

# Crisis translation: considering language needs in multilingual disaster settings

Crisis  
translation

129

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## Abstract

**Purpose** – The purpose of this paper is to highlight the role that language translation can play in disaster prevention and management and to make the case for increased attention to language translation in crisis communication.

**Design/methodology/approach** – The paper draws on literature relating to disaster management to suggest that translation is a perennial issue in crisis communication.

**Findings** – Although communication with multicultural and multilingual communities is seen as being in urgent need of attention, the authors find that the role of translation in enabling this is underestimated, if not unrecognized.

**Originality/value** – This paper raises awareness of the need for urgent attention to be given by scholars and practitioners to the role of translation in crisis communication.

**Keywords** Crisis communication, Translation studies, Cross-cultural barriers, Emergency responses, Linguistic vulnerability

**Paper type** Conceptual paper

## Introduction

Much as the world is interconnected and globalized in terms of communication, the breadth of social and economic impact of communication in multilingual, transborder as well as national crises remains understudied (Federici, 2016). Long-lasting crises can erupt within multicultural cities (e.g. the 2017 Grenfell Tower fire in London), a region (the 2017 earthquake in Mexico), a nation (the 2011 Great East Japan earthquake, or the 2010 Haiti earthquake) or across borders between multiple countries (the 2004 Boxing Day Tsunami across 18 countries in the Indian Ocean). Triggered by natural hazards, or teleological motivations – human-driven disasters, including terrorism and conflict (Glade and Alexander, 2016) – happen within multilingual and multicultural societies (Cadwell, 2014; Cadwell and O'Brien, 2016; O'Brien and Cadwell, 2017). Increased people displacement and economic migrations across the world causes major concerns for migrants' adaptability to disasters in their new contexts. Although displaced populations can be resilient because of their past experiences (Guadagno *et al.*, 2017; Khan and McNamara, 2017; MICIC, 2016), at the same time they can be exposed to new vulnerabilities in their new environments with limited access to information (Puthooppambal and Parente, 2018). Language plays a role in both cross-boundary and local settings. Local crises in multilingual societies equally have implications for temporary or long-term residents with limited proficiency in the local language – an example: translations into 18 languages were needed after the Grenfell Tower fire. Thus, from indigenous populations to (un)integrated



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migrants, to tourists or business travellers, any crisis can cascade into multiple, diverse and interrelated temporal, cultural, linguistic and geographical dimensions (Pescaroli and Alexander, 2015). Consequently, language translation is required.

Training for internationally coordinated responses to crises (Howe *et al.*, 2013) and collecting data from disasters (Mulder *et al.*, 2016) also happen in multilingual environments, where the lingua franca (the English language of international humanitarian institutions) is both a solution and part of the problem. Overreliance on everybody's (degrees of) competence in English delays engaging with the "perennial issue" of crisis communication among international responders (Crowley and Chan, 2011, p. 24) and with crisis-affected communities (New Zealand Government, 2013).

In this paper, we make the case for increased attention to language translation in crisis communication. Translation is here intended as linguistic and cultural transfer from one language into another, be it through oral, signing, written or multimodal channels. We show how, in spite of some progress, the literature that deals with the multilingual nature of crisis situations is limited in fields where it should thrive, such as in crisis communication and in translation studies. Despite the central role attributed to efficient communication in disaster risk reduction (henceforth DRR), our current ability to plan and deliver multilingual information in crises is in fact hindered by the focus on language needs that is predominantly limited to considering, dealing or resolving language issues in the response phase. We propose a shift of focus towards considering language translation as part of disaster prevention and management. Embedded in debates on planning, preparedness, training and mitigation, language translation aligns with the recent call to consider communication of crucial and timely information in crisis management as a human right (Greenwood *et al.*, 2017). Yet, as the cursory evidence on how the multilingual communication issues are studied so far shows this right goes currently unnoticed, or gets very limited attention, at best.

### What is crisis translation?

Communication mediated by professional and *ad hoc* linguists (be they translators or interpreters) is a complex form of communication. Prior to explaining the proposed conceptualisation of crisis translation, it is necessary to scope what is meant by "translation" and "crisis", as used in this paper. We propose a broad conceptualisation of crisis translation as a specific form of communication that overlaps with principles of risk communication (CDC, 2014; Reynolds and Seeger, 2014) as much as with principles of emergency planning and management (Alexander, 2002, 2016b).

Over the last decades, the recognition that any disruptive event has cascading effects has become significant. As issues in multilingual communication exist before, during and after any emergency or disaster, an awareness of cascading effects over the long-term and beyond the geographical location of the event is a *conditio sine qua non* to consider definitions of crisis that account for the interconnectedness of the twenty-first century world. Pescaroli and Alexander's (2015) definition of "cascading disasters", which connects crisis as a threatening condition with disasters as triggering events of different magnitude and duration, shapes our definition of crisis. In particular, Pescaroli and Alexander (2015, p. 62) integrate and sharpen the UN Office for Disaster Risk Reduction terminology by emphasizing "that cascades are events that depend, to some extent, on their context, and thus their diffusion is associated with enduring vulnerabilities". It is noteworthy, however, that the UN perceives language translation as a matter of "services". For instance, the *Disaster Assessment and Coordination Field Handbook* (UNDAC, 2018) in the workflow of its On-Site Operations Coordination Centre for disaster management includes in one of its checklists for crisis communication "procurement of translation/interpretation services" (UNDAC, 2018, p. 17). This positive awareness of need clashes with the reality that such services may exist professionally in very limited scope, translators and interpreters are not

trained in the many language pairs that may be required, and local languages, dialects, minority languages and low/no literacy communities are less served than lingua franca or “international” languages. The lack of appropriate linguistic and cultural awareness in crisis communication may lead to catastrophic consequences, which could be avoidable and for this reason we position this lack within the “cascading disaster” paradigm. Problems of translation leading to inappropriate evacuations (e.g. Field, 2017) or cultural presumptions leading to further infection in displaced and local populations in the 2014 Ebola outbreak (e.g. Bastide, 2018) show that inadequate planning for language translation provision leads to vulnerability.

The UN defines as vulnerabilities “the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards”[1]. Vulnerabilities also depend on cultural perceptions of risk and whether cultural backgrounds align with the international (often Anglophone) concepts of preparedness and risk reduction (see discussions in Blaikie *et al.*, 2004; Krüger *et al.*, 2015). Lack of integration, lack of participation, lack of access to information represent vulnerabilities for culturally and linguistically diverse (CALD) communities. Translation would mitigate some of these pre-existing vulnerabilities, but as Grin (2017, p. 156) puts it “[t]ranslation sometimes evokes the image of a Cinderella confined to humble domestic chores while her elder sisters, that is, communication strategies like ‘lingua franca’ and second/foreign language learning, enjoy all the attention and visibility”. The consequences of these are highlighted in the recent IFRC (2018) World Disasters Report:

Speakers of minority languages who are not fluent in the official national language(s) are at a structural disadvantage in many countries. [...] However linguistically diverse the affected population, humanitarian responses are usually coordinated in international lingua francas and delivered in a narrow range of national languages. (p. 103)

As a result, language translation rarely, if ever, features among plans to increase resilience but its absence increases the cascading effects of crises. Pescaroli and Alexander’s (2015) definition of “cascading disasters” (pp. 64-65) underpins a notion of “crisis” that persuades us that research into translation and its effects on communication in crisis management is much needed. Poor or culturally inappropriate communication undermines trust in responders and institutions. Failure to address effective communication for CALD communities generates further social disruption, one of the cascading effects. This, in turn, risks affecting and endangering respondents who may deal with crisis-affected populations because their lack of understanding or their cultural mindset make them appear as non-collaborative. Thus, crisis translation considers language barriers in the context of multi-dimensional cascading effects that widen existing vulnerabilities or engender new ones by means of miscommunication.

As mentioned earlier, “translation” here refers to all modes, oral, written, signed and multimodal that could be used for communication in preparation and response, as well as for recovery from a crisis. Hence, “translation” includes the oral task of “interpreting”. For those outside the academic and professional domain of translation, debates about the different skills required from translators and interpreters are largely unknown and “translation” is the term used generally to mean the transfer of meaning and cultural encodings from one language/cultural system to another regardless of the channel of communication (e.g. the Harvard Humanitarian Initiative heading “translation: the perennial hidden issue” concerns in fact a question of interpreting). Moreover, an individual may act as a translator of written content in one instance and an interpreter of oral content in another. This is especially the case in crisis situations. The term “translator” is usually reserved in academia and in the translation professions

(Gouadec, 2007) for those who are “qualified” to act through training and/or experience. However, in a crisis situation, a “translator” might be any person who can mediate between two or more language and culture systems, without specific training or qualifications (Federici and Cadwell, 2018; O’Brien and Cadwell, 2017). A translator might even be a young refugee (see Marlowe and Bogen, 2015; Melandri *et al.*, 2014). This loose definition of a translator is not a comfortable one for those who work in the translation professions or in the related academic discipline. Nonetheless, when people are faced with a crisis, the luxury of a trained professional is often just that – an unattainable luxury. We recognize that translation is carried out by many different people in crisis situations; that it is sometimes oral, sometimes written and sometimes highly multimodal; that the translator is sometimes a trained professional and sometimes not, sometimes an adult, sometimes a child, that translators do not just transfer linguistic information, but also act, very importantly, as cultural mediators. Take this state of affairs and add to it the lack of trained translators and interpreters who are available to work in a crisis, the lack of funding for communication, never mind translation, the urgency that is associated with core phases of crises (response and recovery), and the potential power of volunteers, it is necessary to adopt a broad definition of “translation” and “translator”.

### **Growing recognition of the need**

We do not wish to give the impression that translation is entirely overlooked in commentaries or policies on crisis communication. At the Sendai implementation conference in 2016, translation and interpreting were discussed in the context of capacity building for disaster risk reduction (Aitsi-Selmi *et al.*, 2016). The Global Disaster Alert Coordination System[2] guidelines for international exchange in disasters mentions translators once, but they are listed in the company of the following information exchange responsibilities of the affected country: transport, fuel/lubricants, translators, warehouses, maps, etc. The Sphere Project (2018, p. 71), under commitment 6 on information sharing in humanitarian response, includes two explicit communicative obligations: “Communicate clearly and avoid jargon and colloquialisms, especially when other participants do not speak the same language. Provide interpreters and translators if needed”.

Cadwell (2015) and Cadwell and O’Brien (2016) investigate the use and potential of translation technology in crisis situations. Somewhat surprisingly, it was found that industry-standard and commercial translation tools such as translation memory, terminology databases and machine translation (i.e. MT – fully automatic translation) played an insignificant role for foreign nationals affected by the Great East Japan Earthquake. Since then, the potential of translation technology to assist in crisis situations has been growing (see O’Brien, 2019 – for a discussion). Having crisis terminology online is of course useful, but accessibility in times of crisis for all the potential actors has not been critically appraised and ways of building and sharing translation databases, for example, by and for volunteers goes largely unassessed, as does the utility of such databases for the training of MT engines.

Initial strides for inclusion of translation technologies in response to crisis come from the NGO Translators without Borders (TWB). It has played a leading role in having translation recognized and implemented as part of humanitarian aid in the past number of years, including pioneering work to train crisis translators (O’Brien, 2016). Their Words of Relief project aims to translate crisis messages into 15 world languages, build a spider network of diaspora who can translate and create a crowd-sourced application that connects aid workers and data aggregators in an emergency. In addition, TWB partnered with Microsoft to push forward crucial work in MT (Crisis MT, see Lewis, 2010; Lewis *et al.*, 2011) and their operations office in Kenya stimulated a first study on comprehension of translated information about Ebola among Kenyans.

### Yet, translation is mostly ignored

In spite of these seedling developments, translation as a facilitator of crisis information is mostly overlooked. In 2018, the “Multi-Hazard Early Warning System: A Checklist” (WMO, 2018) shows how awareness about cultural and linguistic differences remains very limited. Even though the checklist responds to the purpose of the Sendai Framework for Disaster Risk Reduction 2015-2030 (UNISDR, 2015) so as to attain “the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities, and countries”, the checklist remarkably excludes language obstacles to effective communication. Linguistic diversity is the status quo in most countries world-wide. However, “language” is often conflated with the concept of “culture” and the implicit assumption seems to be that if cultural diversity is noted, translation will somehow happen; many international documents, including influential documents such as this checklist, are redacted in one of the seven official languages of the UN, whilst 7,111 languages are currently in actual use (Eberhard *et al.*, 2019)[3]. Yet languages such as Hindi, the fourth largest for native speakers and third largest for overall number, are not included among the official languages. It is tempting to argue that considerations about linguistic diversity recede before prestige and power of *lingua francas*. Moreover, translation costs money, which may not abound in crisis response. It also requires forward planning. For example, establishing a database of approved translators and interpreters for specific language pairs, knowing their expertise, their availability, etc. As a result of these and possibly other factors, the fact that linguistic diversity comes with translation needs in cross-boundary crises remains underestimated.

It is unclear who has ownership of provision for effective communication in a language that is understood by the recipients of crisis information. The document dedicated to early-warning signals does not suggest that a specific responder (person or institution) should deal with the logistical difficulties of accommodating language differences when communicating risks with the purpose of mitigating its impact. CALD communities and their needs are listed; they are included in checks for assessment of “exposure, vulnerabilities, capacities, and risks” (p. 10) where the checklist includes a box for “legislation and cultural norms assessed to identify gaps that may increase vulnerability”. Though cultural diversity is listed, it does not follow automatically that language needs are either included or taken care of, as mentioned above. The focus, rather, seems to be on cultural and behavioural norms, but not on language access.

Further, in the extensive body of literature on crisis or disaster management, with its intrinsic terminological debates on what disaster management entails (Fischer, 2008; Haddow *et al.*, 2011; Thomas *et al.*, 2013; Wall and Chery, 2011; Waugh, 2007), or in the charter of humanitarian response of The Sphere Project (2011; as seen some more commitment appears in the 2018 edition), the common denominator appears to be that multilingual communication issues are considered sporadically, and only recently have they acquired limited visibility. In some of this literature, the strategic importance of communication, or information as aid, is highlighted (Fischer, 2008; Isiolo, 2012; Santos-Hernández and Hearn Morrow, 2013; Seeger, 2006; WHO, 2012). In international and European protocols or roadmaps on crisis or emergency management, recommendations on clear communication with crisis-affected communities form a core element yet they do not mention translation (DG-ECHO, 2013; EC, 2014, 2017). A recent institutional commitment from the United Nations High Commission for Refugees has one formal commitment about access to information – to address migration crises:

Therefore, we need to maintain continuous communication with communities, using languages, formats, and media that are contextually appropriate and accessible for all groups in a community, including children and persons with disabilities. (UNHCR, 2018, p. 8)

It is, at best however, a general statement of principle.

The EU's General Guidelines for Operational Priorities on Humanitarian Aid signalled the importance of communicating transparently about disasters (EC, 2014) and recently introduced an economic argument in favour of risk reduction and prevention that applies to considering translation as a tool to better inform and educate for prevention: "We know that investment in prevention saves lives and livelihoods; it needs therefore efficient targeting to disaster risks" (EC, 2017, Section 2). These goals sit alongside the rights-based notion that whatever the status of one's spoken language (Mowbray, 2017), information in a crisis is a fundamental human right (Greenwood *et al.*, 2017; O'Brien *et al.*, 2018).

Some of these commentators have provided evidence of negative consequences when crisis communication does not work, especially when communication is in a second or third language for the crisis-affected communities, or in a language they do not understand at all. The pivotal work, previously mentioned, Disaster Relief 2.0, published by Harvard Humanitarian Initiative (Crowley and Chan, 2011), using the Haiti Earthquake example, argues for increased cooperation and dialogue between humanitarian agencies and the technical and linguistic volunteers spread around the globe who help process the communication generated by the disaster-affected communities. It also called for deeper interactions in future disasters between those responding to and those experiencing a disaster; eight years on and this issue is still relevant as it remains unaddressed (Cook *et al.*, 2016).

Moser-Mercer *et al.* (2014, p. 141) confirm this point: "Surprisingly, language needs of large-scale humanitarian actions and deployments are rarely voiced, often downplayed and at best indirectly stated". To provide additional concrete examples, Haddow *et al.* (2011) in their *Introduction to Emergency Management* list five critical assumptions for a successful crisis communications strategy: customer focus; leadership commitment; the inclusion of communications and planning in operations; situational awareness; and media partnership. The audience and customers of crisis information are listed as the general public, victims, the business community, media, elected officials, community officials and volunteer groups (i.e. a diverse group). It cannot be assumed that all these people share equal competencies in the same language, so translation is a necessity. Yet, nowhere is translation mentioned in this volume.

The DG-ECHO (2013) Disaster Risk Reduction Policy Document discusses the importance of inclusive information and communication and mentions in particular that information should be "accessible for all" (p. 41). This document also mentions strengthening resilience through timely exchange of information. However, making information accessible by either simplifying it for those with limited proficiency in a lingua franca, or translating it is only mentioned very briefly ("briefing of colleagues and translation in practice").

In his discussion on lessons learned from previous disasters, Fischer (2008, p. 217) notes that:

[...] instructions for obtaining medical assistance and subsistence supplies as well as instructions for an evacuation or a quarantine are more likely to be responded to if they are frequently repeated, articulated clearly and with specificity. All too often emergency personnel assume that because the information was disseminated, the intended recipients have received it, understood it, and responded to it in the desired fashion. Nothing could be further from the truth.

This statement reminds us that communicating one way is insufficient, but the author fails to note that, for communication to be effective, it does not only have to meet the requirements listed above, but should be delivered in a language that is comprehended by those who need that communication. Retention, understanding and desire for information in specific modes or formats by affected populations are excluded from this equation, with the risk of one-directional forms of communication (for an illustration, see O'Brien and Cadwell, 2017).

In his 2006 article on best practices in crisis communication, Seeger lists ten best practices on crisis communication generated from research literature. Due to space constraints, we do not list them all here, but emphasize practice number (8), given its

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significance for ethical crisis communication: communicate with compassion, concern and empathy. None of the “best practices”, not even (8), recognize the role of multilingual communication through translation.

Access to compassionate speakers of one’s language represented a powerful resource for refugees caught in the aftermath of the 2010 and 2011 earthquakes in New Zealand (Christchurch and Canterbury), but it was acknowledged that improvements in communicating with CALD communities was required (New Zealand Government, 2013). As a final example, even Santos-Hernández and Hearn Morrow (2013) who focus on language and literacy as factors in successful crisis communication, acknowledge the importance of readability using typical measures such as SMOG and Flesch-Kincaid, but fail to mention translation or interpreting. In summary, there are ample examples of a considerable lacuna for the role and need for translation in academic, governmental and non-governmental discourse on crisis communication.

### **Crisis translation and emergency planning**

We intend to demonstrate that in the context of DRR and crisis management alike, additional focus on the language barrier would greatly contribute to community-led initiatives to mitigate risks (Gaillard, 2010; Mercer *et al.*, 2012; Shaw, 2012; Tabatabaei *et al.*, 2013). Language translation is a significant problem in the response phase of disasters, as deploying language specialists in combinations that are difficult to predict in advance is an expensive and logistically challenging task; as we mentioned previously, interpreters and translators for the needed language combinations may not be available, fully trained, or even exist. It is likely to remain an impossible task to complete if the focus remains only on the response phase. In order to deploy interpreters or provide information in languages that reach the affected communities, translators and interpreters must be available. Professional translators are rare in many language combinations, so bilingual staff of NGOs double up as translators and interpreters. This role is frequently imposed on such staff, on top of their existing workload, and without training or support. Also, translators and interpreters may even be affected themselves by whatever crisis is ongoing.

Embedding translation into communication strategies within emergency planning is part of the solution, like any other element that can be considered and included in emergency plans as part of the “the process of preparing systematically for future contingencies, including major incidents and disasters” (Alexander, 2016b, p. 2). This could involve pre-translated, pre-subtitled, pre-audio described materials in the languages understood by the local communities to be part of early actions. To achieve this, language translation needs to be part of pre-crisis emergency plans that will include the development of resources to enable affected-communities to interact with disaster managers and humanitarian organization. The “so-called ‘disaster cycle’ refers to the phases of resilience building, preparation, emergency response, recovery, and reconstruction” (Alexander, 2016b, p. 23). Our contention is that translation can play an important role towards preparedness.

Including translation as a component in emergency planning would have multiple benefits. With increased access to timely and accurate information in a language that can be (better) understood, lives and well-being can be protected. Moreover, the considerable economic costs of dealing with crises could be reduced. The EU H2020 Work Programme noted that the environmental and socio-economic impact of disasters and crime and terrorism on the population amounts to average annual losses of roughly 25 per cent of the global GDP and 5 per cent of the Union’s GDP, respectively. According to the UNISDR, the 2013 central European floods alone resulted in losses of \$18bn. In the foreword to the World Atlas of Natural Disaster Risk (Shi and Kasperson, 2015), the then UN Special Representative of the Secretary General for Disaster Risk Reduction, Mrs Margareta Wahlström, stated that economic losses as a result of disasters continue to rise. It is

estimated that in the past three years, losses due to disasters have exceeded \$100bn. In 2005, the UK Department for International Development put forward a policy briefing document arguing that investment in risk reduction is more cost-effective than just response actions when crises occur (White *et al.*, 2005). To shift from managing disaster to the proactive prevention of risk, with possible reductions in the cost of disasters, multilingual communication needs to take its proper place in the list that normally includes supplies, medicine, infrastructure and technology.

Steps can be taken to incorporate translation into emergency planning. A logical starting point is to ensure that it is a concrete and explicit part of emergency response policy. The lack of reference to translation in policy or guideline documents is unsurprising, given that there is not even agreement in policy documents on what core terms such as vulnerability, capacity and resilience mean. Gaillard (2010) discusses how these core terms in DRR are often interpreted differently, depending on whether the policy makers are active in the domain of climate change, development or DRR. He believes that huge efforts are required to close the gap between these domains as well as between practitioners and scientists. Given conceptual differences at that level, it is not hard to understand that translation hardly figures in policies relating to disasters and crises. Expert terminology and the lack of preparedness in sourcing specialist translators can be a deadly combination. An example of language needs from the local community is given by Field (2017, p. 340) through her discussions with local groups. The failure to evacuate appropriate regions before the landfall of Typhoon Yolanda in the Philippines partially rests on a lack of appropriate translation based on local cultural needs: “while the two are scientifically different phenomena, it was acknowledged that had the threat of the storm surge been likened to that of a tsunami (for a coastal population hit by a wave, the impact would be similar), the coastal regions would have seen higher evacuation rates, particularly due to familiarity with the 2004 Indian Ocean tsunami and the more recent 2011 tsunami in Japan”.

There is an urgency to identify best practices and to provide new insights for, or indeed create, recommendations for crisis translation policy for national, European, and international agencies that regularly work across borders and across languages, with a view to reversing inequalities across language communities and promoting fairness of access to information. This approach will be especially important in the context of new migration patterns and policy requirements for Europe. Crisis communication literature emphasizes the difficulties when trying to communicate with those who are the most vulnerable, e.g. the elderly, disabled, children or those with low literacy levels. Dealing adequately with these challenges must be within the scope of crisis translation into the future, when, in many societies with migrant populations, first generation migrants will represent large communities in the care homes and their linguistic skills may not meet their communicative needs.

There is some evidence that high level, national policies (e.g. FEMA, 2016; NHS England, 2015; Cabinet Office, 2012) provide for language provision for limited-proficiency speakers, but more empirical data on the ways in which translation is understood in these policies is required (O'Brien *et al.*, 2018), not to mention how policies are implemented.

Contending that crisis translation must be considered in relation to cascading disasters, we opt for an activist approach. Viewing the definition from the point of view of emergency planning, research into crisis translation needs to explore the roles of language in all the phases of a disaster, including during the “normal” phase in which resilience is built up. Alexander (2016a, p. 14), discussing emergency planning, reminds the reader that “[a] crisis is a sudden, intrusive interruption of normal conditions with potentially adverse consequences. ‘Normality’ is defined here as the average of conditions over a protracted period in which things function acceptably”. If CALD communities are being supported by intercultural mediators (Belpiede, 1999; Casadei and Franceschetti, 2009), interpreters or community



translators (Taibi, 2011; Taibi and Ozolins, 2016) to access information in normal conditions, surely this confirms that such needs will persist, in fact be exacerbated, in crisis situations. We suggest inverting the research priorities, so that by building up data, resources and technology, these can be better deployed in the response and recovery phases. Just as other specialist skills receive training to operate in emergencies, linguists ought to receive training to provide support in crises and to create valuable expertise in handling language needs by being embedded in crisis management practices. Translation, interpreting, cultural mediation and relationships between different language communities that enhance effective communication in crisis connecting linguistic sub-groups to the broader society need to be considered as part of the preventive measures that prepare residents for emergency response (Federici, 2016). A good example is the initiative described by Clerveaux *et al.* (2010) where a Disaster Awareness Game (DAG) is developed to help increase hazard awareness among school children in the Caribbean Community and Common Market area. This multicultural area demands a multilingual approach to risk communication. Clerveaux *et al.* (2010) argue that children are an appropriate target for the DAG because it is an investment in future disaster preparedness, but also because children of immigrant families are a conduit of information between school and home. They show awareness of the need for accessibility of the game, mentioning simple language and the potential for translation. Nevertheless, the game itself, as represented in the paper, is in English, which still falls short of truly serving multilingual needs. Another good example is discussed in the study of Shackleton (2018); New Zealand Red Cross worked with members of CALD offering them translation training in order to contribute to a project to increase awareness of emergencies affecting the Wellington region. In this project, under-resourced language combinations saw CALD members develop a basic understanding of translation and linguistic resources to describe natural hazards in the local area through languages other than New Zealand's main languages (English and Te Reo Maori). These are good illustrations of how translation can be embedded in practices of risk reduction; the CALD members involved in the project would not be professional interpreters in case of a response, but they could contribute to circulating information in translations (written texts, texts written to be read, radio or TV broadcasts) to allow CALD communities to attain information in a language they understand and in a format accessible to them. The example has limitations, however, as it does not entail a feedback loop seeking to find out from the CALD communities what information they would like to have and which formats are most appropriate.

Written, oral and multimodal communication channels are used at different stages of a crisis, with different audiences. Only early phases of crises automatically call for oral interpreting; preparedness activities and reconstruction phases after a crisis are more likely to call for translation, if there is an awareness of language needs. These are broad differentiations: empirical data to identify how municipal, regional or national-level policies connect CALD needs with emergency planning is required. The data need to have a cross-border as well as a local dimension to make sense of the needs of CALD communities; often the data on ethnographic and linguistic background may be collected for other reasons (census, electoral rolls) and these data could help identify existing needs and create the premises (databases, leaflets, technological resources) to develop language support for the time when it is needed. Data accuracy, assessment of real language competences, distance between rural and urban needs and budget are among the obvious obstacles to developing crisis translation resources. However, this complexity can no longer be a sufficient justification for a reactive mode to deal with the language barrier, because cross-referencing such data with other well-known data sets on hazards capes, risks and models derived from statistical data can be done as part of disaster prevention measures. Interpolating these existing data would create more valuable resources than what can be put together in the middle of a response.

The role of translation in recovery, reconstruction and preparation phases (intended as learning from activities just completed during the response phase) has not been studied much either. This point begins to be appreciated also in the crisis communication literature:

In other words, to date, transnational corporations, political institutions, disaster relief organizations, and other actors involved in cross-cultural crises and communication have almost no evidence-based and well-established guidelines they can use to organize or coordinate international crisis communication or to develop culture-sensitive crisis communication strategies or messages (instruction, adjusting information, etc.). (Schwarz *et al.*, 2016, p. 6)

Taking the most cynical of arguments, even if all the preparations are never going to be needed, the benefits of involving CALD communities in preparedness strategies would at the very least lead to more inclusive societies.

### Conclusions

Crisis translation should be viewed from the point of view of reducing vulnerabilities and providing efficient communication that would reduce costs if/when a crisis erupts. Feeble yet slowly growing is the voice of cost-effectiveness of investing in preparedness, as in the Communication of the European Commission of 23 November 2017:

A fully integrated approach to prevention, preparedness, and response to disasters in the Union and its Member States is urgently needed. We know that investment in prevention saves lives and livelihoods; it needs therefore efficient targeting to disaster risks. (EC, 2017)

Evidence of failings in crisis communication is plentiful and usually categorized under “issues of communication”; reasons for avoiding these failings are compelling (Greenwood *et al.*, 2017), translation is considered as a “perennial hidden issue” (Crowley and Chan, 2011, p. 24; IFRC, 2018, p. 103), yet its inclusion in emergency planning (and studies thereof) remain minimal and alternatives of plain or clear language are still offered as adequate solutions, but are blind to the needs of those who have very limited or no competence in the “language” in question in the first instance (see Strayhorn *et al.*, 2012, for example), who cannot read, see or hear.

In this context, we highlight the rationale for demanding evidence-based investigations into the impact of the language barrier on communication in crisis situations. We need to understand authentic training needs to support linguists (intended here as anybody with some knowledge of more than one language) who may need, want or be co-opted to operate as translators in rare-language combinations when they are not professionally trained. We need to identify beforehand the needs of local populations in relation to existing capabilities to deal with multilingual contexts and to identify ways of developing additional capabilities. We need to seek a better use for the skills, technologies and existing data on translation to be used in planned and sophisticated ways rather than as afterthoughts at the moment of dire need. Crisis Translation, as we propose in this paper, is a catalyst research area to develop a holistic, multidisciplinary and comprehensive understanding of the role of communication in multilingual crisis situations, so as to better address the necessity for accommodating language needs in crisis situations, thus lessening the impact of the language barrier in cascading crises.

### Notes

1. See UNISDR, [www.unisdr.org/we/inform/terminology](http://www.unisdr.org/we/inform/terminology) (accessed 21 November 2018).
2. See [www.gdacs.org](http://www.gdacs.org) (accessed 21 November 2018).
3. Source: [www.ethnologue.com/guides/how-many-languages](http://www.ethnologue.com/guides/how-many-languages) (accessed 26 June 2019).

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**References**

- Aitsi-Selmi, A., Murray, V., Wannous, C., Dickinson, C., Johnston, D., Kawasaki, A., Stevance, A.S. and Yeung, T. (2016), "Reflections on a science and technology agenda for 21st century disaster risk reduction", *International Journal of Disaster Risk Science*, Vol. 7 No. 1, pp. 1-29.
- Alexander, D.E. (2002), *Principles of Emergency Planning and Management*, Oxford University Press, Oxford; New York, NY.
- Alexander, D.E. (2016a), *How to Write an Emergency Plan*, Dunedin Academic Press, Edinburgh.
- Alexander, D.E. (2016b), "Disaster and emergency planning for preparedness, response, and recovery", in Cutter, S.L. (Ed.), *Oxford Research Encyclopedia Natural Hazard Science*, Oxford University Press, Oxford; New York, NY, pp. 1-20.
- Bastide, L. (2018), "Crisis communication during the Ebola outbreak in West Africa: the paradoxes of decontextualized contextualization", in Bourrier, M. and Bieder, C. (Eds), *Risk Communication for the Future*, Springer, Cham, pp. 95-108.
- Belpiede, A. (1999), "La professione di mediatore culturale in ambito sociale", *Prospettive Sociali e Sanitarie*, Vol. 2 No. 99, pp. 11-14.
- Blaikie, P., Cannon, T., Davis, I. and Wisner, B. (2004), *At Risk. Natural Hazards, People's Vulnerability and Disasters*, 2nd ed., Routledge, London; New York, NY.
- Cabinet Office (2012), *Emergency Preparedness: Guidance on Part 1 of the Civil Contingencies Act 2004, Its Associated Regulations and Non-Statutory Arrangements*, Crown, London, available at: [www.gov.uk/government/publications/emergency-preparedness](http://www.gov.uk/government/publications/emergency-preparedness) (accessed 21 November 2018).
- Cadwell, P. (2014), "Translation and interpreting needs in the Great East Japan Earthquake of 2011", paper presented at the Man versus Machine Conference, Proceedings of the XXth FIT World Congress (Vol. II), pp. 752-760.
- Cadwell, P. (2015), "A place for translation technologies in disaster settings: the case of the 2011 Great East Japan Earthquake", in O'Hagan, M. and Zhang, Q. (Eds), *Conflict and Communication: A Changing Asia in a Globalising World*, EHV Academic Press, Bremen, pp. 248-282.
- Cadwell, P. and O'Brien, S. (2016), "Language, culture, and translation in disaster ICT: an ecosystemic model of understanding", *Perspectives: Studies in Translation Theory and Practice*, Vol. 24 No. 4, pp. 557-575.
- Casadei, S. and Franceschetti, M. (2009), *Il mediatore culturale in sei Paesi europei*, ISFOL, Rome, available at: [http://archivio.isfol.it/DocEditor/test/File/2009/Strumenti\\_Isfol/II\\_Mediatore\\_culturale\\_in\\_sei\\_Paesi\\_europei.pdf](http://archivio.isfol.it/DocEditor/test/File/2009/Strumenti_Isfol/II_Mediatore_culturale_in_sei_Paesi_europei.pdf) (accessed 21 November 2018).
- CDC (2014), *Crisis, Emergency and Risk Communication*, Centers for Disease Control and Prevention, Atlanta, GA, available at: [https://emergency.cdc.gov/cerc/resources/pdf/cerc\\_2014edition.pdf](https://emergency.cdc.gov/cerc/resources/pdf/cerc_2014edition.pdf) (accessed 21 November 2018).
- Clerveaux, V., Spence, B. and Katada, T. (2010), "Promoting disaster awareness in multicultural societies: the DAG approach", *Disaster Prevention and Management: An International Journal*, Vol. 19 No. 2, pp. 199-218.
- Cook, A.D., Shrestha, M. and Htet, Z.B. (2016), "International response to 2015 Nepal earthquake: lessons and observations", available at: [www.rsis.edu.sg/wp-content/uploads/2016/10/NTS\\_Report\\_5\\_Nepal\\_final\\_revised\\_Oct.pdf](http://www.rsis.edu.sg/wp-content/uploads/2016/10/NTS_Report_5_Nepal_final_revised_Oct.pdf) (accessed 21 November 2018).
- Crowley, J. and Chan, J. (2011), *Disaster Relief 2.0: The Future of Information Sharing in Humanitarian Emergencies*, Vodafone Foundation, Washington, DC and Berkshire.
- DG-ECHO (2013), "Disaster risk reduction. Increasing resilience by reducing disaster risk in humanitarian action", available at: [http://ec.europa.eu/echo/files/policies/prevention\\_preparedness/DRR\\_thematic\\_policy\\_doc.pdf](http://ec.europa.eu/echo/files/policies/prevention_preparedness/DRR_thematic_policy_doc.pdf) (accessed 21 November 2018).
- Eberhard, D.M., Simons, G.F. and Fennig, C.D. (2019), *Ethnologue: Languages of the World*, SIL International, Dallas, TX.
- EC (2014), "General guidelines for operational priorities on humanitarian aid in 2015", available at: <http://ec.europa.eu/transparency/regdoc?fuseaction=list&coteId=10102&year=2014&number=345&language=EN> (accessed 21 November 2018).

- EC (2017), "Strengthening EU disaster management: rescEU solidarity with responsibility", available at: <http://ec.europa.eu/transparency/regdoc/?fuseaction=list&n=10&adv=0&coteId=1&year=2017&number=773&version=F&dateFrom=&dateTo=&serviceId=&documentType=&title=&titleLanguage=&titleSearch=EXACT&sortBy=NUMBER&sortOrder=DESC2017> (accessed: 21 November 2018).
- Federici, F.M. (2016), "Introduction: a state of emergency for crisis communication", in Federici, F.M. (Ed.), *Mediating Emergencies and Conflicts. Frontline Translating and Interpreting*, Palgrave Macmillan, New York, NY, pp. 1-29.
- Federici, F.M. and Cadwell, P. (2018), "Training citizen translators: Red Cross translation needs and the delivery of a bespoke training on the fundamentals of translation", in Tesseur, W. (Ed.), *Translation in Non-Governmental Organisations. Special Issue of Translation Spaces*, John Benjamins Publishing, Amsterdam and Philadelphia, PA, Vol. 7 No. 1, pp. 20-43.
- FEMA (2016), "Language access plan", available at: [www.dhs.gov/sites/default/files/publications/FEMA%20Language%20Access%20Plan.pdf](http://www.dhs.gov/sites/default/files/publications/FEMA%20Language%20Access%20Plan.pdf) (accessed 21 November 2018).
- Field, J. (2017), "What is appropriate and relevant assistance after a disaster? Accounting for culture(s) in the response to Typhoon Haiyan/Yolanda", *International Journal of Disaster Risk Reduction*, Vol. 22, pp. 335-344, available at: <https://doi.org/10.1016/j.ijdr.2017.02.010>
- Fischer, H.W. (2008), *Response to Disaster: Fact Versus Fiction and its Perpetuation: The Sociology of Disaster*, 3rd ed., University Press of America, Lanham, MD.
- Gaillard, J.-C. (2010), "Vulnerability, capacity and resilience: perspectives for climate and development policy", *Journal of International Development*, Vol. 22 No. 2, pp. 218-232.
- Glade, T. and Alexander, D.E. (2016), "Classification of natural disasters", in Bobrowsky, P.T. (Ed.), *Encyclopedia of Natural Hazards*, Springer, Berlin, pp. 78-82.
- Gouadec, D. (2007), *Translation as a Profession*, John Benjamins Publishing, Amsterdam and Philadelphia, PA.
- Greenwood, F., Howarth, C., Poole, D.E., Raymond, N.R. and Scarnecchia, D.P. (2017), *The Signal Code: A Human Rights Approach to Information During Crisis*, Harvard Humanitarian Initiative, Cambridge, MA, available at: <https://hhi.harvard.edu/publications/signal-code-ethical-obligations-humanitarian-information-activities> (accessed 21 November 2018).
- Grin, F. (2017), "Translation and language policy in the dynamics of multilingualism", *International Journal of the Sociology of Language*, Vol. 243, pp. 155-181.
- Guadagno, L., Fuhrer, M. and Twigg, J. (2017), *Migrants in Disaster Risk Reduction: Practices for Inclusion*, IOM, Geneva and Strasbourg, available at: <https://publications.iom.int/books/migrants-disaster-risk-reduction-practices-inclusion> (accessed 21 November 2018).
- Haddow, G.D., Bullock, J.A. and Coppola, D.P. (2011), *Introduction to Emergency Management*, 4th ed., Butterworth Heinemann, Burlington, MA.
- Howe, A.W., Jennex, M.E., Bressler, G.H. and Frost, E.G. (2013), "Exercise24: using social media for crisis response", in Jennex, M.E. (Ed.), *Using Social and Information Technologies for Disaster and Crisis Management*, IGI Global, Hershey PA, pp. 232-250.
- IFRC (2018), "World Disasters Report 2018. Leaving no one behind", International Federation of Red Cross and Red Crescent Societies, Geneva, available at: <https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2018/10/B-WDR-2018-EN-LR.pdf> (accessed 21 November 2018).
- Isiolo, I.A. (2012), "A learning review of the pilot communications project", available at: [http://reliefweb.int/sites/reliefweb.int/files/resources/infoasaid-actionaid\\_isiolo-learningreview032012\\_2.pdf](http://reliefweb.int/sites/reliefweb.int/files/resources/infoasaid-actionaid_isiolo-learningreview032012_2.pdf) (accessed 21 November 2018).
- Khan, K. and McNamara, T. (2017), "Citizenship, immigration laws, and language", in Canagarajah, S. (Ed.), *The Routledge Handbook of Migration and Language*, Routledge, London and New York, NY, pp. 451-467.
- Krüger, F., Bankoff, G., Cannon, T., Orlowski, B. and Schipper, E.L.F. (2015), *Cultures and Disasters: Understanding Cultural Framings in Disaster Risk Reduction*, Routledge, New York, NY.

- Lewis, W.D. (2010), "Haitian creole: how to build and ship an MT engine from scratch in 4 days, 17 hours, & 30 minutes", *Proceedings of the 14th Annual Conference of the European Association for Machine Translation (EAMT 2010)*, available at: [www.microsoft.com/en-us/research/wp-content/uploads/2016/02/EAMT-05.pdf](http://www.microsoft.com/en-us/research/wp-content/uploads/2016/02/EAMT-05.pdf) (accessed 21 November 2018).
- Lewis, W.D., Munro, R. and Vogel, S. (2011), "Crisis MT: developing a cookbook for MT in crisis situations", *Proceedings of the Sixth Workshop on Statistical Machine Translation, Edinburgh, 30-31 July*, available at: <http://dl.acm.org/citation.cfm?id=2132960.2133030> (accessed 21 November 2018).
- Marlowe, J. and Bogen, R. (2015), "Young people from refugee backgrounds as a resource for disaster risk reduction", *International Journal of Disaster Risk Reduction*, Vol. 14, pp. 125-131, available at: <https://doi.org/10.1016/j.ijdr.2015.06.013>
- Melandri, E., Carbonari, L. and Ricci, A. (2014), *La qualifica del mediatore interculturale. Contributi per il suo inserimento nel futuro sistema nazionale di certificazione delle competenze*, ISFOL, Rome.
- Mercer, J., Gaillard, J.-C., Crowley, K., Shannon, R., Alexander, B., Day, S. and Becker, J. (2012), "Culture and disaster risk reduction: lessons and opportunities", *Environmental Hazards*, Vol. 11 No. 2, pp. 74-95.
- MICIC (2016), *Guidelines to Protect Migrants in Countries Experiencing Conflict or Natural Disaster*, MICIC, Geneva, available at: [https://micicinitiative.iom.int/sites/default/files/document/micic\\_guidelines\\_english\\_web\\_13\\_09\\_2016.pdf](https://micicinitiative.iom.int/sites/default/files/document/micic_guidelines_english_web_13_09_2016.pdf) (accessed 21 November 2018).
- Moser-Mercer, B., Kherbiche, L. and Class, B. (2014), "Interpreting conflict: training challenges in humanitarian field interpreting", *Journal of Human Rights Practice*, Vol. 6 No. 1, pp. 140-158.
- Mowbray, J. (2017), "Translation as marginalisation? International law, translation and the status of linguistic minorities", in González Núñez, G. and Meylaerts, R. (Eds), *Translation and Public Policy: Interdisciplinary Perspectives and Case Studies*, Routledge, New York, NY, pp. 32-57.
- Mulder, F., Ferguson, J., Groenewegen, P., Boersma, K. and Wolbers, J. (2016), "Questioning big data: crowdsourcing crisis data towards an inclusive humanitarian response", *Big Data and Society*, Vol. 3 No. 2, pp. 1-13.
- New Zealand Government (2013), "Including culturally and linguistically diverse (CALD) communities", available at: [www.civildefence.govt.nz/assets/Uploads/publications/is-12-13-including-cald-communities.pdf](http://www.civildefence.govt.nz/assets/Uploads/publications/is-12-13-including-cald-communities.pdf) (accessed 21 November 2018).
- NHS England (2015), "Emergency preparedness, resilience and response framework", available at: [www.england.nhs.uk/ourwork/epr/](http://www.england.nhs.uk/ourwork/epr/) (accessed 21 November 2018).
- O'Brien, S. (2016), "Training translators for crisis communication: translators without borders as an example", in Federici, F.M. (Ed.), *Mediating Emergencies and Conflicts. Frontline Translating and Interpreting*, Palgrave Macmillan, New York, NY, pp. 85-111.
- O'Brien, S. (2019), "Translation technology and disaster management", in O'Hagan, M. (Ed.), *The Routledge Handbook of Translation Technology*, Routledge, New York, NY, pp. 304-318.
- O'Brien, S. and Cadwell, P. (2017), "Translation facilitates comprehension of health-related crisis information: Kenya as an example", *Journal of Specialised Translation*, Vol. 28, pp. 23-51, available at: [www.jostrans.org/issue28/art\\_obrien.pdf](http://www.jostrans.org/issue28/art_obrien.pdf) (accessed 29 June 2019).
- O'Brien, S., Federici, F.M., Cadwell, P., Marlowe, J. and Gerber, B. (2018), "Language translation during disaster: a comparative analysis of five national approaches", *International Journal of Disaster Risk Reduction*, Vol. 31, pp. 627-636, available at: <https://doi.org/10.1016/j.ijdr.2018.07.006>
- Pescaroli, G. and Alexander, D.E. (2015), "A definition of cascading disasters and cascading effects: going beyond the 'toppling dominos' metaphor", *Planet @ Risk*, Vol. 3 No. 1, pp. 58-67, available at: <https://planet-risk.org/index.php/pr/article/view/208>
- Puthooppambal, S.J. and Parente, P. (2018), "Report on the health of refugees and migrants in the WHO European region: no public health without refugee and migrant health (2018)", WHO Regional Office for Europe, Copenhagen and Geneva, available at: <https://apps.who.int/iris/bitstream/handle/10665/311347/9789289053846-eng.pdf?sequence=1&isAllowed=y&ua=1> (accessed 26 June 2019).

- Reynolds, B. and Seeger, M.W. (2014), *Crisis and Emergency Risk Communication*, Centers for Disease Control and Prevention, Atlanta, GA, available at: [https://emergency.cdc.gov/cerc/resources/pdf/cerc\\_2014edition.pdf](https://emergency.cdc.gov/cerc/resources/pdf/cerc_2014edition.pdf) (accessed 26 June 2019).
- Santos-Hernández, J.M. and Hearn Morrow, B. (2013), "Language and literacy", in Thomas, D.S.K., Phillips, B.D., Lovekamp, W.E. and Fothergill, A. (Eds), *Social Vulnerability to Disasters*, 2nd ed., CRC Press, Boca Raton, FL and New York, NY, pp. 265-280.
- Schwarz, A., Seeger, M.W. and Auer, C. (2016), "Significance and structure of international risk and crisis communication research – toward an integrative approach", in Schwarz, A., Seeger, M.W. and Auer, C. (Eds), *The Handbook of International Crisis Communication Research*, John Wiley and Sons, Oxford and Malden, MA, pp. 1-10.
- Seeger, M.W. (2006), "Best practices in crisis communication: an expert panel process", *Journal of Applied Communication Research*, Vol. 34 No. 3, pp. 232-244.
- Shackleton, J. (2018), "Preparedness in diverse communities: citizen translation for community engagement", paper presented at the Understanding Risk, Risk Reduction, Consequences and Forecasting Track. Proceedings of the National Academy of Sciences, Wellington, available at: [http://idl.iscram.org/files/jamieshackleton/2018/1655\\_JamieShackleton2018.pdf](http://idl.iscram.org/files/jamieshackleton/2018/1655_JamieShackleton2018.pdf) (accessed 26 June 2019).
- Shaw, R. (Ed.) (2012), *Community Based Disaster Risk Reduction*, Emerald Group Publishing, Bingley.
- Shi, P. and Kaspersen, R. (Eds) (2015), *World Atlas of Natural Disaster Risk*, Springer, Heidelberg.
- Strayhorn, T., Dasmohapatra, S., Tilotta, D. and Mitchell, P. (2012), "Effectiveness of educational tools for hurricane resilience in homes", *Disaster Prevention and Management: An International Journal*, Vol. 21 No. 4, pp. 433-444, available at: <https://doi.org/10.1108/09653561211256143>
- Tabatabaei, F., Nasserzadeh, S.M.R., Yates, S., Akhgar, B., Lockley, E. and Fortune, D. (2013), "From local to global: community-based policing and national security", in Akhgar, B. and Yates, S. (Eds), *Strategic Intelligence Management*, Butterworth-Heinemann, Amsterdam, pp. 85-92.
- Taibi, M. (2011), "Public service translation", in Malmkjær, K. and Windle, K. (Eds), *The Oxford Handbook of Translation Studies*, Oxford University Press, Oxford and New York, NY, pp. 214-227.
- Taibi, M. and Ozolins, U. (2016), "Community translation: definitions, characteristics and status quo", in Taibi, M. and Ozolins, U. (Eds), *Community Translation*, Bloomsbury Academic, London, pp. 7-28.
- The Sphere Project (2011), *Humanitarian Charter and Minimum Standards in Humanitarian Response*, 2nd ed., The Sphere Project, London and Washington, DC.
- The Sphere Project (2018), *The Sphere Project: Humanitarian Charter and Minimum Standards Disaster Response*, 3rd ed., The Sphere Project, London and Washington, DC.
- Thomas, D.S.K., Phillips, B.D., Lovekamp, W.E. and Fothergill, A. (Eds) (2013), *Social Vulnerability to Disasters*, 2nd ed., CRC Press, Boca Raton, FL.
- UNDAC (2018), *United Nations Disaster Assessment and Coordination (UNDAC) Field Handbook*, 7th ed., UNOCHA, Geneva, available at: <https://reliefweb.int/report/world/un-disaster-assessment-and-coordination-undac-field-handbook-7th-edition-2018> (accessed 26 June 2019).
- UNHCR (2018), "Policy on age, gender, and diversity", UNHCR/HCP/2018/1, available at: [www.unhcr.org/5aa13c0c7.pdf#zoom=95](http://www.unhcr.org/5aa13c0c7.pdf#zoom=95) (accessed 21 November 2018).
- UNISDR (2015), "Sendai framework for disaster risk reduction 2015–2030", available at: [www.unisdr.org/files/43291\\_sendaiframeworkfordren.pdf](http://www.unisdr.org/files/43291_sendaiframeworkfordren.pdf) (accessed 21 November 2018).
- Wall, I. and Chery, Y.G. (2011), "Ann Kite Yo Pale: let them speak: best practice and lessons learned in communication with disaster affected communities: Haiti 2010", available at: [https://reliefweb.int/sites/reliefweb.int/files/resources/IAA\\_Haiti\\_2010\\_0.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/IAA_Haiti_2010_0.pdf) (accessed 21 November 2018).
- Waugh, W. (2007), "Local emergency management in the post-9/11 world", in Waugh, W. and Tierney, K. (Eds), *Emergency Management: Principles and Practice for Local Government*, ICMA Press, Washington, DC, pp. 11-23.

- 
- White, P., Pelling, M., Sen, K., Seddon, D., Russell, S. and Few, R. (2005), *Disaster Risk Reduction: A Development Concern*, DfID, London, available at: [www.preventionweb.net/files/1070\\_drrscopingstudy.pdf](http://www.preventionweb.net/files/1070_drrscopingstudy.pdf) (accessed 21 November 2018).
- WHO (2012), "Toolkit for assessing health-system capacity for crisis management – part 1. User manual", available at: [www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/157886/e96187.pdf](http://www.euro.who.int/__data/assets/pdf_file/0008/157886/e96187.pdf) (accessed 21 November 2018).
- WMO (2018), *Multi-Hazard Early Warning Systems: A Checklist*, UN World Meteorological Organization, Geneva.

### Further reading

- Coombs, W.T. (2004), "Impact of past crises on current crisis communication: insights from situational crisis communication theory", *The Journal of Business Communication*, Vol. 41 No. 3, pp. 265-289.
- Crouse Quinn, S. (2008), "Crisis and emergency risk communication in a pandemic: a model for building capacity and resilience of minority communities", *Health Promotion Practice*, Vol. 9 No. 4, pp. 18S-25S.
- Reynolds, B. and Seeger, M.W. (2005), "Crisis and emergency risk communication as an integrative model", *Journal of Health Communication*, Vol. 10 No. 1, pp. 43-55.
- Steelman, T.A. and McCaffrey, S. (2013), "Best practices in risk and crisis communication: implications for natural hazards management", *Natural Hazards*, Vol. 65 No. 1, pp. 683-705.

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