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Intangible
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Heritage

Safeguarding and Mobilising Intangible Cultural Heritage in the Context of Natural and Human-induced Hazards

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DESK STUDY

The present document presents the results of a desk study commissioned by the UNESCO Intangible Cultural Heritage Section in 2017 to Meredith Wilson and Chris Ballard.

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EXECUTIVE SUMMARY

This concept paper reports on a review of the literature relating to the safeguarding and mobilisation by local communities of Intangible Cultural Heritage (ICH) in the context of disasters triggered by natural hazards. What is the current state of knowledge regarding the impact of natural hazards on ICH? What role is played by ICH in mitigating the impacts of these disasters on local communities?

ICH is a relatively new concept in the public domain and in the disaster risk management (DRM) field, and is seldom explicitly identified in these terms. The concept of local knowledge, which is more widely used and understood, serves as a synonym or proxy for ICH in much of the literature on disasters. To date, however, the two distinct fields and literatures of ICH and disasters are only rarely in direct conversation with each other.

Local knowledge and, by extension, ICH play a crucial role in mitigation at every step of the disaster management cycle, from preparedness through response to recovery. This role is increasingly evident and appreciated in disaster management and risk reduction practice. However, there is only limited understanding of the longer-term structures that generate and sustain ICH and render it viable, and of the broader significance of non-technical ICH for disaster mitigation.

There is very little analysis that focuses directly on the impacts of disasters on ICH, in part reflecting the limited elaboration on the specific topic of disaster threat in most ICH baseline documentation. The Post-Disaster Needs Assessment (PDNA) process is an increasingly important opportunity to assess disaster impacts on ICH, but the process itself struggles to identify ICH elements, to gauge their risk, and to estimate recovery costs. This challenge reflects the absence of a coherent and integrated framework for managing and reducing the risk of disasters to the viability of ICH, which must be modelled and understood over longer periods of time than a conventional disaster management cycle.

The outlines of a possible model of disaster risk management and reduction for ICH are sketched, breaking down the complexity of ICH expression and transmission, and grasping both the dynamism and the interplay of tangible and intangible components to ICH. The variable impact on ICH of different kinds of hazard-induced disaster is then introduced as an important consideration for safeguarding strategies.

The principal findings and recommendations of this review are addressed under three broad categories: the need for a better understanding of ICH mobilisation and safeguarding in disaster contexts; the production of guidelines on the safeguarding of ICH in disaster contexts; and the operationalisation of this understanding and guidance. The following recommendations are proposed in light of the findings of this paper, along with means for their implementation:

- Initiate further mapping of ICH risk and viability in disaster contexts through a series of 'ICH-Disaster Biographies'.
- Develop of a resource manual on Safeguarding and Mobilising ICH in Disaster Contexts.
- Initiate a programme of ICH inventory preparation which addresses the role of ICH in DRM and the safeguarding of ICH in disaster contexts.
- Establish a programme of 'ICH and Disaster Risk Reduction' activity that supports and streamlines the PDNA process.
- Invest in the generation and refinement of baseline data, and in activities that support the PDNA process, to guide the provision of emergency assistance to States Parties during the emergency phase.

1. SCOPE OF STUDY

This concept paper has been commissioned by the Intangible Heritage Section of UNESCO as a review of issues relating to the safeguarding and mobilisation by local communities of Intangible Cultural Heritage (ICH) in the context of emergencies or disasters triggered by natural hazards.[1] The impetus for this review comes from Decision of the Intergovernmental Committee 11.COM 15, which encourages the Secretariat 'to enhance gathering knowledge and gaining experience on the role of communities in both safeguarding their intangible cultural heritage at risk in emergencies and mobilizing it as a tool for preparedness, resilience, reconciliation and recovery'. This review also responds to the concerns of the Consultative Body regarding the need for adequate elaboration of safeguarding measures in ICH nominations and International Assistance requests.[2]

Disaster and the reduction of risk from disaster are topics addressed in the *Operational Directives for the Implementation of the Convention for the Safeguarding of the Intangible Cultural Heritage*.[3] The Operational Directives call for measures that strengthen resilience among vulnerable populations in the face of climate change and natural disasters, recognise the significance of disaster knowledge held by traditional bearers, and provide for international assistance in response to natural disaster (see Appendix D for details of all references to disaster in the Operational Directives). This concept paper responds specifically to the commitment in VI.3.3 to:

> foster scientific studies and research methodologies, including those conducted by the communities and groups themselves, aimed at understanding and demonstrating the effectiveness of knowledge of disaster risk reduction, disaster recovery, climate adaptation and climate change mitigation, that are recognized by communities, groups and, in some cases, individuals as part of their intangible cultural heritage, while enhancing the capacities of communities, groups and individuals to face challenges related to climate change that existing knowledge may not address.

The importance of preventing or mitigating damage to intangible as well as tangible heritage has been emphasised in a series of recent statements by the UN General Assembly, the Human Rights Council and UNESCO. The Sendai Framework for Disaster Risk Reduction 2015-2030 recognises and identifies as a priority for attention the role of traditional knowledge and practices along with the role of their bearers in the development and implementation of disaster risk reduction plans and mechanisms.[4] The present challenge is to generate models and tools that might allow us to operationalize these principles.

Following an initial discussion of available definitions of key concepts, and a summary of past approaches, this paper addresses two central themes:

- The role of community or local knowledge in preparing for, surviving and recovering from disaster; and
- The impact of disasters on community or local ICH and the efficacy of safeguarding measures.

The first of these themes – on the role of local knowledge in disaster mitigation – has been substantially addressed by disaster risk management (DRM) practitioners, mostly under the rubric of 'indigenous knowledge' (IK) or 'technical ecological knowledge' (TEK); the concept of ICH appears in the analysis of disaster mitigation only through the Post-Disaster Needs Assessment (PDNA) process, which specifically prompts enquiry into ICH (see section 4.b).

The second theme – the impact of disasters on ICH – is less well documented and insufficiently elaborated as an area for analysis, in part because no conceptual framework exists for such analysis.

To allow gaps in our knowledge to be identified, addressed and integrated, a provisional framework for understanding how disasters might impact on ICH is proposed in section 2.b.ii, and drawn on to model disaster impacts in sections 4.c and 4.d.

The case studies used here to illustrate these themes are drawn largely but not exclusively from the Pacific region. While the Pacific experiences fewer conflicts than most of the other zones of the world, it is exposed to a wider range and greater severity of natural hazards than almost any other zone. Case study sources are largely documentary, and draw on published and unpublished materials, and library, archival, online and personal collections.

The paper concludes with a series of recommendations in three areas, which may be addressed or implemented individually or collectively. The first recommendation addresses the need for integrated case studies of ICH and disasters, which will provide a knowledge base for policy development. A second recommendation proposes the production of a resource manual on *Safeguarding and Mobilising ICH in Disaster Contexts,* corresponding to if necessarily different from the 2010 resource manual on *Managing Disaster Risks for World Heritage*.[5] The process of developing this new manual in itself maps a possible program of work and research for the Secretariat and other stakeholders. The third recommendation directs attention to possible enhancements in the preparation of ICH inventories, the design and execution of PDNAs, and the provision of Emergency Assistance for ICH in disaster contexts.

2. DEFINITIONS AND APPROACHES

2.a Definitions and Distinctions

Many of the terms employed in this review are used in variable ways in the different literatures addressed here. For the purposes of clarity, we adopt the following definitions of certain key terms and concepts, largely following current UNESCO and UNISDR conventions.

2.a.i Intangible Cultural Heritage (ICH) and Local Knowledge

The *Convention for the Safeguarding of the Intangible Cultural Heritage* of 2003 defines Intangible Cultural Heritage (ICH) in an open-ended manner as '… the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage…';[6] these are manifested in the following five domains 'i) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; ii) performing arts; iii) social practices, rituals and festive events; iv) knowledge and practices concerning nature and the universe; v) traditional craftsmanship'.[7]

The broader concept of local knowledge has wider application, especially in the natural sciences, as in this UNESCO definition:

> Local and indigenous knowledge refers to the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings. For rural and indigenous peoples, local knowledge informs decision-making about fundamental aspects of day-to-day life. This knowledge is integral to a cultural complex that also encompasses language, systems of classification, resource use practices, social interactions, ritual and spirituality. These unique ways of knowing are important facets of the world's cultural diversity, and provide a foundation for locally-appropriate sustainable development.[8]

Local knowledge is commonly referred to in the development and disaster literatures as 'Indigenous Knowledge' (IK), 'Traditional Knowledge' (TK), 'Traditional Ecological Knowledge' (TEK) or 'Indigenous Technical Knowledge' (ITK), where it tends to be defined and deployed more narrowly or instrumentally in terms of specifically environmental or technical knowledge.[9] None of these alternatives is sufficient to capture the breadth of knowledge held 'locally' (as distinct from knowledge in the form of global science or national and international policy), and the term 'local knowledge' is thus preferred in this concept paper.[10]

ICH tends to refer to distinctive or iconic 'expressions' or forms of local knowledge and practice, which are readily identified and privileged by communities, and registered on national inventories and international lists. In contrast, local knowledge encompasses all of the components and assemblages of knowledge and practices that underpin a community's everyday life, including those that contribute towards the production of ICH; local knowledge is both conscious and unconscious, articulated and implied. In this concept paper, where specific references to ICH cannot be found, we use local knowledge as a proxy, particularly in relation to Disaster Risk Management practices.

2.a.ii Natural Hazards and Disasters

Natural **hazards** can be the trigger for disasters. Natural hazards may be *meteorological* (storm, fire, drought, heatwave and high sea temperature); *hydrological* (flood, tsunami); *geological or geomorphological* (volcanic, seismic, mass movement of land and sea, erosion); *biological* (epidemic; pest infestation, algal bloom, weed, coral bleaching); *astrophysical*; or related to *climate change* (sea-level rise; melting permafrost; rainfall pattern change; increased severity or frequency of meteorological or hydrological hazards; desertification).[11] The original natural hazard that triggers a disaster is often referred to as the primary hazard. Secondary hazards (such as a landslide) can be triggered by primary hazards (such as excessive rainfall).

Natural **disasters** arise from the intersection of natural hazard events and human populations. UNISDR defines a disaster as 'a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceeds the ability of the affected community or society to cope using its own resources.'[12] Thus the term 'natural disaster' – while still widely used – is misleading in the sense that all disasters are socially defined: 'the root cause of the disaster does not lie in the hazard itself… A hazard leads to a disaster only because people are affected'.[13] Hazard-induced disasters must therefore be understood in their cultural, political, economic and social contexts. We refrain from using the term 'natural disaster', referring instead to natural hazards as the primary sources of culturally- or socially-defined disasters.

2.a.iii Disaster Risk Management and Disaster Risk Reduction

In contrast to the long history of Disaster Risk Management as a body of knowledge and practice, Disaster Risk Reduction has emerged only during the past two decades as a program for the reduction of vulnerability and exposure in advance of disasters.[14]

UNISDR (2009: 10) defines **Disaster Risk Management** (DRM) as the 'systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.' Models of DRM process are organised around a cycle of preparedness, response and recovery.

UNISDR defines **Disaster Risk Reduction** (DRR) as: 'The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to 11 hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.'[15] The goal of DRR practices is to work in advance of natural hazards to reduce disaster losses, 'in lives and the social, economic and environmental assets of communities and countries', and to inform and influence DRM policies.

2.a.iv Risk: Vulnerability, Resilience, Viability and Safeguarding

Risk, vulnerability and resilience are all terms which are relative, context-dependent and resistant to simple measurement or comparison. UNISDR defines **vulnerability** as the 'characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard', adding that there

> are many aspects of vulnerability, arising from various physical, social, economic, and environmental factors. Examples may include poor design and construction of buildings, inadequate protection of assets, lack of public information and awareness, limited official recognition of risks and preparedness measures, and disregard for wise environmental management. Vulnerability varies significantly within a community and over time. This definition identifies vulnerability as a characteristic of the element of interest (community, system or asset) which is independent of its exposure. However, in common use the word is often used more broadly to include the element's exposure.[16]

UNISDR defines **resilience** as:

> The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic services and functions.[17]

Disaster analysts and practitioners have debated whether resilience refers to a community's ability to 'bounce back' to its pre-disaster state, or whether it is a measure of its adaptive capacity and transformative ability – to Build Back Better (Sendai Priority 4). There appears to be a growing consensus that the concept is capable of absorbing both definitions.[18]

UNISDR defines **risk** as: 'The combination of the probability of an event and its negative consequences';[19] the word 'risk'

> has two distinctive connotations: in popular usage the emphasis is usually placed on the concept of chance or possibility, such as in 'the risk of an accident'; whereas in technical settings the emphasis is usually placed on the consequences, in terms of 'potential losses' for some particular cause, place and period. It can be noted that people do not necessarily share the same perceptions of the significance and underlying causes of different risks.

Disaster risk is defined as 'a function of the magnitude, potential occurrence, frequency, speed of onset and spatial extent of a potentially harmful natural event or process' (the 'hazard') multiplied by the vulnerability of the affected community.[20] Following this model, **ICH disaster risk** can be defined as a function of the interaction between the hazard, understood in all of its dimensions, and the vulnerability of an ICH element (see sections 4.c and 4.d).

Viability is not formally defined in the 2003 Convention, but the Transmission page of the UNESCO ICH website states that: 'The viability of intangible heritage practices relies on the ongoing transmission of the special knowledge and skills that are essential for their enactment or embodiment'.[21] Further elaboration of the concept suggests that the

> viability of intangible cultural heritage (ICH) should be understood as its potential to remain significant to the community or group concerned. The community, group and individuals concerned have the primary responsibility to ensure the viability of their ICH. This viability depends especially on their capacity and commitment to practice and transmit their heritage into the future, even as circumstances change. The conception of viability in the Convention thus converges with the broader international concerns with sustainability, especially with regard to sustainable development.[22]

Viability is the fundamental object of **Safeguarding** strategies, which the 2003 Convention defines as 'measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage'.[23]

2.b Approaches

2.b.i ICH and Disaster in Dialogue

This literature review addresses the intersection of the two substantial fields of ICH and disaster. There is little literature that embraces the two fields together in a sustained and balanced way, and there are few frameworks available for combining findings and analyses from both fields on the role of ICH in disaster mitigation or the impacts of disasters on ICH.[24] While the immediate role of local knowledge (and, by extension, ICH) in mitigating the effects of disasters is extensively documented, the processes through which ICH contributes to a community's resilience or is itself adversely affected by disaster are not well understood. A thorough integration of these two fields will require more than expressions of mutual acknowledgment and respect, or the inclusion of principles and insights from either field in the other.

Disaster agencies and professionals have long been interested in the potential contribution to disaster mitigation of various forms of local knowledge (whether as IK, TEK or ITK), and have promoted strong frameworks for their incorporation in disaster procedures; however, ICH is not specifically addressed in this field.[25] The one exception to this observation is the Post Disaster Needs Assessment (PDNA) process, which requires specific attention to impacts on ICH (see Section 4.b).[26]

However, the incorporation of local knowledge and practices in disaster mitigation – and of ICH in the PDNA process – tends to be restricted to identifying tangible features of local cultures that are easily recognizable, quantifiable, and scientifically verifiable resources that promote and support resilience, or that provide a measure of damage and loss. Because this local knowledge is rarely understood within broader, more holistic social and cultural contexts, the opportunity is missed to understand how such local knowledge is generated and transmitted, how resilience operates more widely within a culture, and how scientific or global knowledge might be better adopted or taken up within local knowledge frameworks.

While ICH agencies and professionals have only recently begun to address the intersection of ICH and disasters, the question of ICH vulnerability to disaster in particular remains under-explored.

Recognising the lack of research in this area, the UNESCO Category 2 *International Research Centre for Intangible Cultural Heritage in the Asia-Pacific Region* (IRCI) is currently overseeing a programme of research on *ICH Safeguarding and Disaster Risk Management*, the findings of which will further our understanding of the relationship between these two fields.[27]

This review proposes that understandings of ICH in the context of disaster have much to contribute to disaster mitigation practices, as well as to the refinement of ICH concepts. Bringing the fields of ICH and disaster into sustained conversation with each other will permit the generation of common frameworks that allow for analysis of both roles and impact for ICH in disaster contexts.

2.b.ii Frameworks for Addressing ICH and Disaster

There are no publicly available frameworks for documentation and analysis that specifically address ICH and disasters. But there are strong frameworks in place for disasters, and for the relationship between local knowledge and disasters, on which we can draw in generating a framework for ICH purposes.[28]

The DRM cycle of Preparedness, Response and Recovery (PRR) provides a strong sequential framework for both understanding disaster impacts to ICH and incorporating ICH within mitigation strategies (see section 3). What is needed is a comparable ICH framework for analysing the ways in which ICH is placed at risk through disaster, and identifying the broader potential of ICH to contribute to disaster mitigation strategies. Drawing on community strategies and a survey of the literature, the outlines of such an ICH framework are proposed here, along with a means of integrating DRM and ICH approaches within a single model.

In the context of disasters, ICH is best approached through a broad, holistic frame which permits and prompts the identification of practices and connections operating across the full spectrum of a community, its environment, and its local knowledge. This spectrum can be captured under the rubric of 'People, Place and Story' (PPS). **People** are the agents of ICH (individuals, communities, transmitters); **Place** is the material world (landscapes, objects, resources); and **Story** is the immaterial or the intangible (knowledge, narrative, tradition). The three modalities are brought together in the **Articulation** of dynamic acts of performance, practice or production. All three modalities are engaged together in the reproduction or transmission of ICH. Articulation might be considered the actual practice of ICH, but distinguishing between its three constitutive modalities permits the complexity of the process of ICH transmission to be broken down and grasped.

Transmission is the communication of ICH across space – by multiple different mechanisms, voluntary and involuntary, free or commercialised – and time – between or through people as transmitters, through the mnemonic device of 'monuments' (landscapes, key artefacts, sites etc.), and through the 'archival' reproduction of story (in performance, recording or documentation). Finally, **Safeguarding** covers the full suite of strategies (local or traditional, national, regional and international) that seek to support and enhance the viability of each of the framework components: the different forms of People, Place and Story, their Articulation, and their Transmission.

The PPS framework has universal application, and provides a practical mechanism for documenting and integrating both tangible and intangible heritage components in the assessment of disaster risk and scope for mitigation. The PPS framework is derived from community-based models, and is easily explained and communicated between and applied by both practitioners and communities. Whether or not the PPS framework is deemed adequate, it responds to the need to disaggregate and explain the inter-relationships between the different components of processes that are as complex as those of ICH transmission and safeguarding.

Table 1: People, Place, Story: a Framework for ICH Transmission and Safeguarding				
Modality	*Form* →	*Articulation* →	*Transmission* →	*Safeguarding*
People	Individuals, communities, agents, transmitters, transactors, institutions, states	Performance, expression, language, practice, mobilisation, production	**Space:** Intra-group, external, exchange, trade, theft, conquest	Local, national, regional and international
Place	Material or tangible settings, sites, environments, resources, settlements, objects, artefacts		**Time:** Inter-generational, monumental, archival	strategies to enhance the viability of the forms, articulation and
Story	Immaterial or intangible, knowledge, narrative, tradition			transmission of ICH

The overarching framework proposed here as a means of integrating the disaster and ICH frameworks is dynamic and historical, positioning disasters, and understanding them as threats or opportunities, over the 'life' of an identified ICH element: 'local knowledge is disappearing and being created all the time… Building upon local knowledge and practices requires an understanding of the transformation processes involved'.[29] Longitudinal narratives or 'biographies' allow us to capture the development (and in some instances decline) of individual ICH elements, and the role in that process of successive disaster cycles. How might the viability, resilience or vulnerability of ICH elements be understood over the longer term, both within and beyond the term of a full disaster cycle? A number of examples of such studies are reviewed and evaluated in this study.

3. ROLE OF LOCAL KNOWLEDGE (ICH) IN DISASTER RISK MANAGEMENT AND REDUCTION

Local knowledge is recognised in the disaster field as a critical tool in DRR strategies for directly improving resilience and reducing vulnerability, and one that needs to be considered in tandem with global knowledge and technologies.[30] Beyond these direct roles, there are other key reasons why the disaster field has engaged local knowledge: useful local knowledge may be transferable to other communities in similar situations; community participation and leadership in DRM and DRR practice can be enhanced; understanding of the local context for a disaster can be improved; and DRR education can be facilitated.[31] However, ICH has not yet been adopted as a term of reference in the disaster field, and appears in relation to disaster impacts only in the emerging area of Post-Disaster Needs Assessments (see Section 4.b).

For the Pacific region, Campbell has identified four 'clusters of coping mechanisms' that are used by societies to mitigate the effects of disasters, including: food security; inter- and intra-community cooperation; settlement characteristics (architectural features; irrigation systems); and environmental knowledge (weather indicators).[32] Disaster specialists now recognise the role of culturally embedded mechanisms of information transmission, such as history, memory and story, as critical for the inter-generational transfer of disaster mitigation strategies, and the importance of social activities (such as individual or collective rituals and ceremonies) as mechanisms of disaster recovery.[33]

There is a substantial multi-disciplinary literature that seeks to integrate 'culture and disasters' (often couched in the sub-field of 'disaster anthropology'), which provides a more open-ended conceptualisation of the role of local knowledge and other dimensions of culture in disaster contexts.[34] This broader conceptualisation of the intersection of culture and disasters introduces both greater

temporal depth to analysis, and an increased complexity to the embeddedness of technical knowledge within a society's broader system of knowledge and practice.

Through the following series of case studies, the established role and further potential of local knowledge (and implicitly of ICH) is considered at each phase of the DRM cycle of 'Preparedness, Response and Recovery'.

3.a Preparedness

Preparedness is defined as 'the knowledge and capacities developed by … communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters'.[35] Features of disaster preparedness can be observed in: site location; architectural knowledge; garden preparation and food preservation strategies; early warning systems; and a wider range of other aspects of community life.

The nature and the extent of preparedness vary considerably according to disaster type. In the case of frequent, seasonal disasters, such as cyclones and floods, preparatory measures have evolved over centuries and are deeply embedded – consciously and unconsciously – within cultural practices that enhance the resilience of communities. Vernacular architectures, particularly those associated with socially significant community structures, have disaster resilience built into their design (Case Study #1). Food security strategies are universally important as preparatory mechanisms for offsetting variability in food production and to cope with destructive events such as cyclones and drought (Case Study #4). These strategies include surplus production, agricultural diversity, fermentation and storage, the production of flour, and drying;[36] often involving complementary roles and responsibilities for men and women.[37] Preparations are also triggered by community-based environmental observations in the months, days and hours leading up to hazard events, such as the over-fruiting of mango trees at the beginning of a strong cyclone season, or the particular behaviours of animals and birds immediately prior to the arrival of a cyclone.

Case Study 1: PACIFIC MEETING HOUSES AND DISASTERS

Anecdotal evidence for the resilience of vernacular architecture during cyclones and floods has prompted studies of the role of building knowledge and associated features in the Pacific. The Vanuatu *nakamal*, the Tongan *fale*, and the Fijian *vale* meeting houses have each been shown to incorporate features that enable them to survive one or more disaster events.[38] The knowledge relating to these vernacular structures includes the construction by 'master builders'; the location and procurement of raw materials; and the use, significance and broader symbolism of these structures within the life of the community. For instance, many Fijian *vale* are built on elevated mounds, called *yavu*, which simultaneously reflect the status of the occupants and reduce the effects of water inundation.[39] Throughout Vanuatu, the *nakamal* is the embodiment of tradition, with cultural references incorporated within its design features. As sites for cultural safeguarding, these focal structures are situated in protected locations, and designed both to withstand and survive high wind events, and protect those sheltering inside. At Unponkor on the island of Erromango, Vanuatu, the village *nakamal* protected 117 people during the devastating Cyclone Pam in 2015, and the structure itself remained largely intact. But the Unponkor *nakamal* is also a site for transmission, where information about land ownership, family groupings, governance systems and family connections and histories is communicated through song.[40] While specific knowledge exists for preparing and surviving within these structures during a cyclone event, the disaster role of the meeting house is ancillary to their broader, day-to-day function and significance within the life of a community. In many communities, the social functions of the *nakamal* have been transferred to the church,

and non-traditional church buildings are physically replacing *nakamal* structures. To explain the declining number of *nakamal* in Vanuatu today, and hence their diminishing role as a disaster mitigation strategy, it is necessary to comprehend the full range of social, economic, political and environmental factors that have led to shifts in their broader function and significance within ni-Vanuatu society.

In the case of less frequent, non-seasonal or rapid-onset disasters, such as volcanoes and tsunamis, memories and stories relating to preparedness can fade between major events, and strategies for preparedness are often less solidly embedded within communities. The case of the 1998 Aitape tsunami, which devastated several villages along the north coast of Papua New Guinea (Case Study #2) illustrates the consequences for a community and its disaster knowledge of this longer temporal gap between significant hazard events, and of the importance of risk reduction through the careful positioning of settlements.

Case Study 2: ICH LOSS, AITAPE TSUNAMI, 1998

At 19:05 on 17 July 1998, a near-source tsunami struck a 45-kilometre stretch at Sissano on the Aitape coastline of Papua New Guinea, resulting in over 1600 fatalities (up to 38% of the population of some villages) and the erasure without trace of entire villages. Prior to this devastating event, tsunamis of this magnitude had not occurred within the living memory of the residents of the region.[41] Although there was some local knowledge of previous tsunamis along the region's coastline, and a 1907 tsunami had caused one Sissano village to disappear completely, the four villages around Sissano Lagoon were not situated in areas safe from tsunamis.[42] The worst-hit villages were located on low-lying sand spits just 50-150m from the water's edge, but houses located up to 600m from the shoreline were also affected. Sediments later retrieved from the Sissano Lagoon identified that tsunamis comparable in magnitude to the 1998 event had occurred 500 and 850 years ago. For events of this size, residents would need to inhabit areas at least 10m above the high tide mark (500-1000 metres inland) to remain safe. The lengthy intervals between these massive events – which are greater than a lifetime – has led to a loss of cultural memory, and breaks in the transmission of information and awareness of tsunami warning signs, safe settlement options, and the impact of these events. In addition, it appears that successive tsunami events at this precise point of the coastline may have effectively eliminated previous communities, which have been replaced over time by immigrants unaware of the hazards of their environment. Finally, the scale of destruction is such that cultural loss has not been considered in much detail in the post-disaster analysis and documentation of the 1998 event. The loss of settlements and landscape features, the elderly and the young, and almost all items of material culture, together with lengthy periods of relocation, suggests that the impact to ICH must have been severe. This exceptional case illustrates the consequence of near-total devastation by a natural hazard of impacted communities and their local knowledge of infrequent disasters.

3.b Response

Response is defined as 'actions taken directly before, during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected.'[43] The response period varies considerably with disaster type, from cataclysms such as volcanic eruptions and tsunami during which the response period might last only a matter of days after the event, through to food security events in which responses play out over a much longer period. In the Pacific region, the remoteness of some affected islands can mean that several days or even weeks can pass before external assistance is forthcoming.

During and immediately after a disaster, communities must draw on their own intra-communal resources to meet their immediate health, food and shelter needs. The activation of inter-communal networks also offers immediate relief to affected communities: 'kin ties, trade partnerships, and friendships are well-established cumulative generational response mechanisms… that facilitate giving aid, comfort, and assistance to those less fortunate following natural disasters'.[44] The efficient application of local knowledge and the galvanising and maintaining of intra- and inter-community networks in disaster response has been shown repeatedly to save lives (Case Study #3) and to protect livelihoods (Case Study #4).

Case Study 3: INHERITED RESPONSE MECHANISMS, SOLOMON ISLANDS, 2007

On 1 April 2007, a major 8.1 seismic event near the New Georgia Group in the Solomon Islands prompted an immediate self-evacuation by hundreds of people to raised inland areas. The implementation of this ancestrally-inherited earthquake response meant that the ensuing tsunami, which struck 300 coastal villages in less than three minutes following the quake, was far less devastating than it might otherwise have been. While the tsunami led to the loss of 50 lives, the death toll would have been substantially higher had these populations not evacuated. At Tipurai, on the northwest tip of Simbo Island, where the tsunami impact was greatest, seven individuals perished, but 234 inhabitants successfully retreated to the hills, resulting in a loss of less than 3% of the population.[45] A demographic study of mortality showed that a disproportionate number of those who lost their lives during the 2007 tsunami were immigrants from the coral atoll nation of Kiribati (31 of the 50 people who died), and that the primary factor contributing to their loss was a lack of familiarity with the early warning signs generated by the earthquake.[46] Kiribati itself is exposed to only mild tsunamis that are generated by earthquakes too distant for i-Kiribati people to experience tremors. Most i-Kiribati arrived in Solomon Islands in 1962 and did not experience a tsunamigenic earthquake until the event of 2007; they thus had little tsunami mitigation knowledge on which to draw.

A similar contrast, but with far more devastating impact in terms of fatality, is reported for communities on the island of Simeulue and the adjacent Aceh Province mainland during the 2004 tsunami.[47] A strong oral tradition that had developed on Simeule in the aftermath of a tsunami in 1907 triggered an immediate response to the first signs of impending disaster, with the entire population fleeing for high ground and suffering no fatalities as a consequence. At Jantang on the mainland, no such tradition was in place or recalled, and the population of some 10,000 suffered approximately 50% mortality.

In the New Guinea highlands, repeated famines caused by frost and drought have given rise to oral traditions and networks of support maintained over successive generations.

Case Study 4: NETWORKS AND TEMPORARY MIGRATION: ENSO DROUGHT AND FAMINE IN NEW GUINEA, 1942, 1972, 1997 AND 2016

In response to a cycle repeated over centuries of ENSO-induced frost, drought and famine in the highlands of New Guinea, the most-affected communities, those living at the highest altitudes above 2000m, have developed and maintained over centuries networks of kinship and trade with communities at lower, less affected altitudes. Once food security becomes critical, the traditional response of high-altitude communities was to relocate the bulk of the community, along with domestic animals, to lower-altitude hosts. These ties were maintained through inter-marriage, trade and reciprocal exchange or rights of access to seasonally fruiting crops in the different altitudinal zones. However, the advent of significant government food aid since the 1972 drought has reduced the incentive for these movements, and the inter-

communal network ties and exchanges have been allowed to atrophy. In the most recent drought in 2016, there were reports that some former hosts rejected higher-altitude immigrants on the grounds that they had not maintained customary connections and obligations.[48]

Both of these case studies illustrate the importance of local ICH in maintaining traditional knowledge or links within and beyond communities, and the perils of not having or maintaining these traditions or networks.

3.c Recovery

If the response phase describes measures to stabilise a situation during and immediately after the event of a natural hazard, the recovery phase addresses the longer-term process of returning services and conditions to something approaching 'normal'. UNISDR defines recovery as 'the restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and "build back better", to avoid or reduce future disaster risk.'[49]

The recovery of a community depends on the nature and scale of the disaster, as well as the capacity of the community to prepare and respond, and of the broader state or society to assist. One of the key findings after both the 1997-98 ENSO drought and famine in Papua New Guinea, and the 2004 Indian Ocean Tsunami, was that families, communities and their networks largely drove their own recovery.[50] If pre-disaster preparedness in local housing and food supply reduces the immediate impact of a cyclone, it also significantly reduces the time and resources required for recovery. Where knowledge of how to harvest and prepare famine foods has been passed down over generations, the capacity to endure the post-disaster period is similarly enhanced.

Overlaying the more practical pathways to recovery are issues of the general well-being of those affected by disaster. Local knowledge, in the form of cultural beliefs and values, plays a fundamental role in the recovery process.[51] Belief systems may foster resilience, leading to proactive recovery and enhanced community cohesion. After the Samoan Tsunami of 2009, aspects of the Samoan way of life (*fa'a Sāmoa*) were identified as central to post-disaster recovery. The concept of hospitality, in combination with the *āiga* (the extended family unit), provided a powerful social and familial network for sharing and maximising resources.[52] Cultural values can greatly facilitate recovery: Case Study #5 illustrates how Buddhist beliefs and values were central to the recovery process following Cyclone Nargis in 2009. Conversely, where a community perceives a disaster to be the retribution of a higher power, its members may experience guilt and despair, which may in turn lead to feelings of helplessness, inaction, and decreased resilience.[53]

> ### Case Study 5: BELIEF SYSTEMS, SPIRITUALITY AND CEREMONY IN RECOVERY, CYCLONE NARGIS, MYANMAR, 2009
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> In May 2009, Cyclone Nargis swept across the Yangon and Ayeyarwaddy divisions of Myanmar, killing over 80,000 people and displacing approximately 800,000. The fishing and agricultural communities then living in the Ayeyarwaddy Delta had never experienced a cyclone on this scale. While some out-migration occurred after the cyclone, people displayed a preference to rebuild *in situ*, with around 80% of rebuilding occurring within the first month after the cyclone. The predominantly Buddhist cultural context, with its emphasis on giving, sharing and selflessness, has played a significant role in the recovery of the Delta communities. While food security was a major concern, survivors with off-season produce willingly shared with others, and people from the north travelled great distances to feed survivors. Some communities

erected commemorative stupas (temples) to mark the remains of the dead, a collective activity requiring strong leadership and the mobilisation of significant resources in a post-disaster context. Despite the ongoing psychological distress experienced by the Delta communities in the years following Nargis, these commemorative structures are material markers of the strength of social capital, and the robustness and spiritual cohesion of the communities involved. Building religious structures and participating in religious festivals, such as 'full moon day', has helped to foster community and individual recovery.[54]

The PDNA process has recently promoted a specific focus on the role and potential of ICH in the disaster recovery phase. The creative economy, in particular, has a substantial role to play in disaster recovery, generating local income where it is most needed, providing the local materials, craftspeople and knowledge necessary for rebuilding, and often reviving or strengthening local knowledge and ICH practices in the process.[55] While the PDNA for the 2015 earthquake in Nepal made only limited reference to damage and loss for ICH, it did highlight the important role of ICH in the recovery phase.

Case Study 6: OPPORTUNITIES FOR ICH IN POST-DISASTER RECOVERY, NEPAL, 2015

The Post Disaster Needs Assessment (PDNA) for Nepal after the earthquake of April 2015 highlights the breadth of impact to the cultural sector, including the loss of hundreds of significant cultural sites and their associated ICH. The PDNA predicted both immediate and long-term losses to ICH, especially with respect to social practices such as rituals, worship and festivals, but also within the museum sector. However, the PDNA also illustrated a more positive role for ICH in the post-disaster context. Recognising the widespread devastation to the cultural heritage sector as potentially impacting on the well-being of Nepalese communities, and leaving the younger generation potentially disconnected from their heritage, the strategies proposed for disaster recovery promoted the use of ICH to facilitate recovery and rebuild the cultural sector more generally. For instance, the rebuilding process provided an opportunity to undertake a 'resource mapping' project of traditional artisans (carvers, carpenters, masons, metal workers) who could be employed to rebuild and train younger apprentices in their craft. The PDNA document also suggested earmarking recovery funds for workshops and festivals, and establishing national awards that recognise master craftsmen and performers, raise their status, and provide encouragement for younger generations to become involved in the continuation of their culture. Importantly, these external safeguarding interventions built on and augmented local ICH strategies already being deployed by the community: for example, victims of trauma as a result of the earthquake were engaged in therapies that included local dance, art and music.[56]

The case of Nepal in 2015 demonstrates that disasters can play a powerful role in reaffirming the importance of ICH in the disaster management cycle, and can stimulate or even revive the discussion and practice of ICH. As a community leader at the World Heritage property of Chief Roi Mata's Domain observed of Cyclone Pam in Vanuatu in 2015 (see Case Study #7), where damage to tangible heritage was fortunately limited: 'The cyclone was a great disaster, but the wind also brought with it great opportunities'. In the aftermath of the cyclone, traditional disaster mitigation strategies such as the planting of cyclone-resistant wild yam were openly discussed, revived and demonstrated to the community at large.

3.d Summary

There has been widespread uptake of local knowledge and ICH elements in DRM strategies, but an expanded conception of ICH – both temporally and spatially or socially – would allow for a considerably enhanced understanding of the role and potential of ICH in disaster mitigation. Currently,

the role of ICH in disaster mitigation is too narrowly conceived in terms of both its historical depth (and thus the implications for its long-term viability) and its breadth and embeddedness within local systems of knowledge. Most disasters that are triggered by natural hazards appear to pose only a temporary threat to local knowledge and ICH practices; but we need a more detailed understanding of ICH transmission processes in order to model their response to disasters over the longer term, and to understand how ICH safeguarding might be further improved.

The role of ICH needs to be understood in a longitudinal dimension greater than the immediate DRM cycle of preparedness, response and recovery for a single disaster event – whether to account for its lack of a role in mitigating the effects of the Aitape tsunami (Case Study #2), to explain the differences in mortality of local New Georgians and immigrant i-Kiribati in the Western Solomon Islands (Case Study #3), or to appreciate the changing nature and contribution over time of ICH and local strategies to mitigation measures during repeated ENSO-induced famines in the New Guinea Highlands (Case Study #4) or major cyclones in northern Vanuatu (Case Study #8).

Similarly, ICH or local technical knowledge that relates specifically to disaster mitigation needs to be understood as embedded within broader systems of local knowledge and cultural practice, because
- there is considerable untapped potential for ICH to contribute to each stage of the disaster cycle (understanding the wisdom of traditional site location as a mitigation measure, or the role of music and dramatic performance in post-disaster recovery, for example);
- ICH plays a role in cultural safeguarding beyond its obvious immediate contribution in a disaster event (evident in Case Study #1 on the Erromango nakamal meeting house, which houses and protects both people <u>and</u> the context and materials for future ICH transmission); and
- an understanding of the structure of local knowledge systems is essential for the efficient uptake or exchange of other, non-local DRM and DRR strategies.

Finally, local knowledge or ICH that does not appear directly relevant to disaster mitigation, or that might even appear to impede mitigation in the response or recovery phases, may still play a fundamental and positive role in other aspects of community life, which may feed back into broader processes of recovery.[57]

4. IMPACTS OF DISASTERS ON ICH

This section addresses the impacts of disasters on all forms of ICH, including those that may have some bearing on the mitigation of disasters. Four themes are addressed: 1) the lack of available data or analysis on the impact of disasters on ICH; 2) the role of PDNAs in the identification of disaster impact on ICH; 3) the need for a model or framework for collecting and analysing ICH impacted by disaster, and 4) the application of the model highlighting the complexity of ICH change over time through a series of disaster events (Case Study #8).

There is very little analysis that focuses directly on the impacts of disasters on ICH, in part reflecting the limited elaboration on the specific topic of disaster threat in most ICH baseline documentation. ICH identification appears to vary considerably from country to country, but access to country inventories was not available for this report.

A striking observation is that ICH elements identified on the Urgent Safeguarding (USL) and Representative (RL) lists tend to be more detailed for those countries that have a low degree of natural hazard risk; threats to identified ICH in these low-risk countries are thus characterised more often in terms of socio-economic or cultural threats rather than natural hazards. Currently ICH exposure to

natural hazards is most clearly addressed through the Post-Disaster Needs Assessment (PDNA) process, but the short time frames for survey and lack of baseline data combine to produce assessments which largely focus on tangible proxies for ICH.

The limitations of available baseline data on hazard risk to ICH reflect the lack of an accessible model that might allow for the collection and documentation of appropriate data. A model of ICH risk in natural hazard contexts requires an understanding of the variable potential for impact of different forms of hazard, and of the ways in which hazards impact on ICH in each of its modalities ('people', 'place', and 'story') as well as their collective articulation through performance and transmission. Case Study #8 provides an application of this model to a specific series of disaster events.

4.a Baseline Data for Disaster Impacts on ICH

One challenge for analysis is the limited availability or accessibility of data that documents the impacts on ICH of disasters triggered by natural hazards. The documentation for ICH nominations is one source for understanding threats posed to ICH by natural hazards (where such information is relevant or recorded). National ICH inventories and safeguarding plans are other possible sources, but access to this material was not available for this report.

A survey of elements identified on UNESCO's Representative (RL) and Urgent Safeguarding (USL) lists indicates a lack of information regarding the impacts of natural hazards on ICH. A comparison of risk and ICH listing by country suggests that this limitation is more acute for those countries most exposed to natural hazards. The 2016 World Risk Index calculates risk by indexing a country's exposure to natural hazards against its vulnerability (Appendix #B, Table 1).[58] Of the top 20 countries most at risk of natural hazards, six have no elements identified on the Representative and Urgent Safeguarding lists, eight have just one listing, and four have between two and four listings each; two countries, Japan and Vietnam, have 21 and 10 elements listed respectively.

In contrast, the majority of countries with the largest number of elements listed on the RL and USL are not exposed or vulnerable to natural hazards. Of the top 20 countries with the largest number of elements on the RL and USL, sixteen are regarded as medium to low risk (Appendix #B, Table 2). The remaining four – Japan, Vietnam, Indonesia and Mali – are considered high to very high risk. Overall, the documentation available on the RL and USL provide limited information on the impact of natural hazards on ICH.

A further significant finding is that Japan and Vietnam – the two countries at high risk of natural hazard and with the greatest number of listed elements – make no reference amongst their 31 nominations to either threats or safeguarding measures that relate to natural hazards. Two possible reasons for this apparent anomaly can be proposed: the absence of prompts in ICH documentation regarding natural hazards as a challenge for ICH safeguarding and – more profoundly – the lack of a clear model for considering disaster impacts. In Section 2 of the USL nomination form, States Parties are asked to identify and describe 'threats to the element's continued transmission', and in Section 3 of the RL form they are requested to outline 'safeguarding measures'. However, neither of the two forms, nor the associated instructions and aide-mémoires, specifically requests or prompts a consideration of the past, present or potential impacts of natural hazards.

A brief analysis of the identified threats to ICH elements identified on the USL reveals that cultural factors are overwhelmingly regarded as the primary causes of the deteriorating viability of these traditions. Of the 47 elements on the list, threats to 64% (30) are ascribed to the dwindling number of practitioners or bearers of the expression. Other threats include a decline in demand for the element, or a preference for alternatives attributed to foreign influences and modernisation (40%); migration

and urbanisation (34%); and a lack of interest amongst the younger generation (26%). One element – the Qiang New Year Festival, China – was severely impacted by the 2008 Sichuan earthquake that destroyed a number of Qiang villages, but the element is also threatened by longer term cultural processes including 'migration, declining interest in Qiang heritage among the young and the impact of outside cultures'.[59] Around 12% of elements identify a lack of raw material as a threat, which may in some cases be attributed to natural hazards. However, the vast majority of the elements have been included on the USL due to unfolding socio-cultural threats. This should not be taken to imply that natural hazards do not pose a significant threat to ICH, but rather that these impacts have not been thoroughly considered or investigated.

4.b Post Disaster Needs Assessments (PDNAs)

An important means of access to the direct impacts of disaster on ICH is the Post-Disaster Needs Assessment (PDNA) process. PDNAs are surveys performed in the weeks immediately following a disaster to document damage and loss to different domains within the culture sector (built heritage and cultural sites, cultural and creative industries, intangible cultural heritage and traditional knowledge, movable property, cultural governance and heritage institutions and repositories), and to plan and cost the recovery process. Given the short time frames over which PDNAs are conducted (up to a maximum of one month), the tangible aspects of ICH tend to provide an expedient proxy for recording those aspects of the ICH that are less readily identified or assessed: these include the damaged or destroyed fabric of those buildings, structures, performance venues, resources and objects that provide the spaces or the material means for the production and performance of ICH, as well as the physical movement or displacement of communities and ICH bearers.

> Case Study 7: PACIFIC PDNAs, 2012-2016
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> The three PDNAs conducted in the Pacific (Samoa 2012, Vanuatu 2015, and Fiji 2016) each use the tangible aspects of culture to assess damage and loss to ICH. In Vanuatu, the assessment considered the Vanuatu Cultural Centre and its island outposts, the community meeting houses (*nakamal*); the World Heritage property of Chief Roi Mata's Domain (CRMD); historical buildings and churches; and handicraft and arts centres. The general role of the damaged *nakamal* in transmitting knowledge within communities was raised, as was the role of cultural tours in transmitting the stories of Chief Roi Mata at CRMD. However, the extent to which Cyclone Pam might have caused damage and loss to ICH expressions associated with these places – and by extension their viability – was not specifically addressed. Likewise, in Samoa after Cyclone Evan in 2012, the PDNA assessed damage to traditional Samoan meeting houses (*fale*), and linked the rapid disappearance of these structures from the cultural landscape to the passing of master builders (*tufunga*) without transmitting knowledge to younger generations. However, missing from the report is an assessment of whether the damage from the cyclone, considered in combination with the declining number of master builders and other historical factors, has impacted the overall viability of the ICH associated with Samoan *fale*. The PDNA for Cyclone Winston in Fiji in 2016 focused on damage to the built infrastructure that houses the material outputs of ICH expression, and the raw materials required for ICH expression, rather than the impact and loss to practitioners or the immaterial components of ICH. Notably, both Cyclone Pam and Cyclone Evan have been the impetus for projects that examine these traditional buildings in more detail, and are therefore enhancing mechanisms for their safeguarding.[60]

The PDNA assessment process is too rapid to allow for comprehensive background research into individual ICH elements or to chart their change over time. Understandably, those responsible for

undertaking the assessments often depend on tangible evidence or material proxies for assessing damage and loss to ICH.

Individuals working on PDNAs in the culture sector have noted a range of issues that influence the documentation of ICH in post-disaster contexts:[61]

1. Current PDNA guidelines, while comprehensive in their definition and treatment of ICH, do not specify how ICH data should be collected. This does allow for flexibility in the approach, but more guidance is required for the documentation process.
2. As an instrument which covers multiple sectors and generates a recovery plan that guides humanitarian appeals and other types of recovery funds, the PDNA requires both pre- and post-disaster data, and has to produce monetised estimates. This can be challenging in relation to ICH, for which damage and loss are particularly difficult to cost.
3. Baseline ICH data in the form of inventories or other documentation are usually limited but must be generated for the PDNA, if ICH is to be addressed in post-recovery budgets.
4. Defining and explaining ICH for local and national actors during the PDNA process can be complicated, and ICH tends to be interpreted relatively narrowly in relation to festivals, ceremonies, religious activities, and occasionally craft, with other expressions, such as traditional building knowledge, food, medicine, agriculture and fishing practices, frequently overlooked.
5. Much of the reference to ICH in PDNAs is predictive, identifying possible impacts during the recovery phase and beyond, but there is currently no formal mechanism to allow for evaluation of these assessments through repeat survey.

4.c Modelling Impacts to ICH: People, Place and Story

The PDNA process highlights the challenge of grasping ICH risk in terms of each of its modalities – the tangible (people and place) and the intangible (story). Here we briefly sketch an approach to analysis of the risk posed to ICH by hazard impact in terms of the framework for ICH transmission and safeguarding proposed in section 2.B.ii: each modality (people, place and story) is assessed individually for risk, before considering how their performance, transmission, and safeguarding can also come under threat.

People, as performers and transmitters of ICH, are obviously susceptible to the impact of natural hazards. Population loss or dispersal, whether through death or out-migration, directly impacts on all aspects of ICH transmission and safeguarding, removing not just critical practitioners and knowledge holders but also their pupils, peers, audiences and consumers. In extreme cases such as the Aitape tsunami (Case Study #2) the impact on population is massive and the implications for ICH are immediately apparent. Other forms of disaster can have a more subtle but equally damaging impact, as in the case of post-disaster epidemics which may target the older members of a community, who are often key transmitters. The broader wellbeing of individuals or communities, which is vital for the regular performance and ongoing transmission of ICH, can also be vulnerable to natural hazards.

Place, as the setting, resource, and materials necessary for the performance and transmission of ICH, is obviously susceptible to the impact of natural hazards. Transformation of the landscape, loss of sites, or forced migration away from those sites, and destruction of the material resources or expressions of ICH, are some of the principal areas for impact to ICH. Erosion, landslides, tsunamis, earthquakes and volcanic eruptions, can result in immediate transformation or loss of landscape settings, sites and objects for ICH production and performance. Slow onset hazards, such as sea-level rise, can lead to the forced relocation of communities. Given that intangible cultural heritage is embodied within the tangible landscape and practiced using 'spatialized mnemonics', displacement

through migration removes people from the landscapes that reinforce their own pasts, cultural identities, and values. Natural hazards such as cyclones can also destroy the material resources used in the production and performance of ICH, such as forest habitats that provide the timber for *nakamal* meeting houses in Vanuatu (Case Study #1). In a post-disaster setting, the provision of non-traditional emergency shelters may gradually lead to a loss of knowledge concerning the sourcing and preparation of traditional house materials. Places provide the settings and resources for teaching and learning ICH, and are thus essential to the transmission of ICH practices.[62]

Story, as the intangible or immaterial modality of ICH, includes knowledge, narratives and traditions. While it is relatively easy to identify and quantify losses to a population or its material setting (the destruction of a temple, for instance), it is more challenging to understand the mechanisms by which the immaterial aspects of ICH are impacted by natural hazards. Loss of knowledge may correlate with losses in terms of people or places, but understanding how that knowledge is reproduced and transmitted over time and space is essential for understanding the scale and significance of the loss, and whether or not it is retrievable and reproducible. Story is variably distributed, in some cases held by practitioners and imparted to the wider community, and in others held widely across a community. Because most systems of knowledge must confront the prospect of loss from multiple sources, including disaster, communities tend to have risk strategies for knowledge which may include wider distribution, compartmentalisation, public performance, documentation or other forms of inscription, and formal and informal mechanisms for transmission. Even where knowledge is represented as traditional and unchanging it is, in almost all instances, dynamic, flexible and evolving.[63] In some cases it can also be retrieved from ancestors through dream, or trance. Documentation, recordings and other forms of archiving provide both an opportunity, allowing modern communities to reconstitute 'lost knowledge', and a risk, where destruction of the document or archive threatens the possibility of future transmission or revival.

Articulation of the three modalities of people, place and story occurs through the performance, production or practice of ICH. It is the dynamic mode through which ICH is reproduced across time and space, and contributes to transmission. This dynamism can render ICH articulation both particularly vulnerable to disaster, and difficult to identify and assess through the PDNA process. Natural hazard impacts to ICH can be understood at the level of each of the three modalities, but need then to be grasped in terms of their overall impact on the dynamic articulation or transmission of that ICH. Damage across each of the modalities is compounded at the level of articulation – disruption to the transmitting population, to the material setting, and to the knowledge itself places the performance or practice of ICH at high risk. But is impact to just one modality damaging to articulation? Is there a hierarchy of risk amongst the three modalities? To address these and other questions will require surveys of impact at longer intervals following the immediate aftermath of a hazard event. To appreciate the processes through which communities and their ICH become vulnerable to or impacted by disasters requires a broad conceptualisation of the social, economic, political and environmental pressures that have historically shaped the people, places and stories (the 'modalities') that constitute ICH. A comprehensive analysis of the risks to an ICH element needs to match this longitudinal or 'biographical' perspective on the full life of that element.

Transmission, as the communication of ICH knowledge and practice across time and space, is a process that integrates both the modalities of people, place and story, and their articulation as performance. Transmission is cumulatively affected by the impacts of disasters to the different forms of people, place and story, as well as by interruptions to the performance of ICH. Strategies for **safeguarding** ICH, while obviously implicated in the mitigation of disaster impacts, are themselves vulnerable to the effects of disaster: whether through impacts to their design and implementation, or through the inadvertent competition between local and international strategies for safeguarding.

4.d Disaster Variability and Impact on ICH

The model of ICH risk outlined in 4.c above requires further consideration of the variability in disasters, and in their impact on different forms of ICH. Disasters triggered by natural hazards differ considerably in terms of their type, magnitude, extent, duration and frequency, with variable consequences for impact on ICH.[64] Further complicating this element in our modelling of disaster impacts on ICH are two additional factors: the vulnerability and exposure of different forms of ICH to each of these different dimensions of natural hazard; and the rise of climate change associated with global warming as a potentially transformative factor in each dimension.[65]

Different types of natural hazard (volcano, earthquake, cyclone, etc.) are further distinguished by their magnitude (often expressed through a coefficient of scale, such as the Volcanic Explosivity Index, the Richter Scale, the Tropical Cyclone Intensity Scale etc.). Hazard duration can range from the brief moment of a major earthquake shock to the extended period of a multi-year drought or even a climate interval such as the Little Ice Age; the duration of a hazard seldom covers the duration of its impacts. Extent refers to the spatial area over which a hazard's impacts are registered, ranging from highly localised events such as landslips through to the global impact of a super-volcano. Frequency also varies considerably, if irregularly, with hazard type, from seasonal hazards such as tropical cyclones through to far less frequent events such as major tsunamis.

ICH vulnerability needs to be mapped against this variability in the dimensions of natural hazards. ICH vulnerability is first described across each of the modalities of 'people', 'place' and 'story' (see section 2.B.ii), and then expressed in terms of their collective articulation. People, as ICH practitioners and transmitters; place, as the material settings and resources for ICH practices; and stories, or the knowledge and other intangible expressions of ICH, are all impacted in different ways by the various dimensions of different types of natural hazard.

But the full vulnerability of ICH is best understood in terms of the articulation of these three modalities – that is, in terms of the expression, practice or performance of ICH elements, and their transmission in time and space. In a modification of the formal definition of disaster risk, ICH disaster risk can be defined as a function of the interaction between the hazard, understood in all of its dimensions, and the vulnerability of an ICH element, understood in terms of each of its modalities (people, place and story) and their articulation.[66]

To this already complex equation we must now factor in the amplifying or transformative effects of global warming and associated climate change. Climate change modelling for the South Pacific, for example, predicts that tropical cyclones will be less frequent but more intense.[67] There is increasing evidence also for climatic change as a trigger for earthquakes and volcanic activity.[68] Treating global warming as one amongst many forms of 'creeping environment change' allows us to integrate its effects within a DRR framework of vulnerability and resilience.[69]

4.e Summary: ICH-Disaster Biographies

A disaster biography adopts a longitudinal perspective on a single event, considering knowledge of previous events, and looking at the longer-term consequences of the disaster for a population and its environment. Edward Simpson's account of the 2001 Gujarat earthquake is one such study, taking local politics for its particular focus.[70] What the ICH field requires is a comparable framework that allows us to appreciate the historical development of one or more ICH elements, and the role in this history of one or more disaster events: an ICH-Disaster Biography.

Case Study #8 provides a longitudinal perspective on the role of natural hazards, considered as one amongst a complex range of factors that can lead to the loss of performance and transmission of local knowledge, which then impacts negatively on a community's capacity to respond to future disasters. Narrated in the form of a particular community's experience of 'natural' and 'un-natural' disasters, this 'ICH-disaster biography' illustrates the ways in which the ICH modalities of people, place and story are individually and collectively transformed over time, generating a different set of pre-conditions for each new disaster.

Case Study 8: AN ICH-DISASTER BIOGRAPHY FOR THE BANKS ISLANDS, VANUATU

Transformations in the social, political and economic life of the island of Mota Lava (Banks Islands, Vanuatu) accelerated with the arrival of missionaries in the mid-nineteenth century. Previously, economic exchange amongst Banks Island communities had involved a complex web of inter-island interaction and movements of people, goods, food and shell money that supported marriage, a system of grade-taking for senior men and women, known as the *suqe*, and other regional social structures. These inter-island networks and transactions were personalised around formal individual *pulsala* friendships. Each island specialised in the production of particular foods, goods or shell money that supported these activities. In times of disaster, this established inter-island network effectively spread risk over a wider region, and provided essential avenues for support. The post-contact period saw sweeping changes to these inter-island networks as a result of missionisation, epidemics and population decline, and participation in the market economy. Beads began to replace shell money in transactions; the *suqe* and traditional forms of marriage were impacted by the expansion of the missionaries; and colonial authorities sought to control movement between islands. Without the demand for the inter-island goods and food surpluses required to support these ICH practices, the need for shell-money dwindled, and the inter-island and inter-personal connections fractured. With the expansion of coconut plantations, the Banks Islands became increasingly engaged in the cash economy. The earlier decline in population as a result of disease, and the shift away from traditional subsistence practices, led to a desire for less labour-intensive and more productive crops, such as cassava. Neither coconuts nor cassava fare as well in cyclones as the traditional staples, further exacerbating food shortages after more recent cyclones. This background of historical transformations in people, place and story, permits a detailed analysis of responses to a series of major cyclones (in 1873, 1910, 1939, 1972 and 1988). From the 1873 cyclone onwards, with the decline in diversity of food crops, food scarcity became commonplace in the Banks, and the first non-traditional and external food relief was provided. From 1910, traditional famine foods such as sago disappeared. Although traditional networks were still being activated in 1939, by 1972 they had been replaced by links to government agencies and migrant kin in the capital, Port Vila. Each of these historical changes, precipitated by the effects of globalisation, reshaped the pre-disaster conditions and transformed the scope and nature of impacts on ICH.[71]

This historical or longitudinal approach to the relationship between ICH and disaster allows us to appreciate both the embeddedness of ICH relating to disaster mitigation within broader social and cultural practices, such as the *pulsala* and *suqe*, and the complexity of the changing political, social and economic conditions for disaster.

Over the long term of successive adaptations to a hazardous natural environment, ICH and 'natural' disasters can perhaps be understood as mutually constituted. ICH elements, and the broader body of local knowledge in which they are embedded, are formed in an environment that is itself shaped by natural hazards. The substantial challenge now is reckoning with and mitigating the impacts of the two additional modern sources of threat: globalisation (economic, political and religious

transformation) and climate change associated with global warming. Local safeguarding strategies that have developed and served well over centuries need to be augmented or adapted to these novel conditions through a collaborative process.

5. FINDINGS AND RECOMMENDATIONS

5.a Summary of Findings

1. The core requirement of safeguarding expressed in Article 1 of the 2003 Convention demands close consideration of disasters – as critical watersheds in the livelihood of communities and their environments, and thus in the viability of their ICH elements – and a sustained conversation with disaster management specialists. Currently there is little elaboration either in theory or in practice on the topic of disaster as either a risk or an opportunity for ICH.

2. Local knowledge and, by extension, intangible cultural heritage play a crucial role at every step of the disaster management cycle, from preparedness through response to recovery. This role is increasingly evident and appreciated in disaster management and risk reduction practice. However, there is only limited understanding of the longer-term structures that generate and sustain ICH and render it viable, and of the broader significance of non-technical ICH for disaster mitigation. There is considerable scope for a more sustained engagement between ICH and disaster management and risk reduction practices.

3. The principal findings and recommendations of this review are addressed under three broad categories: the need for a better **understanding** of ICH mobilisation and safeguarding in disaster contexts; the production of **guidelines** on the safeguarding of ICH in disaster contexts; and the **operationalisation** of this understanding and guidance. While the three categories also provide a basic sequence for action – from research and documentation, through the development of guideline materials, to a program for operationalisation – they inform each other, and thus there are benefits to progressing on all fronts simultaneously (within the constraints of available financial and human capacities).

4. This study addresses disasters triggered by natural hazards, and the recommendations proposed below are restricted to conditions featuring 'natural' disasters. Yet these 'natural' disasters form only a subset of disasters overall, and it is seldom possible to disaggregate the natural trigger from the existing socio-economic, cultural or environmental conditions that contribute to or amplify the impacts of the initial hazard. In addition, challenges to the safeguarding of ICH from disasters of natural or non-natural origin cannot necessarily be distinguished from each other. A program addressing the role of and impacts to ICH from natural hazards would be enhanced by seeking to comprehend ICH in the context of all forms of disaster, including conflict.

5. Finally, the effects of global warming and associated climate change introduce both a potentially transformative factor in every dimension under consideration in this report, and an urgency to the need for action on the safeguarding and mobilising of ICH in the context of natural hazards.

5.b Understanding ICH Mobilisation and Safeguarding in Disaster Contexts

Finding

Few studies have explored either the role of ICH specifically in DRM, or the impact of disasters on ICH. In the studies that are available, the DRM role of an ICH element is often decoupled from its broader social and historical setting, which is critical to the sustainability of the element. Studies and programmes that consider the impact of disasters lack a clear framework for considering the longitudinal, dynamic, and embedded social, cultural, economic and environmental processes that impact on the articulation and transmission of both the tangible and intangible modalities of ICH (people, place and story). Without such a framework, the viability and potential for mobilisation of an ICH element in the context of disasters is difficult to assess. Further longitudinal documentation of the intersecting histories of disasters and ICH, and the processes of change that influence ICH elements over time, might allow us to capture the emergence (and in some instances decline) of individual ICH elements, and their role in disaster risk management.

These processes can be captured in the form of case-study narratives or biographies that chart each of the intersecting social, political, economic, and environmental factors that have impacted on the viability of an ICH element over time. An 'ICH-disaster biography' would provide the background research necessary for the development of a DRM plan for ICH exposed to disaster (see 5.c below). A DRM plan for ICH would require a rich understanding of the full range of threats that have historically impacted on an element in order to establish clear actions and guidelines to support its survival. The 'ICH-disaster biographies' would thus seek to map the resilience, vulnerability, and viability of individual ICH elements across successive disaster cycles, and over the 'life' of an identified ICH element.

Recommendation: Initiate further mapping of ICH risk and viability in disaster contexts through a series of 'ICH-Disaster Biographies'.

Implementation

1. The series of biographies should be comprehensive in its representation of ICH and disasters and include:

   - Elements from each of the UNESCO ICH domains (Article 2, 2003 Convention);
   - Elements that are known to play a role in each of the DRM phases;
   - Elements that are known to be impacted by one or more disasters; and
   - A range of disaster types, scales and frequencies.

   Given present gaps in coverage there may be some advantage to focusing on high-risk countries.

2. Biographies should be prepared with the full participation of communities, through a combination of research and community-based consultations and workshops. The community-based workshops would focus initially on the preparation of ICH inventories, with a view to selecting ICH elements for biographical study.

3. Following the 'People, Place, Story' framework for ICH transmission and safeguarding proposed in this paper, individual biographies would capture the following categories of information:

   - The tangible and intangible modalities of the element: people, place and story;
   - The articulation/expression of the individual modalities of the element: performance and production;

- The processes involved in the transmission of the element;
- The historically situated social, environmental, economic and other processes (including disasters) that have affected the viability of ICH over time;
- The historical role of ICH in DRM (preparedness, response and recovery); and
- The historically embedded social and cultural processes that have contributed to the safeguarding of ICH over time.

5.c Guidelines for the Safeguarding and Mobilisation of ICH in Disaster Contexts

Finding
Currently, States Parties, communities and ICH practitioners lack clear and practical guidance on the measures required to anticipate, document, track and safeguard ICH in disaster contexts. This is particularly evident during the PDNA process, which is challenged by a lack of pertinent baseline data and local awareness of the requirements of ICH documentation.

A resource manual on *Safeguarding and Mobilising ICH in Disaster Contexts*, matching and partly modelled on the 2010 resource manual on *Managing Disaster Risks for World Heritage*, would provide guidance to State Parties, DRM and ICH practitioners, and others on appropriate strategies for safeguarding and mobilising ICH in disaster contexts. The 2010 World Heritage resource manual is understandably focused on protecting the tangible features of World Heritage sites, and specifically the values embedded within the tangible fabric of properties. While taking the World Heritage manual as its model, the ICH manual would reflect some of the differences between tangible and intangible forms of heritage, and the relatively under-developed analysis and modelling of critical vectors for intangible heritage, such as the transmission of ICH through time and space, and the complex vulnerability of ICH within a range of social, political and economic contexts.

Like the World Heritage manual, an ICH manual might consider addressing both 'natural' and 'cultural' forms of disaster. Even where it is possible to distinguish between the two, the extent of overlap between them, and the implications of one form of disaster for the other, present very similar challenges for the safeguarding of ICH and opportunities for the mitigation of the impacts of disaster. In itself, the process of developing this new manual maps a possible program of work and research for the ICH Secretariat and other stakeholders. An accessible resource manual would provide guidance for practitioners, communities, and States Parties, assisting them to act pre-emptively in order to better safeguard and mobilise ICH in the context of disaster.

Recommendation: Develop a resource manual on *Safeguarding and Mobilising ICH in Disaster Contexts*.

Implementation
Developing the manual would require a series of steps or components, which could be assigned to different coordinating teams. Minimally, the manual should seek to address the following topics:

PART 1: ICH safeguarding and mobilisation in the context of disasters

- What is the relationship between ICH safeguarding and DRM?
- What are ICH safeguarding and mobilisation and why are they important?
- Documenting and understanding processes of ICH safeguarding and mobilisation in the context of disasters (drawing on ICH-Disaster biographies for case studies)
- Integrating scientific and local safeguarding strategies for the mitigation of disasters

PART 2: Developing a DRM Plan for ICH

- Developing or refining ICH inventories and baseline data
- Identifying and assessing disaster risks
- Limiting risk and mitigating impact
- Preparing and responding to emergencies (how can ICH be mobilised, and what is the potential contribution of ICH in disaster contexts?)
- Implementing, reassessing and reappraising the DRM-ICH Plan
- Integrating the plan nationally and internationally (in ICH and DRR policies)

5.d Operationalisation

The programme of work outlined above provides the theoretical and methodological foundation for implementing a range of practical projects that will contribute to the ongoing mobilisation and safeguarding of ICH in disaster contexts. Specific steps for implementation of the programme are proposed.

5.d.i Improving ICH Datasets and Baselines

Finding

There is currently a lack of data available or accessible within country inventories or UNESCO's ICH Representative and Urgent Safeguarding Lists on the roles and viability of ICH in disaster contexts, possibly reflecting the lack of specific prompts in current guidelines and procedures. Enhanced support for the development or elaboration of country inventories that take account of natural hazards would:

- Further our understanding of the relationship between ICH and natural disasters;
- Provide baseline data that will enhance the quality and improve the efficiency of the PDNA process;
- Provide a pre-emptive safeguarding measure for ICH in countries with high-level exposure to disasters;
- Identify ICH that can be mobilised in disaster contexts and support DRR; and
- Increase State Party awareness of the role of ICH in disaster contexts, and the importance of safeguarding ICH impacted by disasters.

Recommendation: Initiate a programme of ICH inventory preparation which addresses the role of ICH in DRM and the safeguarding of ICH in disaster contexts.

Implementation
1. Prompt consideration of threats posed by natural hazards in relevant ICH guidelines and procedures (inventory guidelines, RL and USL nomination forms, aide-mémoires), to further enhance the protection of ICH threatened by disasters.
2. Initiate a programme of ICH inventory preparation that supports and is guided by the research and resource material generated through Recommendations 5.b and 5.c. Given present gaps in coverage there may be some advantage to focusing on high risk countries.

5.d.ii Support for the PDNA process

Finding
The PDNA process is an important avenue for identifying and documenting damage and loss to ICH triggered by natural hazards. Currently, the process is hindered by a lack of accessible baseline data,

the short timeframes available for survey, and the absence of a clear methodology for considering and costing damage and loss to both the tangible and intangible components of ICH. These factors negatively impact on the establishment of effective post-disaster recovery and safeguarding measures for ICH.

Recommendation: Establish a programme of 'ICH and Disaster Risk Reduction' activity that supports and streamlines the PDNA process.

Implementation
The 'ICH and Disaster Risk Reduction' programme should support and be guided by the research and resource material generated from the implementation of Recommendations 5.b and 5.c. To promote cross-sector dialogue and policy discussion, individuals involved in both the disaster and cultural heritage fields should be involved as facilitators and participants, as well as those involved in coordination roles or field surveys for the PDNA assessment process. To maximise available resources, the programme can be implemented in conjunction with or alongside the ICH inventory programme described above. Elements of this programme might include:

- Online training (currently provided for the culture sector as part of the PDNA process);
- Generation, review and refinement of baseline data to be used in PDNAs;
- Identification of ICH that plays a role in preparedness, response and recovery;
- Identification of ICH that is impacted by natural hazards, and consideration of its possible inclusion in the USL;
- A review of how ICH is mobilised and supported in practice and policy;
- Development of a longitudinal 'ICH review' component of the PDNA process which provides for periodic review of disaster impacts to ICH over one or more 5-year period.

Given present gaps in coverage there may be some advantage to focusing on high risk countries.

5.d.iii Emergency Assistance

Finding
Paragraph 50 of the Operational Directives states that an emergency shall be considered to occur 'when a State Party cannot overcome on its own an insurmountable circumstance due to a calamity, a natural or environmental disaster, an armed conflict, a serious epidemic or any other natural or human event which has catastrophic consequences for the intangible cultural heritage as well as communities, groups and, if applicable, individuals who are the bearers of this heritage'. However, document ITH/16/11.COM/15, presented to the Intergovernmental Committee in October 2016, notes that even though emergency requests are considered outside the normal 18-month cycle, a lengthy process of application assessment means that the special provision for emergency assistance can only be effective in supporting States Parties in the post-emergency recovery phase.

Access to emergency funding for ICH is of considerable significance in supporting community-led recovery, often at minimal expense (e.g. support for local ceramic production, the reconstruction of community places of worship, and support for critical community festivals which promote redistribution). But swift identification of these targets for funding requires further investment in the integration of disaster risk measures for ICH in the baseline data available to the PDNA process; this will enhance the foundation for both making and judging claims for Emergency Assistance.

Recommendation: Invest in the generation and refinement of baseline data (5.d.i), and in activities that support the PDNA process (5.c.ii), to guide the provision of emergency assistance to States Parties during the emergency phase.

Implementation
- Implement Recommendations 5.d.i and 5.d.ii.
- Review the outcome of Recommendations 5.b-5.d to determine the circumstances requiring expedited emergency assistance for repair or loss.
- Review the application process for emergency assistance to establish means of expediting the provision of emergency assistance funds.

Endnotes

[1] We would like to acknowledge the assistance and advice of the Intangible Cultural Heritage Section of UNESCO, Elke Selter (Consultant, UNESCO) and Yoko Nojima (IRCI) in the preparation of this concept paper.

[2] ITH-12-7-COM-7-EN, paragraphs 34-39.

[3] UNESCO 2016b.

[4] UNISDR 2015b, IV.24.i.

[5] UNESCO 2010.

[6] UNESCO 2016b, Section 2.1.

[7] UNESCO 2016b, Section 2.2.

[8] UNESCO n.d.

[9] Shaw et al. 2008; Nakashima (ed.) 2010; Nakashima et al. 2012: 29-31.

[10] See Dekens 2007.

[11] UNESCO 2010: 60.

[12] UNESCO 2009: 9.

[13] Cannon 2016: 26.

[14] UNISDR 2015a.

[15] UNISDR 2009: 10-11.

[16] UNISDR 2009: 30.

[17] UNISDR 2009: 24.

[18] Alexander 2013. See Gaillard 2007 for a discussion focused on the resilience of traditional societies facing natural hazards.

[19] UNISDR 2009: 25.

[20] Wisner, Gaillard and Kelman 2012: 24.

[21] UNESCO ICH n.d.a.

[22] UNESCO ICH Secretariat n.d.

[23] UNESCO 2016b.

[24] See ICOMOS 2013 for discussion of disaster and heritage more generally.

[25] See, for example, Nakashima et al. 2012.

[26] UNISDR 2008; IRP / UNDP 2014.

[27] UNESCO 2016c: Item 15; see also UNESCO 2010; ICOMOS 2013. IRCI 2017.

[28] Dekens 2007a; Mercer et al. 2007; Mercer et al. 2009.

[29] Dekens 2007a: 29.

[30] UNISDR 2008, Mercer et al. 2009, Wonesai et al. 2015.

[31] UNISDR 2008: vii.

[32] Campbell 1990: ii.

[33] Dekens 2008, Wonesai et al. 2015.

[34] Oliver-Smith and Hoffman (eds) 1999; Hoffman and Oliver-Smith (eds) 2001; Torrence and Gratten (eds) 2002; Wisner, Gaillard and Kelman (eds) 2012; Krüger et al. (eds) 2015, Barrios 2017.

[35] UNISDR 2009.

[36] Pollock 1992.

[37] UNPCC 2009.

[38] UNESCO 2017b, UNESCO 2015, Campbell 2006.

[39] Campbell 2006: 25.

[40] UNESCO 2017b: 90.

[41] Davies 2017: 8.

[42] Welsch 2004; Davies 2002: 30.

[43] UNISDR 2017.

[44] Terrell et al 2011: 25.

[45] Fritz and Kalligeris 2008: 2.

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[46] McAdoo, Moore & Baumwell 2009.

[47] McAdoo et al. 2006. See also Walshe and Nunn 2012.

[48] Waddell 1983; Allen and Bourke 2009.

[49] UNISDR 2017.

[50] Clinton, 2006; Allen and Bourke 2009.

[51] McGeehan 2012: 18-19; McGeehan 2014.

[52] McGeehan 2012: 78.

[53] IFRC 2014: Chapter 2.

[54] James and Paton 2015: 21.

[55] See Throsby 2015 on the potential of the creative economy in the Pacific region.

[56] Government of Nepal 2015.

[57] Dekens 2007a: 28.

[58] United Nations University 2016.

[59] UNESCO ICH n.d.b.

[60] UNESCO Apia Office 2013; UNESCO 2015; Government of Fiji 2016; UNESCO 2017b.

[61] Elke Selter, pers. comm., 11 August 2017.

[62] Keller 2009: 134.

[63] Barth 2002.

[64] See Torrence and Grattan 2002.

[65] Adger et al. 2013.

[66] Wisner, Gaillard and Kelman 2012: 24.

[67] Climate Council 2017.

[68] McGuire 2012.

[69] Mercer 2010; Kelman et al. 2015.

[70] Simpson 2013.

[71] Campbell 1990; note that Campbell's 'biography' was written prior to the 2003 Convention, and thus makes no reference to ICH.

Appendix A: Natural Disaster Risk and ICH Element Listing Compared

The two tables below provide a comparison between natural disaster risk (by country) and the number of ICH elements included on the Representative List and Urgent Safeguarding List. The 2016 World Risk Index calculates risk by multiplying a country's exposure to natural hazards by its vulnerability. Table 1 lists the top 20 countries identified as being most at risk, and provides a count of the number of ICH elements currently included on the Representative and Urgent Safeguarding Lists. Apart from Japan and Vietnam (highlighted), representation on ICH lists amongst high-risk countries is relatively low. Table 2 lists the twenty countries with the greatest number of ICH elements included on the Representative List and Urgent Safeguarding List. Only four of these countries (highlighted) are considered to be at high or very high risk.

Table 1: Countries most at risk (countries with larger numbers of listed ICH elements highlighted)

Country	Risk %*	Elements**
Vanuatu	36.28	1
Tonga	29.33	1
Philippines	26.70	2
Guatemala	19.88	2
Bangladesh	19.17	3
Solomon Islands	19.14	0
Brunei	17.00	0
Costa Rica	17.00	1
Cambodia	16.58	4
PNG	16.43	0
El Salvador	16.05	0
Timor-Leste	15.69	0
Mauritius	15.53	0
Nicaragua	14.62	1
Guinea-Bissau	13.56	1
Fiji	13.15	0
Japan	12.99	21
Vietnam	12.53	10
Gambia	12.07	1
Jamaica	11.83	1

Table 2: Countries most represented on the Representative List and Urgent Safeguarding List (high risk countries highlighted)

Country	Risk %*	Elements**
China	6.39	37
Japan	12.99	21
Republic of Korea	4.59	17
Croatia	3.97	13
Turkey	5.20	12
France	2.62	11
India	6.64	11
Mongolia	3.08	11
Spain	3.05	10
Vietnam	12.53	10

Belgium	3.07	9
Iran	4.73	9
Colombia	6.45	8
Mexico	5.97	8
Peru	6.59	8
Azerbaijan	5.54	7
Indonesia	10.24	7
Mali	8.39	7
Brazil	4.09	6
Uganda	6.52	6

** 2016 World Risk Report (United Nations University 2016)
** Number of ICH elements represented on both the Representative List and the Urgent Safeguarding List

Appendix B: References Cited and Consulted

This bibliography provides full references for all sources cited in the Concept Paper, along with additional relevant materials consulted during the preparation of the paper.

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Appendix C: References to Disaster in the Operational Directives

UNESCO's *Operational Directives for the Implementation of the Convention for the Safeguarding of the Intangible Cultural Heritage* (2016 version) references 'disasters' in the following paragraphs (*underlines added*):

Chapter I Safeguarding of the Intangible Cultural Heritage at the International Level, Cooperation and International Assistance
I.14 International Assistance

50. Emergency requests, regardless of the amount are examined and approved by the Bureau of the Committee. For the purpose of determining whether a request for International Assistance constitutes an emergency request eligible to receive priority consideration by the Bureau, an emergency shall be considered to exist when a State Party finds itself unable to overcome on its own any circumstance due to calamity, natural disaster, armed conflict, serious epidemic or any other natural or human event that has severe consequences for the intangible cultural heritage as well as communities, groups and, if applicable, individuals who are the bearers of that heritage.

Chapter VI Safeguarding intangible cultural heritage and sustainable development at the national level
VI.3 Environmental sustainability

188. States Parties are encouraged to acknowledge the contribution of the safeguarding of intangible cultural heritage to environmental sustainability and to recognize that environmental sustainability requires sustainably managed natural resources and the conservation and sustainable use of biodiversity, which in turn could gain from improved scientific understanding and knowledge-sharing about climate change, natural hazards, the environmental and natural resource limits and that strengthening resilience among vulnerable populations in the face of climate change and natural disasters is essential.

VI.3.3 Community based resilience to natural disasters and climate change

191. States Parties shall endeavour to ensure recognition of, respect for and enhancement of knowledge and practices concerning geoscience, particularly the climate, and harness their potential to contribute to the reduction of risk, recovery from natural disasters, particularly through the strengthening of social cohesion and mitigation of climate change impacts. To that end, States Parties are encouraged to:
(a) recognize communities, groups and individuals as the bearers of traditional knowledge about geoscience, particularly the climate;
(b) foster scientific studies and research methodologies, including those conducted by the communities and groups themselves, aimed at understanding and demonstrating the effectiveness of knowledge of disaster risk reduction, disaster recovery, climate adaptation and climate change mitigation, that are recognized by communities, groups and, in some cases, individuals as part of their intangible cultural heritage, while enhancing the capacities of communities, groups and individuals to face challenges related to climate change that existing knowledge may not address;
(c) adopt appropriate legal, technical, administrative and financial measures to:
(i) promote access to and transmission of knowledge concerning the earth and the climate, that is recognized by communities, groups and, in some cases, individuals as part of their intangible cultural heritage, while respecting customary practices governing access to specific aspects of it;
(ii) fully integrate communities, groups and individuals who are bearers of such knowledge into systems and programmes of disaster risk reduction, disaster recovery and climate change adaptation and mitigation.