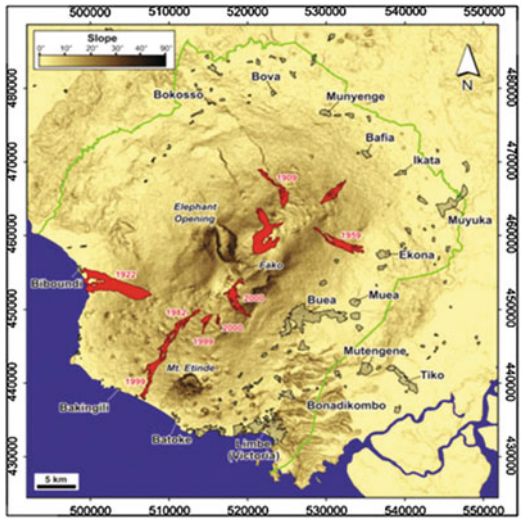

Fig. 3 Map showing Lava flows produced during eruptions of Mt. Cameroon in the 20th century (*red areas*), and towns and villages in the region (*crosshatched areas*). *Source* Favalli et al. (2012: 424)

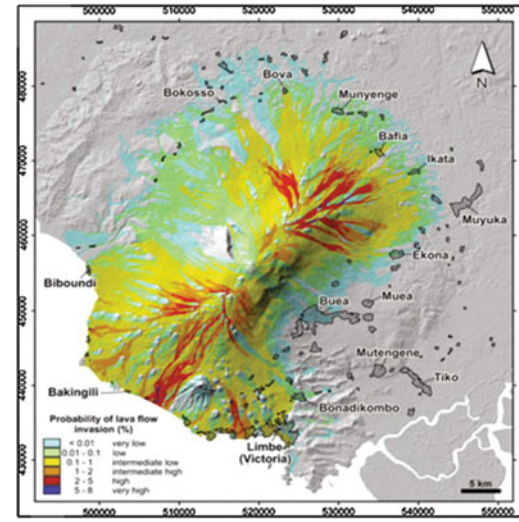

Fig. 4 Lava flow hazard map around Mt. Cameroon volcano. *Source* Favalli et al. (2012: 432)

Africa (Kling et al. 1987; Duruelle et al. 1987; Fitton 1987; Freeth and Kay 1987; Bang 2012, 2013), having erupted eight times in the 20th century and most recently in 2012 (Global Volcanism Program 2012). The historical record of Mt. Cameroon shows an average period of 17 years (Njome et al. 2010) between successive eruptions. Moreover, Mt. Cameroon is also notable due to its size as an elliptical volcano, straddling the continental margin at the bottom of the Gulf of Guinea in the South West Region (SWR) of Cameroon (Fig. 3), and with a height of 4095 m above sea level and an area of about 3000 km^2.

Generally, Mt. Cameroon is characterised by three types of eruptions: explosive types, moderately explosive types (that have built the cinder cones) and effusive types, which are responsible for lava flows (Tchoua 1971; Tsafack et al. 2009). Voluminous lava flow, rather than pyroclastic materials is the greatest threat from Mt. Cameroon, often from summit and flank eruptions (Pyle 1999). Recent studies, mapping the risk of lava flow inundation (Fig. 4) and other hazards around Mt. Cameroon (Bonne et al. 2008; Thierry et al. 2008; Favalli et al. 2012; Wantim et al. 2013), highlight the notable vulnerability of the two biggest towns, and largest population centres in the region. Buea town (90,000 people)—capital of the SWR and administrative headquarters, and Limbe town (85,000 people)—the main tourist town situated along the Atlantic coast, and other villages closer to the Volcano are susceptible to inundation by lava flow. Crisis communication is very important given that there is significant risk to strategic and critical buildings essential to disaster management located in Buea, the capital and regional headquarters of the SWR, and located at the foot of Mt. Cameroon. It should also be noted that such vulnerability also applies to earthquakes and landslides since both felt and instrumentally recorded earthquakes have been documented with the vast majority along or close to the CVL, and largely concentrated in the Mt. Cameroon region (Ateba and Tabod 2009). Volcanic eruptions are usually preceded/or accompanied by volcanic and tectonic earthquakes, indicating that earthquake monitoring remains very important for predicting MCEs.

In terms of crisis communication in the Cameroon, several aspects are also important. First, although the area was seismically active prior to the 1999 eruption, there was no extensive pre-warning or early warning system in place to

warn the population of the threat—severely reducing crisis communication. Secondly, the frequency of volcanic eruptions and the importance of earthquake monitoring have led to some developments in the Cameroon. In the Mt. Cameroon region, for example, the first network of six permanent seismic stations was setup in 1984. Thirdly, the extensiveness of the monitoring has varied at differing points in time. After the Lake Nyos Disaster (LND) in 1986, seismic monitoring of Mt. Cameroon was extended to the region on the Oku Volcanic field where Lake Nyos is situated. However, prior to the 1999 and 2000 eruptions, all but one of the sensors was working, due to lack of maintenance (Ateba et al. 2009). The number of seismic stations was increased after the 1999, and 2000 eruptions, culminating in 32 broadband stations being installed (2005–07) over the CVL and the Congo Craton. All the stations, however, were dismantled in 2007 because they were not operational, except for two, one in Ekona at the foot of Mt. Cameroon and the other in Yaounde (Ateba and Tabod 2009). The volcano is now monitored using a network of six telemeter seismic broadband stations that detect the magnitude and location of earthquakes, and data is processed at a monitoring centre, located at Ekona not far from Buea (Lenhardt and Oppenheimer 2014).

Fourthly, the crisis management framework of the Cameroon is relatively new, with most of the significant developments after the 1999/2000 volcanic eruptions. Clear institutional structures, including communications have been attempted, with volcanic crisis management falling under the remit of civil protection. The government retains the primary responsibility, and has instituted a national policy on crises management that recognises a multi-agency, interdisciplinary and inter-cooperation. The nodal coordinating agency for civil protection is the Department/Directorate of Civil Protection (DCP) in the powerful Ministry of Territorial Administration and Decentralisation (MTAD). Most notably, a multi-agency and multi-disciplinary approach to natural and other hazards has been operational only since 2005. This is supported by governmental legislation setting out a general national strategy for risk reduction and disaster management that includes a National Risk Observatory, and emphases three phases of pre-crisis, disaster response and recovery/rehabilitation—all of which stress the importance of information flows and crisis communication (Bang 2012, 2014). There is also a National Disaster Prevention and Management Programme, which ideally, should liaise with the DCP in coordinating all the local, regional, national and international stakeholders in disaster management, and envisages a decentralised structure where authority lies with chief government administrators in these administrative divisions, who double as the main crisis/disaster managers (Bang 2014). Yet as Bang (2014) notes, these policies are only as good as they appear since most have not been implemented in volcanic crisis situations in recent decades.

6 Crisis Communication: The Case of the 1999 Eruption of Mt. Cameroon

The 28 March–22 April 1999 eruption of Mt. Cameroon is well documented. Although the Cameroon's scientists and authorities were aware that the volcano was indeed active, the actual eruption took everyone by surprise. In terms of crisis communication when the eruption started, the local community was informed through the official government run regional state radio in Buea (CRTV Buea). The eruption, however, was not forecast in advance and the population was not pre-warned of any impending eruption, highlighting the lack of an early warning system and in tandem, effective crisis communication strategies.

This was very surprising since reports of seismic activities leading up to the eruption were available, and painted a picture of an impending eruption. The eruption, which started on 28 March, was explosive, emitting gases and pyroclastic lava flow. On 30 March, a second vent opened, releasing huge quantities of lava that flowed for about 14 km south-southwest towards the village of Bakingili (Suh et al. 2003). In

2000, a brief fissure eruption at the summit produced a lava flow that spread mostly south eastwards and stopped 4 km from the outskirts of Buea (Favalli et al. 2012). Fortunately, the lava flow rate was slow, providing sufficient time for any 'at risk' population on its flow path to be evacuated.

The effects of the 1999 MCE were reasonably profound. Fortunately, there were no human casualties and the damage was mainly restricted to infrastructure and economic activity. The magnitude 4 earthquake damaged houses in Buea, leaving some people homeless. Most notably the lava flow that moved towards the coast, particularly the village of Bakingili, affected over 1000 people including 600 inhabitants of Bakingili village who were subsequently evacuated; the first time ever in the history of MCEs (Atanga et al. 2010). Luckily, the 10–12 m thick lava flow narrowly missed Bakingili village, whose population had been evacuated just a few days earlier, but severely damaged infrastructure, and affected the local economy and tourism resorts of the West Coast. Volcanic ash affected the coastal villages of Batoke, Debundsha, Bakingili and Idenau, causing eye and respiratory problems (Afane et al. 2001). Gas and ash emissions also polluted drinking water for about 2600 residents in the area (Atanga et al. 2010). Although there was no human casualty, the eruption caused a total economic loss estimated at about US$790,000 (Lenhardt and Oppenheimer 2014).

6.1 Flaws in Crisis Communication

Three observations can be readily made in terms of the 1999 MCE. Firstly, crisis communication and early warning was found lacking. In taking everybody by surprise, the 1999 MCE exposed flaws in Cameroon's disaster management system, including both scientific and governmental lack of preparedness, despite frequency of eruptions on Mt. Cameroon. Although various scientific studies had been carried out prior to 1999, the Cameroonian authorities had no clear idea of the level of risks associated with the volcano (Thierry et al. 2008). In addition, there was no warning system in place to alert the population. Although, and following the 1986 LND, a carbon dioxide detection system was adopted to alert the population (Bang 2012), a more extensive early warning system had not been introduced in other hazard prone regions of the country. Indeed, this was only put in place on Mt. Cameroon after the 1999 MCE (Thierry et al. 2008). Hence, the culture of disaster management was reactive, and did not place sufficient emphasis on preparedness for natural hazards that the government, scientists and the public recognised were frequent in the Cameroon. In short, there were ready-made grounds for claims of incompetency in terms of blame management. Second, even when emergency management effectively began as part of the response phase (Fig. 5), the practical reality was that disaster response was widely dispersed providing multiple points of confusion and tension on crisis communication.

From the perspective of crisis communication, the structure centred on the scientific committee, which provided feedback of its monitoring activities to the governor of the SWR during daily meetings as the eruption continued. The meetings were open, attended by members of the public and the press, who received updates from the scientists/government and gave interviews to heads of the committees/chairpersons who consequently updated the public. Although this was an opportunity to eliminate false rumours or wrong information (Ateba and Tabod 2009), the management of the eruption revealed a plethora of problems. In practice, and as shown in Fig. 5, a complex array of actors participated in the disaster management contributing to multiple information flows and communication. Reports also suggested a striking lack of coordination in terms of sharing results and information even inside the committee, resulting in significant confusion (Ateba and Tabod 2009).

Third, the 1999 experience highlighted that there were major deficiencies in how crisis

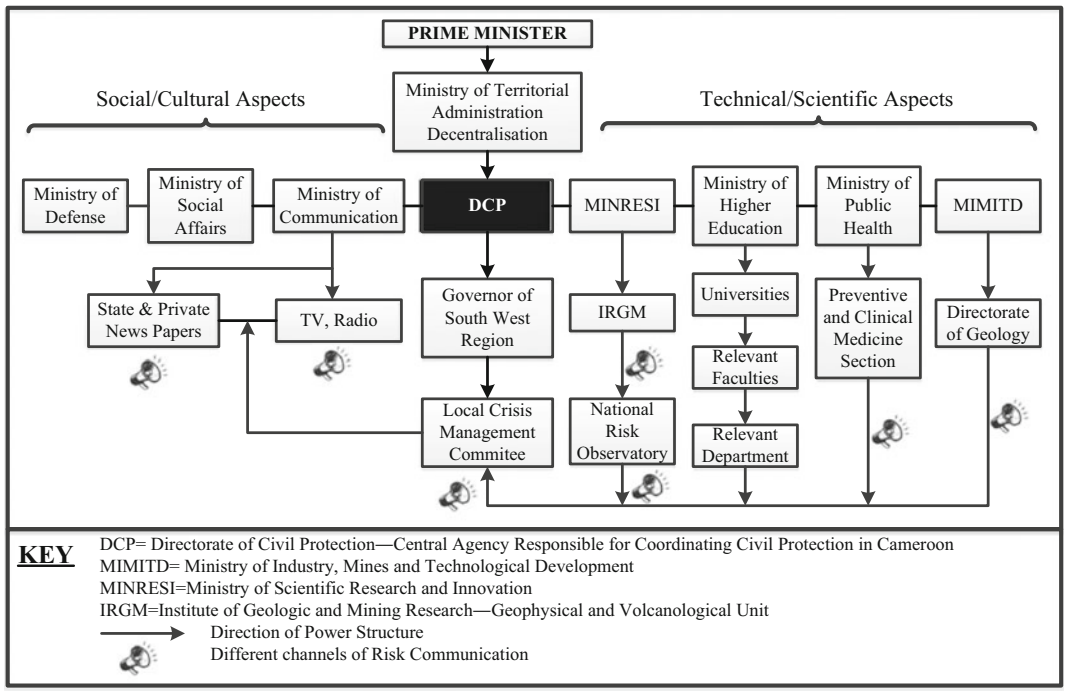

Fig. 5 Organisational structure for the management of the 1999 Mt. Cameroon eruption. *Source* Authors, adapted from Ateba and Tabod (2009: 45)

communication fed into and shaped key decision-making. A good example of this relates to the specific case of the evacuation of 600 people from Bakingili Village, which occurred comparatively late, and was marred by poor preparations, and revealed many communication problems. Although the lava flow had been approaching the village for weeks, evacuation was not considered a priority, regardless of the fact that scientists monitoring the eruption had warned of the threat to the local population in the area. If the lava flow speed was faster, it would have reached Bakingili village before the evacuation. The authorities were divided about whether to inform people living on the SW flank of the Mountain that lava flow was a threat to their settlements because of fear of panic, which neither the national nor regional authorities were sufficiently prepared to handle. Simultaneously, there were radio, TV and media announcements, reassuring the villagers that any dangers were minimal and urging the population to 'stay vigilant', directly contradicting messages from scientists monitoring the eruption who had identified that the village was along the flow path of the lava, and there was no sign of the eruption stopping soon. Moreover, field scientists close to Bakingili were warning the villagers of the danger, resulting in an overall picture where the local residents were getting different messages and mixed signals from various media. When the decision was finally taken to evacuate the residents of Bakingili village due to fear of a possible inundation by the lava flow, the confusion and delay meant that the temporary camps hastily built in Tiko, some 40 km away, lacked basic provision and/or facilities for emergency relief operations. This prompted anger amongst the relocated villagers, who subsequently blamed the government for lack of readiness, inadequate resourcing, and/or an unwillingness to adequately cater for their needs in the camps. The consequence was mistrust and miscommunication between the communities, local scientists and emergency managers (Atanga et al. 2010; Njome et al. 2010).

6.2 Blame Gaming and Blame Avoidance

From the blame perspective, several aspects were evident. First, blame in terms of 'incompetency' was directed at the authorities and identified the lack of preparedness including any emergency plan to evacuate people. This was largely framed as apportioning blame for internal policy failure and incompetence given the threat posed by lava flow in the region was already known from previous eruptions. The blame associated with such internal incompetency and policy failure far outstripped the ability of disaster managers to use blame avoidance strategies based on incapacity and system failure due to the magnitude of external events. In addition, communication on the rate of the advancing flows was not regarded as essential by the authorities, who stressed that prior eruptions had not threatened a settlement in the region before. Although the lava flow rate towards the SW coast was being regularly communicated by scientists to the authorities, nothing was forecast or reported for the ash fall, which caused health hazards affecting many communities. Above all, even as the eruption unfolded, the population in the region was not warned at any stage that this health hazard existed. Hence, the framing and blaming of incompetency was also associated with very poor communication management by the authorities with the local indigenes (Atanga et al. 2010). Compounding this was the setting up of temporary evacuation camps to host the displaced population that lacked basic facilities. Finally, the delay in the final decision to evacuate 'at risk' populations, and its then slow transmission to the local population is indicative of incompetence. Here, the authorities were blamed for inept decision-making, incompetent policy implementation and poor communication framed as policy rather than event failure, particularly in relation to the delay in the evacuation of Bakingili residents.

Framing and blaming of 'incompetency' compounded, what Atanga et al. (2010) has identified as a culture of limited or non-compliance among the Cameroonian villages and settlements. Since the villagers had never been informed of scientific studies about risks on Mt. Cameroon, there was a reluctance to accept evacuation orders from the government notwithstanding the strong community support for enhanced crisis communication. Villagers strongly viewed effective crisis communication as the best way to enhance further and optimal co-operation with the government, including executing strategies, which would strengthen community resilience. Above all, the 1999 eruption also highlighted the need to integrate emergency planning with respect for local customs in order to avoid conflicts, which had bearing on attitudes towards compliance. Here crisis communication was also deemed to play a key role; principally in providing feedback on governmental planning and implementation. Following this line of reasoning, modern information dissemination methods need to be accompanied by and integrated with local/traditional methods to facilitate crisis communication; for example, use of the village's traditional announcement system—'the gong',[1] to facilitate information flow in the event of an emergency.

7 Discussion and Conclusions: Cameroon and the Paradox of Frequency

The experience of the 1999 Mt. Cameroon eruption leaves us with several important observations regarding the 'paradox of frequency'. First, the lack of contingency emergency plan for a frequent event like an eruption reinforces blames framing centred on incompetency rather than incapacity. Second, the 1999 eruption highlights the importance of factoring in the cultural perception of MCEs. The local tribes around the mountain, for instance, believe eruptions are caused by the mountain God (Epasa Moto). Consequently, when he is angry, their

[1]The gong is s traditional instrument, which when played or sounded; everyone is alerted and comes out to get a message.

tribal chief offers sacrifices to appease 'Epasa Moto' to prevent the destruction of their villages (Atanga et al. 2010; Njome et al. 2010). Volcanic eruptions on Mt. Cameroon thus forms part of the cultural fabric of the communities, affecting the perception of volcanic hazard among indigenous populations and thus the role of government in mitigating, preparing and responding to it. It is also appropriate to factor such narratives into crisis communication in order to contextualise messaging, facilitate compliance and develop community resilience and orderly volcanic hazard response among communities around the mountain.

Third, the experience of the 1999/2000 volcanic eruptions showed how little has been learnt and embedded from the previous experience of the LND of the 1980s. Functions were duplicated and financial and material destined for the disaster survivors were embezzled (Bang 2012). There were problems with inadequate needs assessments of the disaster survivors. Similarly, in 1999, no staff from the Ministry of Health sat on the crisis committee to provide advice on health risks from the eruption thereby demonstrating deficiencies in learning about the role of scientific advice in shaping crisis communication.

According to Bang (2012), part of the reason for this lack of learning—in spite of the frequency of disasters—was that there was a notable lack of follow-up projects on the social aspects of the LND. Disaster managers failed to learn from internal policy failure and thereby how *to turn incompetency into practical competency* via *lessons learned or at least counter accusation of incompetency* via *more sophisticated communication strategies*. In fact, government officials used framing strategies emphasising the external nature and magnitude of the LND and the later MCE events in a quick, but largely futile, attempt to shift criticisms about policy failures in the management of the crisis from themselves. They highlighted a 'systemic failure' narrative, where they attempted blame avoidance by highlighting the poor financial state of the country, combined with the magnitude of external natural events.

Other factors can be explained by concepts of blame management. Field observations by Bang reveal also that the political context is important in the Cameroon case. Government authorities and officials appointed to manage the various administrative units of the country—who also double as disaster managers—usually behaved to protect/defend their jobs/positions rather than accepting mistakes. Equally, they were resistant to delegating to others more knowledgeable in crisis management to take control, because they might be sympathisers of opposition parties and may take credit for any good job done (Bang 2012).

As a conclusion, there is empirical evidence that demonstrates that frequency of events is not a guarantee of effective learning and enhanced preparedness for the future. Later blame and blame gaming will continue especially since issues of competency remains at the fore even today in the Cameroon. Issues, such as, lack of political resolve or will, and inadequacy of human and financial resources (Bang 2014) remain as relevant today—suggesting that frequency of occurrence is not necessarily the main factor determining levels of preparedness and resilience. At the very least there needs to be continuous commitment and political will as part of the 'bouncing forwards' that embodies a quest for change, improvement and innovation (Miles 2016). Learning and review of experience must therefore accompany frequency of events. Simply experiencing frequent events will not automatically lead to effectiveness in handling those events. Only by incorporating more sophisticated ideas of crisis communication can any resistance to learning from previous disasters be addressed within Cameroon's disaster management system. There is no time to waste. One thing the paradox of frequency tells us—is that time will not wait until the next disaster is upon the Cameroon.

References

Afane E, Sende N, Biowole J, Akoh-Arrey M, Muna F (2001) Irritation respiratoire Cameroun en Mars 1999. A quarterly publication of the Faculty of Medicine and Biomedical Sciences, University of Yaounde 1, Cameroon, vol 3, pp 62–63

Atanga M, Merve A, Njome M, Kruger W, Suh E (2010) Health system preparedness for hazards associated with Mount Cameroon eruptions: a case study of Bakingili village. Int J Mass Emerg Disasters 28 (3):298–325

Ateba B, Tabod C (2009) Monitoring seismic and volcanic activity in Cameroon: advanced workshop on evaluating, monitoring and communicating volcanic and seismic hazards in East Africa, 17–28 Aug 2009. ICTP, Trieste. http://indico.ictp.it/event/a08176/session/19/contribution/15/material/0/0.pdf

Ateba B, Dorbath C, Dorbath L, Ntepe N, Frogneux M, Aka F, Hell J, Delmond J, Manguelle D (2009) Eruptive and earthquake activities related to the 2000 eruption of Mount Cameroon volcano (West Africa). J Volcanol Geoth Res 179:206–216

Bang H (2012) Disaster management in Cameroon: the Lake Nyos disaster experience. Disaster Prev Manag 21(4):489–506

Bang H (2013) Governance of disaster risk reduction in Cameroon: the need to empower local government. Jàmbá J Disaster Risk Stud. http://dx.doi.org/10.4102/jamba.v5i2.77

Bang H (2014) General overview of the disaster management framework in Cameroon. Disasters 38:562–586

Bird DK, Gísladóttir G, Dominey-Howes D (2010) Volcanic risk and tourism in southern Iceland: implications for hazard, risk and emergency response education and training. J Volcanol Geoth Res 189:33–48

Boin A, 't Hart P, Stern E, Sundelius B (2005) The politics of crisis management: public leadership under pressure. Cambridge University Press, Cambridge

Boin A, 't Hart P, McConnell A (2009) Crisis exploitation: political and policy impacts of framing contests. J Eur Publ Policy 16(1):81–106

Boin A, 't Hart P, McConnell A, Preston T (2010) Leadership style, crisis response and blame management: the case of Hurricane Katrina. Publ Adm 88 (3):706–723

Bonne K, Kervyn M, Cascone L, Njome S, Van Ranst E, Suh E, Ayonghe S, Jacobs P, Ernst G (2008) A new approach to assess long-term lava flow hazard and risk using GIS and low-cost remote sensing: the case of Mount Cameroon, West Africa. Int J Remote Sens 29:6539–6564

Brandström A (2016a) Crisis, accountability and blame management. CRISMART, Stockholm

Brändström A (2016b) Crisis, accountability and blame management. Strategies and survival of political office-holders. http://fhs.diva-portal.org/smash/get/diva2:896367/FULLTEXT01.pdf

Brändström A, Kuipers S (2003) From 'Normal Incidents' to political crises: understanding the selective politicization of policy failures. Gov Opposition 38(3):279–305

Brändström A, Kuipers S, Daleus P (2008) The politics of tsunami responses: comparing patterns of blame management in Scandinavia. In: Boin A, McConnell A, 't Hart P (eds) Governing after crisis: the politics of investigation, accountability and learning. Cambridge University Press, Cambridge, pp 114–147

Clay E, Barrow C, Benson C, Dempster J, Kokelaar P, Pillai N, Seaman J (1999) An evaluation of HMG's response to the Montserrat volcanic emergency. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/67966/ev635.pdf

Cronin SJ, Gaylord DR, Charley D, Alloway BV, Wallez S, Esau JW (2004) Participatory methods of incorporating scientific with traditional knowledge for volcanic hazard management on Ambae Island, Vanuatu. Bull Volcanol 66:652–668

Cutter SL, Barnes L, Berry M, Burton C, Evans E, Tate E, Webb J (2008) A place-based model for understanding community resilience to natural disasters. Glob Environ Change 18(4):598–606

De Vries M (2004) Framing crises: response patterns to explosions from firework factories. Administration and Society 36:594−614

Duruelle B, N'nI J, Kambou R (1987) Mount Cameroon: an active volcano of the Cameroon Line. J Afr Earth Sci 6:197–214

Ewart J, McLean H (2015) Ducking for cover in the 'blame game': news framing of the findings of two reports into the 2010–11 Queensland floods. Disasters 39(1):166–184

Favalli M, Tarquini S, Papale P, Fornaciai A, Boschi E (2012) Lava flow hazard and risk at Mt. Cameroon volcano. Bull Volcanol 74:423–439

Fitton J (1987) The Cameroon Line, West Africa: a comparison between oceanic and continental alkaline volcanism. In: Fitton J, Upton B (eds) Alkaline igneous rocks. Geological Society of London Special Publication, pp 273–291

Freeth S, Kay R (1987) The Lake Nyos disaster. Nature 325:104–105

Garcia C, Fearnley C (2012) Evaluating critical links in early warning systems for natural hazards. Environ Hazards 11:123–137

Global Volcanism Program (2012) Report on Cameroon. In: Sennert S (ed) Weekly volcanic activity report, 1–7 Feb 2012. Smithsonian Institution and US Geological Survey. http://volcano.si.edu/showreport.cfm?doi=GVP.WVAR20120201-224010

Haynes K, Barclay J, Pidgeon N (2008) The issue of trust and its influence on risk communication during a volcanic crisis. Bull Volcanol 70:605–621

Hood C (2001) The blame game: spin, bureaucracy and self-preservation. Princeton University Press, Woodstock

Kling G, Clark M, Compton R, Devine D, Evans W, Humphrey A, Tuttle M (1987) The 1986 Lake Nyos

gas disaster, Cameroon, West Africa. Science 236 (4798):169–175
Kokelar B (2002) Setting, chronology and consequences of the 1995–1999 eruption of Soufriere Hills Volcano, Montserrat. In: Druitt T, Kokelaar B (eds) The eruption of Soufriere Hills Volcano, Montserrat, from 1995 to 1999. Geological Society of London Memoirs, pp 1–43
Lenhardt N, Oppenheimer C (2014) Volcanism in Africa: geological perspectives, hazards, and societal implications. In: Ismail-Zadeh A, Urrutia-Fucugauchi J, Kijko A, Takeuchi K, Zaliapin I (eds) Extreme natural hazards, disaster risks and societal implications. Cambridge University Press IUGG Special Publication Series, Cambridge, pp 169–199
McGuire W, Solana M, Kilburn C, Sanderson D (2009) Improving communication during volcanic crises on small vulnerable islands. J Volcanol Geoth Res 183:63–75
McGraw K (1990) Avoiding blame: an experimental investigation of political excuses and justifications. Br J Polit Sci 20(1):119–131
MIAVITA (2012) Handbook of volcanic risk management: prevention, crisis management and resilience. http://miavita.brgm.fr/Documents/Handbook-VolcRiskMgt-lr.pdf
Miles L (2016) Entrepreneurial resilience. Crisis Response J 11(4)
Miles L, Petridou E (2015) Entrepreneurial resilience: the role of policy entrepreneurship in the political perspective of crisis management. In: Bhamra R (ed) Organisational resilience. CRC Press, London, pp 67–81
Njome M, Suh E, Chuyong G, de Wit M (2010) Volcanic risk perception in rural communities along the slopes of Mount Cameroon, West-Central Africa. J Afr Earth Sci 58:608–622
Pyle D (1999) Widely dispersed quaternary tephra in Africa. Global Planet Change 21:1–15
Ronan K, Crellin K, Johnston D (2010) Correlates of hazards education for youth: a replication study. Nat Hazards 53:503–526
Sanderson D (1998) Volcanic warning dissemination in Montserrat. In: Lee B, Davis I (eds) Forecasts and warnings. National Coordination Committee for the International Decade for Natural Disaster Reduction, London, Thomas Telford, pp 534–541
Simkin T, Siebert L (1994) Volcanoes of the world: a regional directory, gazetteer, and chronology of volcanism during the last 10,000 years, 2nd edn. Geoscience Press, Tucson, AZ, 349 pp
Smale L (2016) Preventing volcanic disasters: the critical nature of communication. http://london-nerc-dtp.org/2016/05/09/preventing-volcanic-disasters-the-critical-nature-of-communication/
Suh E, Sparks J, Fitton J, Ayonghe S, Annen C, Nana R, Luckman A (2003) The 1999 and 2000 eruptions of Mount Cameroon: eruption behaviour and petrochemistry of lava. Bull Volcanol 65:267–281
Tchoua F (1971) Le volcanism estrombolien de la plaine de Tombel (Cameroun). Annales de la Faculté des sciences du Cameroun, pp 53–78
Thierry P, Stieltjes L, Kouokam E, Ngueya P, Salley P (2008) Multi-hazard risk mapping and assessment on an active volcano: the GRINP project at Mount Cameroon. Nat Hazards 45:429–456
Tsafack J, Wandji P, Bardintzeff J, Bellon H, Guillou H (2009) The Mount Cameroon stratovolcano (Cameroon Volcanic Line, Central Africa): petrology, geochemistry, isotope and age data, geochemistry. Min Petrol 47:65–78
UN (United Nations) (1995) Early-warning capacities of the United Nations system with regard to natural disasters. Secretary General Report A/50/526, 28 pp
Volcano Observatory (2016) Cameroon volcano. https://www.volcanodiscovery.com/mt-cameroon.html
Wantim M, Kervyn M, del Ernst G, Marmol M, Suh E, Jacobs P (2013) Numerical experiments on the dynamics of channelized lava flows at Mount Cameroon volcano with the FLOWGO thermos rheological model. J Volcanol Geoth Res 253:35–55
Wooster M, Demeritt D, Dill K, Webley P (2005) Enhancing volcanic hazard avoidance capacity in central America through local remote sensing and improved risk communication. DFID, London