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Global and Local Interpretations of Risk Reduction in the Caribbean and Pacific Islands

Towards a Sustainable Future?



FORSKNING

Author: Simon Hollis, Swedish Defence University
MSB Contact: Bodil Lundberg, 010-240 5661
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Foreword

This report is the summary of a two-year postdoctoral research project funded by the Swedish Civil Contingencies Agency (MSB). The main aim of the project is to understand how the international community can be more effective in supporting disaster risk reduction practices in developing states. This objective is formed from (1) a personal conviction that research ought to have a practical end-use and (2) marks an attempt to answer a question posed at the conclusion of my recently published book, namely: what can explain an observed division between global rhetoric on reducing disaster risk and national activity at the community level (see: *The Role of Regional Organizations in Disaster Risk Management: A Strategy for Global Resilience*. Palgrave Macmillan, 2015). Examining the scope conditions on the transference of knowledge on DRR has consequently established the main objective of this study.

This study compares two vulnerable regions in the world: the Caribbean and Pacific. Representing 44 island states, these island states face similar environmental threats, yet are composed of different risk perceptions and methods of risk management. This provides for a useful comparison to flesh out some of the major determinates of risk. In order to understand what is happening at the local level, the main method of investigation is via extensive interviews with disaster practitioners, local chiefs, diplomats, ambassadors, international organizations, regional organizations, financial institutions, and NGOs. It has been a rewarding process for myself personally and also academically. The process of conducting research and *experiencing* rather than imagining local conditions has greatly helped to sharpen my current research and provide much impetus for future endeavours.

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Summary

How can the international community be more effective in translating global prescriptions on disaster risk reduction to individual communities? This report examines why states, international organizations, financial institutions and regional organizations have had limited success in supporting resilient practices in local communities. Through a comparison of the Caribbean and the Pacific islands, this study highlights a broad array of natural hazards and social determinants of risk that create high levels of vulnerability. Much of this risk is heavily related to development issues on poverty, land management and urbanization. However, it is argued that these larger structural issues cannot be successfully addressed until cultural particularities are taken seriously. That is, the importance of cultural perceptions of risk. It is only when these are better understood that more efficient policy prescriptions can be made, and support given, that larger development issues can assume a different hue and be tackled more effectively. The promotion of the creative arts is suggested as an important method for enhancing the value and stability of communities, which translates into a more resilient future.

1. Introduction: Culture as a key for risk reduction

Natural hazards such as earthquakes, tsunamis, droughts and hurricanes cannot be prevented. They happen. However, the extent to which these and other natural hazards lead to the loss of life, and economic and social upheaval, depends on the resilience of complex social, economic and political environments that constitute our place in the world. The international community has become increasingly involved in supporting risk reduction initiatives in highly vulnerable communities that are largely concentrated in developing states. As a sign of increasing commitment, international disaster financing for disaster reduction initiatives doubled from USD 5 million in 2008 to over 1 billion in 2012 (OECD 2014). Over the last decade reinsurance schemes have been promoted by the World Bank; the UNISDR has supported a network of regional and national platform on Disaster Risk Reduction (DRR); the EU has financed various projects, such as early warning systems; and states, such as the US, Japan and Australia, have provided technical assistance to support local mitigation. As the intensity and frequency of disasters continues to increase in an interdependent world, locating and reducing the root causes of vulnerability has clearly become a paramount global concern. DRR makes sense; it is a long-term investment that will reduce the need for humanitarian aid and assist economic development schemes to overcome critical shocks to the system.

Yet, international efforts that aim to address this global concern have had limited success. While there are pockets of success stories, for many developing states knowledge on how to effectively reduce risk is not being internalized at the community level. This report attempts to shed light on why international organizations have not been highly successful in promoting societal resilience and what ought to be done to achieve greater efficacy in development strategies on DRR. Obstinate development issues – such as poverty, unemployment, land management, urbanization and out-migration – clearly explain, and put into perspective, the difficulties of decreasing vulnerability. It is proposed in this report that addressing these larger structural issues must begin at the community level. There is a pressing need to understand succinctly the particular cultural dynamics that undergird local behaviour. Global efficacy is more likely to be achieved when an appreciation for local cultural practices and beliefs can inform risk reduction programmes directly. More broadly, the link between cultural identity and resilience ought to become a prescriptive element in future development strategies that emphasises the uniqueness of individuals and the societies they constitute.

The following report summarizes an exploratory and comparative study of risk in the Caribbean and the Pacific islands. The main aim is to (1) *identify the primary determinants of risk*, and (2) *tentatively suggest broad policy prescriptions designed to reduce economic, social and political risk from the effects of natural hazards*. While the study focuses on Small Island Developing States (SIDS), the outcomes can also be used to spark more general debate on

how development and humanitarian activity is designed and implemented.

1.1 Research Design

The design of this research includes three main elements: tradition on inquiry, theory and method. Each of these are discussed briefly below (interested readers are encouraged to consult the following references for more detailed discussion: Weber 1949/2011; Jackson 2010; Hollis 2012; 2015).

1.1.1 Tradition of Inquiry

A tradition of inquiry reflects the epistemological (how we know) assumptions that structure the contours of a research design. One can, for example, adopt a neo-positive framework that assumes that best way to create knowledge is through the testing of hypotheses (empirical falsification). The approach taken in this study adopts what is generally understood as *analyticism*: the process of using ideal types to create knowledge. Ideal types are abstractions informed through our interaction with the empirical world. They are concepts designed to explain a set of phenomena. For example, ‘all swans are white’ is an ideal type that explains a feature of reality. Importantly, the ambiguity created when an ideal type is re-applied to the empirical world is what can produce or enhance our understanding and knowledge (i.e. there are also black swans).

1.1.2 Theory

As this is largely an exploratory study, a variant of *grounded theory* is used: the formation of ideal types through the collection and processing of empirical data. It is thus more inductive rather than deductive. However, an international relations theory known as *localization theory* (Acharya 2004) is used to guide research on the interaction and diffusion of ideas between the global and local level. Theorized ideal types are thus used as an important heuristic. For example, the ideal type, ‘diffusion will always be met by pre-existing local norms’ can be translated into a research question that is then applied to the empirical world: ‘what customs and traditions typify the Caribbean and the Pacific in relation to risk’. It is the interchange between these concepts and the particularities of reality that can produce knowledge.

1.1.3 Method

The main method for collecting empirical data is through extensive interviews with global and local practitioners involved in DRR. Based on initial theorized ideal types, semi-formal, face-to-face interviews (a list of questions are asked where freedom to engage in other topics and questions is permitted) were conducted in the Caribbean and Pacific regions in 2014 and 2015. A research diary was also kept, which included observations made about interviews, the environmental surroundings and cultural experiences. In order to ‘triangulate’ the information gained from the interviews, secondary and primary resources – books, framework agreements, minutes, etc. – were used to substantiate emerging concepts. Furthermore, the method of comparison between island countries and between regions is also used to create important contrast and add to our knowledge of risk and vulnerability.

1.1.4 Definitions

The following definitions are given for key terms used in the report:

Disaster Risk Reduction: 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 hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (UNISDR 2009).

Societal Resilience: The ability of a ‘community of people living in a particular country or region and having shared customs, laws, and organizations’ (Oxford Dictionary 2014) to ‘resist disorder’ (Fiksel 2003, as cited in De Bruijne, Boin and van Eaten 2010, p. 13).

Pacific: Attention is delegated to the 12 independent states of Micronesia, Melanesia and Polynesia (Samoa, Nauru, Tonga, Fiji, Papua New Guinea, Solomon Islands, Tuvalu, Kiribati, Vanuatu, Marshall Islands, Federated States of Micronesia (Yap, Chuuk, Pohnpei, Kosrae), and Palau). While the study generally covers the other 17 non-independent states, the main focus of this study – and the major focus of international organizations – is the former group of states.

Caribbean: The main focus of this study is on 19 independent states in the Caribbean (Haiti; the Bahamas, Belize, Dominica, Dominican Republic; Guyana; Trinidad and Tobago; Belize; Jamaica; Barbados; Cuba; St. Lucia; Suriname; St. Vincent and the Grenadines; St. Kitts and Nevis; Antigua and Barbuda; Grenada; Turks and Caicos Islands; Aruba). The nine dependent states are only indirectly covered.

2. Risk Profile of the Caribbean and the Pacific

Based on the seminal formula for disaster risk – (disaster risk = natural hazards × vulnerability) – the following section first describes major natural hazards that are typical for the Caribbean and the Pacific regions. Second, existing vulnerabilities are discussed according to global/regional, national, and community levels of risk.

2.1 Space, Geography and Natural Hazards

The geographic location of many Caribbean and Pacific islands accentuate the vulnerability of the various community's cohabitating these spaces. The geographical volatility of their place within the 'Pacific ring of fire', or on the precipice of colliding tectonic plates, raises particularly high levels of risk which is compounded by the risk of hurricanes (or cyclones as they are called in the Pacific). According to the international disaster database, in the period 1995-2015 the Caribbean and the Pacific collectively experienced 451 disasters, accounting for roughly 6 per cent of recorded disasters and 16 per cent of total deaths worldwide. The most prevalent types of disasters in terms of quantity, total damage and lives lost are storms or hurricanes/cyclones, earthquakes, floods and epidemics (EM-DAT 2015). Some recent examples include a grade 5 cyclone that crippled Vanuatu in 2015; the Haiti earthquake in 2010; a tsunami that wrecked havoc on Samoa in August 2009; hurricane Ivan in 2004 that devastated Grenada and nearby islands; and volcanic eruptions in Montserrat in 1995 and 1997. The intensity and frequency of weather-related disasters are also set to increase due to global warming and the predicted effects of El Nino later this year (2015). For low-lying islands, the rise of seawater levels also puts coastal settlements at risk, and even entire islands, raising a number of difficult social, legal and political questions that emerge with the possibility of forced migration.

Added to this set of volatile hazards is the issue of space and population dispersion. Both the Caribbean and the Pacific have a similar number of countries (28 and 22 respectively) and both regions consist of roughly 7,000 islands. However, the islands of the Pacific are spread over 30 million square kilometres of the Pacific Ocean compared to 2.7 million in the Caribbean Sea. That is, 6 per cent of the world's surface compared to 0.16 per cent. Large demographic differences are also prevalent. Approximately 10.5 million people live in Pacific islands compared to three times the amount in the Caribbean (36.3 million). The people of the Pacific are thus thinly spread. Tonga, for example, has a population of roughly 100,000 that is spread across 36 of its 172 islands and the Cook Islands comprises of 15 islands spread across almost 2 million km² of ocean (roughly the size of the Democratic Republic of Congo). Conversely, the people of the Caribbean have some of the highest population densities in the world: Aruba has a population density (per square kilometre) of 572, Barbados is a little higher with 662, and St. Maarten has a staggering 1,167

(Worldbank 2015). Compare this, for example, with Vanuatu (21), Sweden (24), Samoa (67) and Tonga (146).

These features present undeniable challenges for intra-national and international responses to disasters, where isolated islands cannot be immediately reached. While the cost of time and resources to reach isolated atolls in the Pacific can also circumvent international advocacy on risk reduction, this is also an important reason for promoting effective preparedness and prevention practices to inaccessible islands. The main demographic issue for the Caribbean, in contrast, is the issue of urbanization that can contribute to vulnerability: an issue that is taken up in the following section.

2.2 Vulnerabilities

Countries of the Caribbean and the Pacific contain 10 of the top 25 most at risk countries in the world, according to the 2013 World Risk Index (WRI 2013). The following explains some of the major features that create such high risk.

Table 1. Social and political determinants of vulnerability in the Caribbean and the Pacific

Levels of governance	Social and political determinants of vulnerability
Global	Duplication; project implementation; knowledge; coordination; market economy
National	Political expediency; human and financial resources; inter-departmental coordination; expertise; staff turnover; urbanization; out-migration; dependence; poverty; non compliance (i.e. building standards)
Local	Dependence; indigenous epistemology; governance; experience

2.2.1 Global determinants of risk

International organizations, financial institutions, NGOs, regional organizations and donor countries have been active in trying to help Caribbean and Pacific countries overcome the threats presented by natural hazards. This has included, for instance, awareness and education programmes, financial and technical support to National Disaster Management Offices (NDMOs), and the provision of water tanks and sanitization devices. The international community are, however, beset with a number of issues that limit their efficacy and efficiency. (1) Project implementation in both regions is often based within a short time frame of one-to-five years which means that the long-term sustainability of DRR knowledge is often lacking, particularly if no large disaster is experienced by the population over an extended period of time.

(2) Duplication can be an issue – particularly for the Pacific – when organizations attempt to administer similar projects without adequate coordination. This wastes time and money that could be spent more effectively in related sectors and at worst can lead to recipient confusion. The Eastern and Northern Donor Groups in the Caribbean appear to provide an important arena for reducing such duplication. However, the Pacific remains weak on this front. (3) A related issue that can limit effective coordination is competition between agencies, international organizations and NGOs in order to receive appropriate

funding. Apart from encouraging a silo mentality, this can also place much of the agenda-setting powers in the hands of a few major donors.

(4) An additional issue, at least for the Pacific, is the unintended effect of ‘over supporting’ national NDMOs which can overwhelm national human and financial resource. This is particularly the case for Tokelau, for instance, which is overburdened with various development agencies that it cannot deny because of its desperate need for funding. (5) Another feature specific to the Pacific is changing social dynamics produced by the global economy, such as a switch in emphasis from subsistence farming to cash crops, out-migration and urbanization. These can erode indigenous practices that have traditionally maintained a fairly high level of resilience to the effects of cyclones, tsunamis and flooding.

(6) A final issue concerns the global supply of tourists – and the western reification of the islands’ as a paradise – that can reinforce existing diseconomies of scale that are dependent on tourism: a business sector highly sensitive to natural hazards. The need for economic diversification is in constant demand.

The international community are strongly aware of these issues as reflected in attempts to decrease duplication, encourage inter-organizational coordination, and increase capacities and resources. Yet, the ability of the international community to create positive change at the community level remains limited. A major gap exists between the applications of global prescriptions into local practices (Wisner, Gaillard and Kelman 2012; Gaillard and Mercer 2013; Kirton 2013; Hollis 2015). This observation is most apparent among developing countries that are highly vulnerable to sudden ruptures in the everyday functioning of their societies. Moreover, it is the very countries that are most at risk that also have made the least progress in strengthening local capacities (GNDR 2011, p. 31). Even if the international community has become increasingly active in promoting DRR, change in local practices has been fairly insignificant in developing countries (GNDR 2011; Munro 2013). There is still much more than can be done. As of 2012 only 1 per cent of all development aid was channelled into DRR projects (Kellett and Sparks 2012, p. 2).

2.2.2 National determinants of risk

If the unique space, geography and natural hazards of the Caribbean and Pacific produce vulnerability, limited national capacities only catalyse this risk. A major issue here is little financial investment in NDMOs. Take Fiji, for example. In comparison to many other islands, Fiji has a fairly advanced and diverse economy, yet its investment in the Fiji NDMO has been marginal despite its economy being affected by various disasters such as a drought in 1998-1999 and cyclone Evan in 2012. Caribbean countries, such as St. Lucia and Grenada also face similar issues of limited staff and funding. This lack of investment means that basic risk management assets such as computers, trucks, warehouses, and human resources are largely missing. The extent to which resources and capacities can trickle down to the community level is consequently limited. The need for satellite phones to enable instant communication to remote towns and villages, for instance, is often an expense that cannot be met.

The lack of appropriate funds can be partly explained by political expediency. In the Pacific this has occurred through a dependence on the international community to provide what the state ought to provide, which

deprioritizes national investments in risk reduction. The logic of risk preparedness also means that it can be hard to convince government officials to invest in preventing and preparing for future contingencies when it is highly likely to occur after their incumbency or even lifetime. In the eyes of some politicians, it may be better to be seen assisting in the aftermath of a flood than claiming praise for implementing risk reduction policies that successfully mitigate risk. Disasters can be windows of political opportunity.

High staff turnover and the low prestige equated to NDMOs in many governments in the Caribbean and Pacific region reflect an institutional barrier that restricts the need for increased capacity and resources at the national level. Another institutional issue that prevents greater awareness on the need to invest in a safer future is a lack of inter-departmental coordination and knowledge sharing. While there are some national efforts and support through the UNISDRs national platforms on DRR, the idea of promoting DRR as a 'risk lens' for all ministries in a government is taking time to catch on. A similar situation exists in the private sector, where few business continuity plans are put in place or have been created.

The lack of any building regulations or enforcement mechanisms also means that vulnerability remains fairly low. This issue is tied into the general development problem of poverty, whereby only those that can afford better building materials will implement safety standards (assuming knowledge on standards exist). The makeshift construction of housing with iron roofs in some of the informal settlements in Fiji or Trinidad, for example, represent some of the most vulnerable sectors of society. The limited budget of many of these countries also means that the funds that could be used for development are diverted into short-term relief activities, allowing long-term development problems to persist. This destructive cycle is difficult to avoid and is further compounded by the overuse of limited environmental resources from agriculture to tourism. This has led to increased risk from landslides caused by deforestation, increased risk from hurricanes due to the removal of mangroves, as well as damaged coral reefs, eroded beaches, and polluted waters.

The small and fragile economies of the Caribbean and the Pacific also contribute to high vulnerability. Due to their size and geography many of these islands have a limited natural resource base, which means that they are (1) highly dependent on exports in basic commodities including energy (2) highly reliant on a small number of economic sectors (usually agriculture and tourism) leading to a diseconomies of scale. High costs are also prevalent through many islands in terms of transportation, communication, servicing, energy and infrastructure.

These 'development' conditions can certainly provide a 'push' factor that encourages out-migration. This may indirectly affect the economy through the reduction of labour force in both regions. In the Pacific, it also debilitates traditional village structures where the 'young men' the represent the 'muscle' of the community weaken. Traditional roles of this 'muscle', such as caring for the elderly and working as subsistence farmers, are consequently depleted, leading to a less secure environment for those that choose to stay. Increased urbanization in many parts of the Pacific produces similar effects.

The answer to why a gap persists between global or national efforts to promote risk reduction at the community level is clearly due to a complex risk environment that includes a number of national and global determinants of risk. External economic pressures, urbanization, poverty, migration and limited

capacity fold together to create a difficult development knot to untie. Yet, one fundamental feature of any risk environment that is not always emphasised is the importance of local culture.

2.2.3 Local determinants of risk

Culture is important for understanding risk because it colours how society perceive and thus react towards risk. It is about the social construction of vulnerability. A classical example of this perspective in disaster studies – which the findings in this study substantiate – is the effect modern development practices and colonial rule have on eroding indigenous practices on risk reduction and response. For example, the high mortality rate resulting from the 1970 Ancash earthquake in Peru was in part due to Spanish-induced changes in building standards and resettlements (Oliver-Smith 1996, p. 315). In this sense, the erosion of cultural practices creates vulnerability. Yet, holding on to indigenous knowledge, customs and beliefs can also increase vulnerability for some societies. This was the case for a Javanese community that refused to relocate despite the risk of volcanic activity on the grounds of religious, political and social customs (Kulatunga 2010).

The importance culture and historical events have in shaping vulnerabilities informs the rest of this report that examines how indigenous knowledge and cultural perceptions of risk can reduce or enhance risk. To understand culture is to understand how the customs, habits and beliefs of society are translated into everyday practices. These practices, in turn, construct particular perceptions of risk and thus a particular level of vulnerability. Identifying such traits is not easily achieved particularly if the Caribbean and the Pacific is viewed as a whole. Yet, it is suggested in the following sections that some similar cultural traits can be recognized that can help aid in our understanding of risk.

3. Cultural Perceptions of Risk

Caribbean and Pacific states' experience similar natural hazards and share similar vulnerabilities. Hurricanes, earthquakes, seawater rising and droughts pervade each region along with limited economic possibilities and similar logistical issues. However, one major difference in both regions is how societies perceive risk: a difference attributed to vastly different historical experiences. The following section describes the desperate cultural practices that typify the Caribbean and the Pacific in terms of how they produce different risk perceptions. The section on the Caribbean illustrates that a complex history constructs a culture of non-preservation and non-maintenance that discourages contingency planning for future disasters. The section on the Pacific focuses on how some changes in indigenous practices results in a greater dependence on national and international support, and how resilient indigenous thought produces other challenges for the internalization of DRR knowledge.

3.1 The Caribbean Experience

The Caribbean islands share a turbulent and painful past of oppression. The tumultuous history of slavery, for example, saw the dislocation, loss and re-invention of African customs and traditions. The acculturation of various African and European cultures, languages and beliefs produced a complex assortment of contingent norms and customs that together make up today's Caribbean identity. Much of this creolization was formed out of the need to survive, the creative use of being placed in a new environment and the effects of oppression (Morgan, 2011, p. 251). This has contributed to an ideational fluidity reified through inter-marriage between different African cultures, the establishment of complex inter-faith and inter-ethnic communities and the suppression of African ritual practices.

Slavery, indentureship and colonial rule have applied layers of historical experiences that provide difficult grounds for establishing a common story and, hence, a cohesive and strong self-identity. Even harking back to Carib or Tainos cultures is difficult considering the limited amount of indigenous representation left on most islands. A complex past and a present-day mixture of beliefs and ethnicities, combined with relatively newly claimed independence, represent some important features that have severely affected the ability of communities to ground their customs in a historically defined script.

How does this history influence risk perceptions? An awkward association with history means that there is often less enthusiasm to preserve the past: to preserve a common story that creates community identity.¹ This

¹ By way of illustration, the current state-of-investment in local museums and art galleries is meagre. In some cases, important historical artefacts and architecture are literally crumbling away from modern memory.

culture of non-preservation may also be connected to how the social memory of disasters is retained or forgotten. If there are few customs associated with historical preservation – due, at least partly, to the pain of dealing with the past – it could be supposed that this culture of forgetting may spill over into how societies remember recent traumatic events, such as disasters that evince emotional pain. This is particularly evident for major disasters that generally occur ‘once in a life time’, meaning that the history of an event – or a large shock to the system – will be lost when it may be needed the most.

Importantly, a culture of non-preservation not only reflects an awkward coping with the past, but also limits the depth of vision for the future. If there is little interest in preserving the past to reify/create self-identity, preserving the present will also be of limited concern. A relaxed attitude towards the present and the future reflects a *culture of non-maintenance*. When asking questions on maintenance, one commonly hears the phrase ‘you fix it when it breaks’. There appears to be little concern, for example, with insuring gutters are properly fixed to houses to reduce soil erosion and land movement, and a relaxed attitude to building standards, legislation and enforcement. The existence of recovery funds and handouts plays into a ‘gimme gimme culture’ that reinforces this attitude towards the future where ‘repeat offenders’ can become the norm at the local or national level.

The outcome of past (non-preservation) and future (non-maintenance) based observations on culture points towards an *ephemeral state-of-being*. There is fluidity among large portions of the population, which is constituted by a struggle with the past and an unclear vision of the future. An ephemeral state-of-being emphasises the trajectory of society in terms of its future levels of vulnerability. If society is indifferent to historical preservation and, as a consequence, is disinclined to invest and think in the future, prescriptive advice on DRR is less likely to be internalized by individuals and communities.

3.2 The Pacific Experience

Traditionally, many island peoples in the Pacific have been highly resilient to disasters. Long before the modern concept of humanitarian relief aid, villagers devised resilient practices to cope with rude interruptions to everyday life. Preserving breadfruit underground, using medicinal properties from local trees and fauna, ensuring additional root crops, and constructing wind-resilient houses that can be re-constructed within a week, diversifying basic resources through inter-village and inter-island trade, have been common activities practices performed by local communities across the Pacific.

This is changing. People are now less willing to bury breadfruit or rebuild damaged houses. Instead, they wait for food packages and government payouts. Tarpaulins are set up in place of damaged housing where the occupants will wait for assistance. The involvement of the immediate community in rebuilding traditional housing becomes less likely. The blame for change has been placed on the global economy, poverty and migration: the staple issues that contribute to vulnerable communities. One of the social support structures that are eroding is duty to the community, for example. Instead of contributing to the village under the norm of reciprocity, youth increasingly want to know how much cash they will get. Some even go as far to say that many Pacific youth can easily collapse into an identity crisis between indigenous and western epistemologies.

An additional contributor to this dilemma is the response efforts made by modern humanitarianism. Timely interventions by the international

community in the immediate aftermath of a disaster can reify a growing sense of expectancy that contributes to long-term vulnerability. It is questionable whether the international community fully understands this. In a world where visibility is everything all agencies want a piece of the humanitarian pie. Inter-agency competition can get in the way of long-term development strategies that aim to decrease dependencies on international aid. Inadvertent change in the behaviour of communities produced by a reactive rather than a proactive international system creates the risk of self-perpetuating a cyclical system where the recipient and the donor become interdependent. At worst, people will welcome disasters because it provides the possibility of receiving pay-outs.

While global or external forces have affected behaviour, many indigenous values and corresponding worldviews have not deteriorated. An important aspect of the Pacific worldview is the concept of time. Like the Niuean use of gestures, language and story telling, a Pacific worldview relies on a 'non-linear, culturally-embedded, circular, spiritual way of thinking, theorizing and communicating' (Quanchi 2004). Consider, for instance, that there is no word in indigenous Fijian for future. Instead, future is understood through the idea of '*Sautu*': the achievement of peace and harmony by honouring traditional practices, such as mutual respect and caring. We are thus confronted with two disparate epistemologies on time. One looks back to the future, the other turns its back to the past to see the future. The latter, westernized view of time, is clearly a part of global prescriptions on reducing risk in the future. It is thus postulated that these different conceptions on time can affect the extent to which preparing for future contingent events becomes internalized by local communities. If this is true, then the international community need to be more conscious about how they support DRR practices in local communities that aim to combine western and indigenous thought at a deeper and more meaningful level.

The importance of maintaining traditional governing structures also presents issues for national and international organizations who wish to directly support villages' capacity to cope with natural hazards. First, the chiefs or village council (as the credible actors) must be persuaded to adopt – or merge – external ideas on DRR with existing practices. Organizations have voiced frustration that this can become a costly activity, as most villages will demand a sum of money before the visitors are able to present their message. Second, even when the elders and chief are convinced and have been paid their dues, participants from the village may not be fully represented as they might be performing particular community roles. Third, there is no guarantee that the knowledge transferred to the village will become internalized as practice, or that the resources supplied will be maintained. In the worst case, DRR projects are seen as money (Tari 2015). This is particularly the case when complacency takes over vigilance in long periods of stability.

4. Future Currents of Risk

The previous section outlined different perceptions of risk, which were the result of unique and dramatic historical episodes. The Caribbean expresses a sense of ephemerality based on a culture of non-preservation and non-maintenance. The Pacific expresses a dislocation of indigenous practices that contribute to modern challenges of internalizing ideas on DRR. While an examination of these different cultural settings reveals different perceptions of risk, it is argued that they whistle a similar tune: namely, a culture of complacency. The idea associated with an ephemeral state-of-being in the Caribbean, for example, can encourage a sense of complacency as the concept of preservation and preparedness are not strong societal values. Similarly, an increasing sense of expectancy from inter/national assistance encourages a sense of complacency in terms of future contingent events in the Pacific. Indigenous concepts of time, as well as traditional village customs, may also prevent the internalization of risk reduction and the idea of thinking in the future. So, what is to be done?

4.1 The value of self-worth

The promotion of societal self-worth, through tailored cultural management practices, is proposed as a long-term solution to aid in the re-organization of society towards achieving greater resilience. Societal self-worth is understood as the collective self-worth of individuals that live in a ‘community of...shared customs, laws, and organizations’ (Oxford Dictionary 2014).² Self-worth is understood here as a keystone for establishing a resilient society by forging and reifying a common identity that has the effect of modifying temporal perceptions of risk: from short-term thinking to a holistic understanding of risk that takes pride in the past and preserves the present for the future. Based on the above analysis, cultural management would be applied differently in the Caribbean and the Pacific.

For the Caribbean, careful cultural management can help form societal self-worth by encouraging a *common story* out of the multiplicity and diversity that has emerged out of a turbulent Caribbean past. Studies have shown, for example, that investment in tangible (public places, museums, libraries) and intangible (rituals, festivities, carnival) heritage sites can produce increased level of social trust, common values, a ‘sense of place, local pride and sense of belonging’ (Murzyn-Kupisz and Działek, 2013, p. 47). Banking on the inherent and dynamic creativity of the Caribbean, and through the effective

² Individual self-worth, in turn, is defined as the degree to which self-evaluations from others (family, friends and the community) and oneself ‘is judged to be competent in life domains deemed important’ (James 1890/1983 and Cooley 1902/1964 as cited in Neff and Vonk, 2009: 24). This definition is purposefully broad, recognizing the different types of self-esteem and self-worth conceptualized and discussed by (social) psychologists. As self-worth is understood as ‘our evaluation of our self as being a worthwhile person’ (Psychology Dictionary, n.d.) it is considered synonymous with self-esteem for the purposes of this paper.

management and channelling of this creativity, a greater sense of self-worth among peoples can be achieved. This would encourage a desire to pass on this creativity, and the sense of community it creates, to the next generation. Slowly, the past could re-shape the ideational status quo leading to a greater appreciation for a more secure and less vulnerable environment in the future: a shift from ephemerality to a sense of cultural and ideational permanence.

For the Pacific, cultural management would encourage the careful merging of indigenous and western ideas. This would be a positive step forward. However, it is also important to understand how *knowledge* is translated and internalized into effective *practice*. This requires a better understanding of the cultural perceptions of risk that typify much of the Pacific. There is well-founded scepticism that another workshop or another visit to a village is not going to change behaviour. Long-term strategies are needed that aim to connect and complement existing cultural practices. It is argued in the following section that the use of creative arts can provide the link necessary to turn knowledge into practice.

4.2 The Art of Risk

The use of creative arts – music, dance, sculpture, architecture, painting, etc. – can provide (1) the means for a ‘common story’ that can strengthen Caribbean self-worth and (2) a means of translating knowledge to practice through *experience* in the Pacific.

For the Caribbean in particular and the Pacific in general, art provides not only a vehicle for self-recognition as a society, but provides a mirror for society to reflect upon, to manage their past, and to discuss, mould and create their own identity through critical reflection. It provides an important tool for cultivating cultural depth and thus a stronger sense of self worth as a society. If this can be achieved, resilience to natural hazards will follow as an intrinsic desire to preserve contemporary social memory. Bound together by a strong sense of identity this will translate into thinking in the future and thus a change in social mind-sets towards preparing and preventing for future contingencies.

In more concrete terms, creative solutions are needed to encourage a desire to preserve the past and present for a more secure future. Investment in cultural traditions, such as establishing a museum of Carnival costumes and mask making, or a promotion of the rich musical traditions of the Caribbean, would encourage cohesiveness. The uniqueness and vibrancy of the Caribbean, which is often reflected in the arts, provides a firm foundation for ensuring a more cohesive and bright future.

The use of visual, literary, and performing arts not only provides a source of cultural celebration and ideational self-worth, but it can also be used as useful medium to internalize DRR in communities. The use of dance, music, sculpture, architecture and painting can pierce through language barriers and seamlessly integrate into community practice. The use of Participatory 3-Dimensional Models in local Pacific villages by the UNDP, for example, encourages community participation and effectively raises awareness. This is achieved presumably through interactively experiencing risk in a controlled environment in the village, rather than just imagining how this would look. The IFRC and UNDP Youth have also supported song contests by local musicians in Grenada and Barbados, reflecting a creative and useful way of propagating DRR. The use of visual and performing arts could also be used constructively in a similar way. Performing and visual art competitions could be organized to not

only send a direct message to the community on DRR, but more fundamentally instil a sense of pride in the creativity of the Caribbean people.

Of course, the role of art and cultural heritage is not a panacea for development or for DRR. The role of promoting stronger family units and education on parenting practices; encouraging economic diversity and long-term political strategies; increasing donor-recipient coordination and inter- and intra-regional coordination; investing in research and cost-benefit analyses; change in institutional structures; and the enforcement of building regulations, represents just some critical issues that would support the development of DRR. However, none of these initiatives will produce the desired outcomes if societal perceptions on risk are informed through a sense of complacency. Deep-seated changes in the psychosocial status of Caribbean and Pacific cultures that promote societal self-worth and link modern and indigenous ideas through creative practices are needed and can be achieved through the careful promotion of the vibrant and creative cultures of the islands.

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