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Natural and Unnatural Disasters: Responding with Respect for Indigenous Rights and Knowledges

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Abstract

A key challenge for contemporary democratic societies is how to respond to disasters in ways that foster just and sustainable outcomes that build resilience. respect human rights, and foster economic, social, and cultural well-being in reasonable timeframes and at reasonable costs. In many places experiencing rapid environmental change, indigenous people continue to exercise some level of self-governance and autonomy, but they also face the burden of rapid social change and hostile or ambiguous policy settings. Drawing largely on experience in northern Australia, this paper argues that state policies can compound and contribute to vulnerability of indigenous groups to both natural and policy-driven disasters in many places. State-sponsored programmes that fail to respect indigenous rights and fail to acknowledge the relevance of indigenous knowledge to both social and environmental recovery entrench patterns of racialised disadvantage and marginalisation and set in train future vulnerabilities and disasters. The paper advocates an approach to risk assessment, preparation, and recovery that prioritises partnerships based on recognition, respect, and explicit commitment to justice. The alternatives are to continue prioritising short-term expediencies and opportunistic pursuit of integration, or subverting indigenous rights and the knowledge systems that underpin them. This paper argues such alternatives are not only unethical, but also ineffective.

KEY WORDS risk; ontological risk; vulnerability; resilience; justice; indigenous rights; natural disasters; policy failure; indigenous knowledges; Australia; Kiwirrkurra; climate risk

Introduction

Relationships between states and indigenous minorities in colonised areas are often troubled. There are significant challenges for both indigenous groups and states. There is pressing need to address not only failure to decolonise the lives and territories of indigenous peoples and the legacies of the colonial past, but also much more contemporary failures in intercultural relations and the lack of capacity in state agencies to meet the challenges of cultural diversity.

As is the case in many places vulnerable to rapid environmental change, indigenous people across north Australia continue to exercise some level of self-governance and autonomy (cf. Jonas, 2002; Corn and Gumbula, 2004; Marika et al., 2009). Like indigenous minorities elsewhere, they often experience threats, risks, and hazards that are different to other parts of society (Stoffle and Arnold, 2003: Ellemor, 2005: Stoffle et al., 2008). Their responses and efforts to adapt to changing circumstances are often hampered by state-constructed hurdles (Howitt, 2010). Indeed, indigenous groups' social and cultural resilience is often directly undermined by historical and contemporary practices, attitudes, and policies of state agencies. Consequently, state policies often define indigenous groups as needy victims or problems. Poor policies and practices, however, extend cycles of colonisation, marginalisation, and alienation and impose everincreasing social, cultural, and human costs on both indigenous peoples and the wider national society.

It is important to recognise that both social and biophysical environments are subject to rapid and disastrous change. A key challenge for contemporary democratic societies is how to respond to disasters in ways that foster just and sustainable outcomes that support indigenous rights by building resilience, respecting human rights, and fostering economic, social, and cultural well-being in reasonable timeframes and at reasonable costs (Hocke and O'Brien, 2003; International Strategy for Disaster Risk Reduction, 2008). Part of this response requires acknowledgement that the outcome of natural disasters is often mediated by the unnatural disaster of colonial and post-colonial state policies and practices.

This paper explores ideas of risk, resilience, and responsibility to assess prospects for recognising, respecting, and building indigenous knowledge and resilience as a foundation for addressing rapid environmental, social, and economic change more equitably and sustainably. It suggests that, in many settings, past and present state policies compound and contribute to the contemporary vulnerability of indigenous groups to both natural and policy-driven disasters. In many contexts, state-sponsored recovery programmes fail to respect indigenous rights. The existence of such rights is now formally recognised by the United Nations. Many state programmes, however, fail to acknowledge the relevance of indigenous knowledge to both social and environmental recovery after disasters. In casting indigenous peoples as victims with little to contribute to preparation or recovery, many state policies entrench patterns of racialised disadvantage and marginalisation and set in train

future vulnerabilities and disasters. Indeed, discourses that cast specific communities as either victims or as inherently vulnerable create the risk of self-fulfilling predictions of dependence, incapacity, and exclusion (Bankoff, 2001). In many cases, the slow, underlying disasters of colonisation, marginalisation, and alienation are not acknowledged as 'disasters'. This paper, therefore, makes a two-pronged argument. On the one hand, it is argued here that colonisation and the ongoing processes of 'deep colonising' (Rose, 1999) need to be understood as 'unnatural disasters' that wreak consequential havoc in indigenous communities, and that responses that build upon recognition of indigenous rights and address questions of self-determination, selfgovernance, and decolonisation, are necessary to develop workable reform of state policies and dominant cultures' relationships with indigenous minorities. On the other hand, it is argued that responses to 'natural disasters' affecting indigenous groups, including the environmental risks arising from climate change, must be developed in ways that acknowledge the existing catastrophic consequences of colonisation, and should be addressed as opportunities for decolonisation rather than continuing to impose poorly conceptualised and badly implemented strategies that multiply the miseries visited upon indigenous peoples.

Formal arrangements to acknowledge and respect indigenous rights are a recent policy shift in many jurisdictions across the globe. For many decision makers within dominant cultures, even recognising that existing policies, programmes, and practices reinforce racist and disabling stereotypes of indigenous people is often difficult (International Working Group for Indigenous Affairs, 2001; Hunt et al., 2008). Although international conventions and treaties guarantee specific rights for ethnic, religious, and cultural minorities, including rights to retain identity, language, cultural values, religious practices, and livelihoods,¹ political manipulation of fear and prejudice for electoral advantage can make the implementation of such obligations problematic even in mature democracies (International Working Group for Indigenous Affairs, 2001). Since October 2007, those international instruments have included the United Nations Declaration on the Rights of Indigenous Peoples,² which identifies specific rights of indigenous groups. Despite the passage of time, most states still struggle with the idea and the practice of indigenous rights. Capacity deficits in key state and non-state agencies constrain transition to new arrangements, with serious implications for minority rights, cultural and environmental sustainability, and basic notions of social and environmental justice.

There are few examples where effective changes have been implemented in response to formal recognition of indigenous rights. A perhaps unique case is the Bolivian election of an indigenous president in 2005 following years of activism among the nation's indigenous majority (Postero, 2007: Morales, 2010). Nation states founded upon territorial and cultural claims have long constituted indigenous peoples as excluded from and even hostile to the interests of the nation. State claims to territory, resources, and jurisdiction typically assumed (or imposed) the absence, erasure, or irrelevance of indigenous rights and jurisdiction. States face a paradoxical challenge in framing policies and programmes that simultaneously protect and enhance the welfare and well-being of the nation as a whole (commonly simplified to the welfare and wellbeing of members of the dominant cultural group) and acting to protect and realise the rights and interests of citizens from minority groups, including indigenous peoples, who are easily vilified or victimised as being either outside or hostile to that national interest. Success in resolving this paradox in equitable and sustainable ways has proved elusive and problematic even in mature and generous democracies such as Australia. Indeed, in many nation states, even basic legal foundations of property law, laws and procedures governing environmental management, and the distribution of and access to power, resources, and opportunities continue to reflect entrenched structural racism and intolerance of diversity that is seen as dividing the imagined community of the 'nation'. Linking popular acceptance of indigenous rights to mobilisation of political, legal, and practical tools to deliver sustained improvements in well-being, opportunity, and sustainable futures to indigenous groups is rare. Doing so in the context of responses to emergencies, disasters and extreme risk remains tenuous and haphazard.

Risk and the developmentalist narrative

In modernist and modernising societies, the narratives of linear progress towards national development provide powerful tools to mobilise political, financial, and social capital for projects that are seen to realise national (and nationalist) ambitions (see, e.g. Escobar, 1998; 2001; Simon, 2006). While developmentalist narratives promise improved livelihoods and benefits to people, indigenous minorities are often left outside that vision (e.g. Curry, 2003). In that case, national development projects become little more than a repackaging of earlier patterns of colonisation. The invisibility of indigenous minorities in national development discourses and their marginalisation from the instruments and institutions of power and policy mean that colonisation itself - like the dominance of the colonising culture - is made invisible. Indigenous territories have already been assimilated into the nationalist territory in the geographical imagination of the dominant culture, and indigenous claims to specific property and other rights are thus rendered as a divisive surprise rather than a justifiable claim to protect existing entitlements.

In terms of the developmentalist narrative, persistent indigenous underdevelopment and the failure/refusal of indigenous groups to participate in/contribute to/benefit from the project of national development reinforces suspicion and hostility derived from colonial times. In the dominant culture, it is generally seen as both incomprehensible and somehow catastrophic and dysfunctional. Unvielding faith in the developmentalist agenda allows such failures to be explained in terms of innate flaws in indigenous cultures and indigenous peoples, and - like victims of other catastrophes - the state is thus obliged to intervene to secure the best interests and welfare of the hapless victims precisely because they are unable to do so themselves (see, e.g. Hewitt, 1995 for a similar argument).

This familiar rendition of the failure of development to deliver sustainable benefits to indigenous groups creates its own threats, risks, and hazards for indigenous peoples, and exposes them to different sorts of risks arising from natural hazards compared to other groups in society. It is to these risks that we hope to bring attention in order to reframe the challenge of indigenous rights in state policies and programmes.

Colonisation as unimagined risk

University of Arizona anthropologist Rich Stoffle and his colleagues (Stoffle and Arnold, 2003; 2008; Stoffle and Minnis, 2008; Stoffle *et al.*, 2008; Stoffle and Stoffle, forthcoming) have usefully developed the idea of ontological uncertainty and unimaginable risk in intercultural settings: Ontological uncertainty exists at the juncture of risk and resilience. Over time a society can and will co-adapt to social and natural perturbations . . . that occur within cycles of a few hundred years . . . Perturbations . . . that have either never occurred before or only occur every millennium or so are largely beyond the ability of a society to prepare for and may be beyond their resilience. Resilience is at risk . . . and can be irreparably damaged when members of a society become separated from their traditional environment by unimaginable perturbations (man-made or natural) that weaken the foundations of their society. (Stoffle and Arnold, 2008, 2)

In discussing responses to risk and environmental change, Stoffle and Arnold (2008) consider not only how Hopi Native American communities responded to prolonged drought and smallpox pandemic in the 1780s, but also how transportation of radioactive wastes disrupts access to the afterworld along a section of a traditional trail in Southern Paiute territory in Nevada (Stoffle and Arnold 2003; 2008). In the 1780s, Hopi resilience was secured by accommodating displaced peoples and remnants from other groups affected by the pandemic to form a 'new Hopi society . . . made of many peoples and cultures that today constitute Hopitutskwa (Hopi Land) which encompasses everywhere the Hopi people and their ancestors travelled, lived, and were buried during the long migration from the place of origin to Tuuwanasavi (earth center) on the Hopi Mesas' (Stoffle and Arnold, 2008, 5). For Southern Paiute peoples, the intrusion of radioactive wastes into the 'path to heaven' constitutes a very contemporary challenge. Uranium and radioactive waste generally is conceptualised as a powerful spiritual being, an 'angry rock' that:

... constitutes a threat that can neither be contained nor controlled by conventional means. It has the power to pollute food, medicine, and places, none of which can be used afterwards by Indian people. Spiritual impacts are even more threatening, given that the angry rock would pass along highways where there are animal creation places, access to spiritual beings, and unsung human souls. A most troubling concern is that radioactivity would be transported along the path to the afterlife. The juxtaposition of the angry rock and human spirits being sung to the afterlife is unthinkable. (Stoffle and Arnold, 2003, 16) Stoffle and his collaborators extend their horizon to management of marine protected areas in the Bahamas and effects of conservation management on local communities and livelihoods (Stoffle and Minnis, 2008). This body of work points to the need to recognise that the social. environmental, and economic disruption of conquest, erasure of customary governance, and imposition of new social relationships constitute serious, unnecessary, and unjustified social and cultural trauma. Such trauma – like the trauma of armed conflict, and unlike the trauma of natural disasters - is a product of human decisions. Failure to recognise this trauma sees states continue their imposition on indigenous and minority communities - often across many generations. Thus, such disaster often goes unacknowledged, uncompensated, and unaddressed. Because the disaster is not acknowledged, states allocate resources for recovery poorly, or not at all. The difficulty for indigenous groups is exacerbated by state claims that such matters are internal concerns of the sovereign state, which make external intervention by non-state agencies difficult. Indeed, in many indigenous domains, states continue to insist that the progress and development targeted by inappropriate or poorly designed policies are desirable and necessary – regardless of the demonstrable human (or environmental) costs. Indigenous peoples' failure to thrive and participate in the imagined benefits of national development programmes are taken as a clear indication of the need for more of the same sorts of state action and as evidence of the extent of indigenous intransigence, rather than as indicative of the failure of inappropriate policy. In the highly charged racialised politics of populist nationalism in settler societies, it is easy for political debate to shift to construct indigenous identity as the problem and indigenous issues as an unreasonable burden to the dominant society.

New risk scenarios have been widely acknowledged as a characteristic of modern times (Beck, 1992). New technologies, extended and collapsed time horizons, new spatial links, and the cumulative impacts of changing human-human and human-nature relationships all reshape the landscapes of risk in modern societies. New sorts of risks that threaten human survival constitute unimaginable risks that human societies have not previously confronted and for which no previous social experience provides precedent or analogue (Beck, 1992). Such risks are unprecedented in terms of their frequency, magnitude, and sub-

stance (Stoffle and Stoffle, forthcoming). Consequently, they threaten people's capacity to recover from or adapt to them. Indeed, they create uncertainty at an ontological level by undermining people's understanding of the nature of the cosmos and their place within it. For many indigenous peoples, the encounter with colonisation has been just such a risk. Rapid depopulation, new forms of physical, mental and social illness, loss of identity, language, cultural practice, religious belief and property, incomprehensible violence, rapid environmental change and deliberate destruction of materials and places of cultural and ritual significance constituted catastrophic circumstances from which recovery has been extraordinarily difficult. The continuing onslaught of colonisation, and what Rose (1999) refers to as the 'deep colonising' of paternalism undermined certainties of human existence, leaving whole societies facing the challenge of recovery not only surrounded by hostile settler societies and confronted by state programmes intended to erase their ways of life and being, but also with the continuing unnatural disaster of programmes and practices that renewed and reinforced unimaginable risks unleashed by colonisation on a daily basis in every aspect of their lives.

In periods of rapid social, economic, or environmental change or national crisis, states and state agencies rely on existing patterns of interaction to tackle the challenges (e.g. Adger et al., 2009). Their capacity to recognise, respect, understand, and protect indigenous minorities' rights and interests during such periods of urgency is therefore, at best, limited and, at worst, patronising and disabling. In responding to crises, state agencies and state leaders often rely on emergency responses that assume the universal relevance and appropriateness of dominant cultural values, responses, and understandings (Veland et al., 2010). In doing so, it is common for responses to re-inscribe contemporary political and cultural landscapes with patterns that are colonial in effect and impose substantial risk and cost on indigenous peoples. Such risks are poorly understood by the dominant institutions of power. In short timeframe disasters (environmental, economic, or social), states generally assume that the most important expertise is embodied in state agencies and specialised non-government and international organisations, and that local groups affected by disasters are - by definition - victims rather than potential sources of expertise, understanding,

and wisdom. Procedural reliance on expert systems excludes or marginalises minority interests, values, and perspectives. In extreme circumstances, standard procedures will cause lasting damage to indigenous institutions and their capacity to deliver governance, support, meaning, and recovery to affected communities. In situations characterised by racism and opportunism, disasters create opportunities for corrupt or ruthless vested interests to use relocation, resupply, or recovery to be converted into alienation of indigenous peoples' property and rights for private gain.

In response to natural disasters, states are remarkably effective in mobilising resources for recovery. Most states provide national funding for recovery programmes to support provincial and local governments and even local communities in rebuilding essential infrastructure, replacing lost capacity, and addressing future vulnerability. In climate change debates, states have started to mobilise resources for adaptation and funding programmes to address structural vulnerability. For indigenous groups, however, there are no such programmes to fund action to address the impacts of colonisation and the legacies and contemporary manifestations of state decisions that have constructed vulnerability by dispossessing, disempowering, and relocating people, building essential services in vulnerable locations, providing sub-standard services and facilities and so on. Indeed, states, state agencies, and even many well-intentioned philanthropic and helping organisations continue to set aside indigenous knowledges and create risk not only by excluding people from decisions about their future, but by continuing to create new traumas and risks in their responses to both the everyday and emergency circumstances that constitute the context of indigenous people's lives.

In longer timeframe, processes such as climate change, desertification, urbanisation, national development and structural adjustment to globalisation, indigenous and minority interests are often represented in the dominant discourses of crisis and response as a source of the problem and/or irrelevant to its solution (Davis, 2005; Komeie, 2006). In this way, locally knowledgeable indigenous groups are easily excluded from design and refinement of state responses and processes intended to address the issue. Furthermore, both state and private interests (e.g. corporations, but also powerful individuals, majority religious groups, dominant culture non-for-profit institutions and quasi-government agencies) often act opportunistically to obtain advantage by gaining control of specific resources, property, or wealth, or by increasing their influence at cost to minority groups. In some situations, for example, where national development projects such as major infrastructure projects, resource development, or tourism precincts are at stake, development agencies or private corporations responsible for projects are represented as synonymous with the national or general public interest (Howitt, 1991; Lawrence, 2007), indigenous protests about loss of rights are easily represented as antagonistic to the goal of national development, and even a threat to state stability.

Davis (2005) offers an analysis of the crisis discourse around desertification in Morocco that identifies the ways in which indigenous herders were identified as a key reason for the environmental crisis because of their practices of overstocking vulnerable areas with camel herds. Davis's analysis identifies state policies of sedentarisation of nomadic herding communities, militarisation of the border zones in which the nomads traditionally operated, marginalisation of nomads' extensive ecological knowledge, and the availability of significant financial resources to combat 'desertification' as influencing the ways in which the crisis discourse had become institutionalised and the crisis itself renewed rather than resolved, and the nomad minority continued to be vilified within the institutionalised discourse. Similarly, Komeie (2006) identifies Japanese colonial environmentalism in the 1920s and 1930s as central to displacement of shifting cultivation methods (hwajeon) in the Korean peninsula in favour of forestry land use. He refers to a 'hypothetical or *imagined* construction of environmental change' (Komeie 2006, 670) advocated by Japanese researchers that became the scientific foundation for colonial policies of displacement and representation of local agricultural practices as 'an absurd and barbaric relic' (1911 report quoted by Komeie, 2006, 669). Policy revision to encourage 'improvement' of primitive agricultural practices emerged from the scientific discourses. Papastergiadis (2006) considers the construction of a 'refugee crisis' in Australian political discourses in early 21st century and the construction of a politics of fear for political advantage in a paper that illustrates mobilisation of social and political crisis discourses to the detriment of minority rights in a mature democratic state.

The populist accounts of indigenous vulnerability misrepresent the structures of power and risk. Indeed, there is an urgent need to reconceptualise risk in social, cultural, and environmental terms to respond to the rights, needs, and values of indigenous groups rather than assume that existing ways of seeing and responding to risk are adequate.

The disaster of colonisation and deep colonising

Current discourses of disaster management, environmental crisis, climate change, and humanitarian needs continue to represent local communities as victims (or potential victims) of environmental risks and disastrous change. Some efforts have been made to integrate consideration of 'social risk' into issues of disaster response and environmental management (e.g. Lynch and Brunner, 2005; Petheram et al., 2010). In many settings, however, key institutional structures continue to privilege discourses based on scientific and administrative expertise over locally contextualised knowledges, and to discount or dismiss social and cultural dimensions of risk in favour of the demands of responding to immediate responses to disasters or paternalistic presumptions about what is 'best' for minority groups. Such approaches reinforce racialised discourses of superiority and power and are mobilised to justify institutionalised decision-making processes that both exclude and ignore indigenous peoples and their basic rights. Not only does this approach privilege the developmentalist notion that 'management' as universally possible and appropriate - a proposition that Howitt and Suchet-Pearson (2006) identify as Eurocentric and in need of challenge - but it also ignores the disaster of colonisation in the construction of indigenous vulnerability. This constructs a discourse that naturalises indigenous disadvantage as a normal corollary of a global economic, political, and social order that centres on a Eurocentric development discourses (Blaut, 1993).

Far from addressing the crises facing indigenous peoples, such discourses and practices are part of the problem. They need to be recognised, named, and addressed as such. The everyday practices of states and dominant culture institutions casually impose a continuing burden upon indigenous groups that is similar to the burden of natural disasters. This burden comprises not only the direct trauma of poverty, alienation, and dispossession, but also the deliberate and/or accidental destruction of institutional capacity and cultural knowledge within indigenous societies: erasure of the languages that provide alternative formulations of relations to place, past and futures; removal of people both through deliberate government policies regarding child removal. and collateral damage imposed through inadequate or insensitive provision of access to educational, health, or welfare services, intervention of corrective service arrangements that criminalise indigenous behaviours and penalise indigenous peoples with disproportionate imprisonment, and a 'brain drain' that acts to reduce the availability of educated indigenous people to their own communities; and early loss of key people as a result of poor health and early death through illness, violence, and accident.

This decidedly unnatural disaster constantly erodes the social, cultural, and linguistic infrastructure of local indigenous governance. It continues to deny and alienate the physical infrastructure of indigenous governance in the form of land, property, and knowledge. But, unlike the government recovery arrangements in place to allow local and provincial governments to rebuild local infrastructure damaged or destroyed in natural disasters, this infrastructural damage inflicted by colonisation and contemporary deep colonising remains generally unrecognised, unacknowledged, and uncompensated. Indeed, the legacy of being burdened by such disastrous impacts on the infrastructures of indigenous governance is typically a disabling imposition of 'blame-the-victim' responses in which states and their supporters point to what they see as the lack of capacity in indigenous groups to exercise selfdetermination, which in turn justifies further rounds of deep colonising state intervention to manage indigenous lives to conform to developmentalist ideals of governable and compliant objects of successful development.

There is no intention here to suggest that the disaster recovery programmes of nations, states and major humanitarian and relief organisations are inappropriate or should be discontinued in indigenous communities. Rather, the argument is that the urgent need is for communities, states, and relief organisations to recognise that, unless the wider issues of indigenous rights, colonisation, and sustainability at the community scale are addressed, existing arrangements risk simply reinforcing and reinvigorating colonial burdens faced by many indigenous peoples. There is an urgent need to address the burden of decades of unnatural disaster, and to decolonise the ways in which policies frame responses to social, economic, and environmental change.

Australian examples of state policies and practices as an unnatural disaster for indigenous peoples

This reinforcing of indigenous groups' vulnerability to natural disaster by constructing vulnerability as an inevitable outcome of state policies, programmes, and practices that constitute and constantly reconstitute the unimaginable risk of colonisation can be illustrated in the Australian case with some brief examples.

Australia's emergency intervention into Northern Territory indigenous communities

In June 2007, the report of a Northern Territory inquiry into child sexual abuse in indigenous communities in the Northern Territory (Wild and Anderson, 2007) was drawn into a political maelstrom when the Commonwealth Government responded with what it called an 'emergency response' (Altman and Hinkson, 2007; Howard-Wagner, 2010). While the Northern Territory Emergency Response (NTER) itself was embroiled in political controversy, it was widely acknowledged that the situation in remote communities, including chronic domestic and community violence, child abuse, and poverty, required far-reaching, well-resourced and transformational intervention by responsible governments, indigenous organisations and communities and Australian society. As it was rolled out, however, the Australian Government's NTER set about not only controlling alcohol and pornography and undertaking a range of health checks but also imposing compulsory control of individual incomes and reducing community control over permits to access the communities. The programme of intervention required suspension of the national and Northern Territory racial discrimination legislation, and it relied on ad hoc arrangements that were often costly and poorly coordinated. The 2008 review of the NTER concluded that while some aspects of the NTER should continue, the policy was in many ways a lost opportunity. 'In many communities', the review concluded:

... there is a deep belief that the measures introduced by the Australian Government under the NTER were a collective imposition based on race.

There is a strong sense of injustice that Aboriginal people and their culture have been seen as exclusively responsible for problems within their communities that have arisen from decades of cumulative neglect by governments in failing to provide the most basic standards of health, housing, education and ancillary services enjoyed by the wider Australian community. (Yu *et al.*, 2008, 9)

The circumstances faced in these communities required attention to rights and responsibilities, to well-being and livelihood, to justice and sustainability. Appropriate policies were not to be secured from unilateral government decisions, but from careful partnerships with the people involved and affected. The report of the 2008 review provides some powerful pointers for rethinking the nature of the challenge and how governments and others might best respond:

It is the considered opinion of the Review Board that there is a need to reset the relationship between Aboriginal people and the governments of Australia and the Northern Territory.

The relationship must be recalibrated to the principle of racial equality and respect for the human rights of all Australian citizens.

Sustained and sustainable improvements in the safety and wellbeing of children and families in remote communities will only be achieved through partnerships between community and government. Durable partnerships are based on mutual respect. They also require structural support. The Board considers that place-based agreements – whether regional or local – can provide a framework for more effective community development and the coordination of government services.

Other matters need renovation to build the capabilities required for place-based agreements to work. They include Aboriginal leadership and community governance, funding arrangements and the machinery of government, professional training and integrated data capture.

The Review Board's recommendations touch on all these matters. They are indicators of the way forward.

Robust frameworks, adequate resources, functional governance and professional capabilities are necessary – but without the genuine engagement and active participation of the local community, deep seated change will not be achieved. It must be nurtured within the community. That is the lesson of the [NTER]. (Yu *et al.*, 2008, 11)

Particularly in remote locations, it is the absence of the services, institutions, and infrastructure of everyday governance that is characteristic (Howitt, 2010), and it is the lack of capacity within government agencies and other so-called 'helping organisations' to work constructively and consistently with indigenous institutions – or even to recognise their presence and importance (e.g. Veland *et al.*, 2010) – that is the most urgent capacity deficit (Howitt *et al.*, 2010).

Emergency responses to natural disasters in remote Australian indigenous communities

The challenge of responding to the needs and concerns of indigenous peoples with respect and understanding in periods of rapid and catastrophic change are perhaps most starkly seen in the context of emergency responses in natural disasters. In Australia, significant efforts have been underway for nearly a decade to better match emergency service responses to the needs and capacities of indigenous communities (see, e.g. Remote Indigenous Communities Advisory Committee, 2007), but the capacity of Australian emergency services to work with indigenous communities remains somewhat limited and problematic. Many lessons have been drawn from past problems (e.g. Brinkley, 2009), but implementation of those lessons continues to be difficult to secure in practice.

In 2001, the small Aboriginal community of Kiwirrkurra in the Gibson Desert of Western Australia (Kiwirrkurra Community, no date) experienced a catastrophic flood event generated by rain from ex-Tropical Cyclone Abigail.³ The community of about 135–150 Puntubi people is located 1200 km east of Port Hedland and 750 km west of Alice Springs. Like many small, remote communities in Australia, Kiwirrkurra was seen to be located in a place that made it vulnerable to natural disasters. But as Ellemor notes:

The use of the concept of vulnerability in indigenous communities carries added meaning given the historical context of colonisation and the processes that have taken place in settler societies, such as the forced removal of indigenous individuals and communities from their land and state condoned efforts to assimilate indigenous communities. (Ellemor, 2005, 3)

Unusually heavy rainfall through 2000 meant that the local water table around Kiwirrkurra was already high when the rain depression produced by Tropical Cyclone Abigail dumped over 250 mm of rain on the desert community in early March 2001. Homes in the community were flooded and became uninhabitable. Residents were forced to shelter in the community school for 4 days. With limited food, failing essential services, and a threat to people's health, it was decided to evacuate the whole community.⁴

The initial flood event in Kiwirrkurra was a significant problem for the poorly resourced and poorly prepared community. The subsequent evacuation, however, was followed by a series of relocations to relief sites, and delayed return to the community after more than 18 months of traumatic dislocation (Hindes, 2009) are widely seen as a primer in what to do to maximise the disruption and negative impact of a natural disaster on an affected community. As the Australian Government Fact Sheet on this case puts it:

Away from their country, the Kiwirrkurra people experienced severe disruption to the social fabric of their community. (Emergency Management Australia, no date; Fact Sheet 6: *Surviving the Flood, Returning Home*)

In the Kiwirrkurra case, the state intervention directly exacerbated the existing vulnerabilities of the community, placing at risk their relationships with each other, their most important assets and cultural properties, their sense of identity and the means with which they would ultimately re-establish themselves and their community. Lack of trust and a persistent lack of institutional capacity to recognise and respond to valuable indigenous knowledge are key issues in this case. Major decisions were made without reference to existing community knowledge, and there was no existing set of relationships between emergency service providers and the affected community that had built trust. In the context of the historically poor relationships with state agencies referred to by Ellemor, and the lack of resources to manage and monitor the evacuation and relocations, Kiwirrkurra's return to the community was largely self-managed and funded by sale of art works by community artists.

What remains lacking in the way that emergency responses are framed in Australian indigenous contexts is effective integration of indigenous worldviews into mainstream procedures. The focus remains firmly on emergency services' perspectives, with insufficient thought given to how agencies work with remote communities or to developing agencies' understanding of community perspectives about seasonal

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events that are classified as risks. For many indigenous people, natural phenomena such as storms and cyclones are manifestations of a cosmological order in which such events are anticipated and not reducible to external risks in any simplistic way. This is not to say that there is no need to prepare for these events or to respond afterwards. There is much to be done in building capacity to prepare and respond: a recent survey of environmental health in remote Western Australian communities found that in the communities that are prone to bushfires, 84% do not have firefighting equipment that works; 40% of communities that are prone to cyclones do not have an evacuation plan for cyclones; only 14% of the communities report being trained in emergency procedures such as firefighting: and 38% of the communities (affecting 49% of the affected population) report community preparation for emergency management is unsatisfactory (Environmental Health Needs Coordinating Committee, 2008). But such reports do little to push service agencies to frame their own responses and services in terms of indigenous cultural understandings.

There is a deeper challenge for service agencies to engage with indigenous worldviews and negotiate what is appropriate and effective in building local capacity to respond and building resilience to support recovery in emergency settings. It is also essential to recognise that in many indigenous settings, everyday life proceeds in a constant state of emergency because of the historical context in which people find themselves. As Ellemor put it:

... there is a need for emergency managers to recognise the ongoing implications of historical relationships between indigenous people and government agencies. (Ellemor, 2005, 6)

And because states and their agents have so often been involved in forced removals, dislocation, and dispossession of indigenous peoples, it is essential for agencies and their expert advisors to realise that evacuation and relocation of indigenous communities is highly problematic. In the absence of trust, experience, and resources, the great risk is that evacuations become *de facto* relocations, and that the impacts of relocations are invisible to decision makers who act out of ignorance and in denial of historical context in the chaos of the disaster event. Without protection of basic rights afforded by the international instruments already referred to, dislocated victims face loss of property, identity, culture, and opportunity. In the context of historically problematic state–community relations, the risk that dislocation becomes permanent and disabling is an ever-present risk in such settings.

Climate risks and indigenous governance in Australia

Among the most pressing and critical of environmental risks facing vulnerable populations are those relating to climate change. Responding to emerging climate risks requires individuals, government, non-government organisations, and businesses to make sometimes costly decisions based on irreducible uncertainties in the face of potentially catastrophic environmental change. For Australian indigenous groups, however, environmental change is not (vet) critical, and the most immediate climate-related risks from climate change relate to governance rather than ecosystem shifts. Climate change projections indicate risks to people, and ecosystems are not likely to pose significant new threats, but rather to increase risks of existing hazards in terms of health, livelihoods, and infrastructure (Green et al., 2009). Yet, climate risk assessments see indigenous communities as particularly vulnerable to climate change because of low adaptive capacity based on indicators such as unemployment, education, remoteness and health, and perceived reliance on a narrow range of ecosystem services (International Panel on Climate Change, 2007; Green et al., 2009). This formulation assigns indigenous peoples the role of victims of climate risk, who need targeted intervention to treat the indicators of vulnerability. While these indicators validly and importantly point out critical aspects of indigenous disadvantage, they fall short of recognising risks relating to the disaster of colonisation. Even when agencies seek to harness indigenous peoples as partners, this approach fails to contextualise the historical construction of (and responsibility for) vulnerability. It also marginalises local knowledge and defines the critical capacity to identify and treat vulnerabilities as residing with the experts and agencies rather than the affected communities themselves.

In Australia's recent report from the Department of Climate Change on *Risks from Climate Change to Indigenous Communities in the Tropical North of Australia* (Green *et al.*, 2009), risk (or non-risk) is associated with health, weather, infrastructure, education, employment, ecosystems, livelihoods, and capacity for governance. This focus reflects dominant climate risk discourses which frame climate hazards as an end point of policy and research (Adger, 2006; O'Brien *et al.*, 2007). Assessing vulnerability is a critical component of climate risk management, but its language targeting limitation, incapacity, discrepancy, and weakness unintentionally lines up with historical narratives of indigenous people that have framed them as backward in terms of societal evolution, and therefore the unfortunate victims of the developmental progress that came with colonisation (Ellemor, 2005). In this view, climate-related hazards exacerbate existing hazards relating to dispossession, substance abuse, and violence, which trap the discourse into one of deepening vulnerability and increasing need for paternalistic intervention to 'help'.

In this discourse, governance is treated - at best – as marginal to the central issue of climate risk. In contrast, indigenous discourses are likely to situate indigenous vulnerability to climate risks as a product of the risks associated with governance, rather than the other way around. This paradoxically means that the vulnerability discourse that ostensibly aims to protect indigenous people from harm risks entrenching vulnerability by imposing solutions that make sense in Western meaning making but increase risks in indigenous cosmologies. The strength and importance of kinship, for example, as organising principle for indigenous Australians tying together people, places, and phenomena, is essential to indigenous life, yet Federal Government solutions dictate moving away from country and into larger townships where such connections become strained (while service delivery apparently becomes easier).5 Treating vulnerability indicators such as remoteness in isolation from the larger challenges catalysed by the disaster of colonisation in this way risks perpetuating social dysfunction through, for instance, forced relocation.

In Australia, indigenous governance is typically constructed locally (Hunt *et al.*, 2008), but indigenous Australians are typically governed at the receiving end of an externally constructed government hierarchy. Genuine engagement of contemporary indigenous governances by formal government process is rare and typically prescriptive rather equitable (Howitt, 2006; Cross, 2008). For issues such as climate change, this approach creates silos in which the issue becomes a target for pre-emptive governance for indigenous Australians. Inverting discourse on risk will see handling climate risk as 'means to the end' of constructing governance, rather

than an end in itself (O'Brien et al., 2007). A school near Katherine engaged with this concept - and achieved outstanding results in attendance - by identifying and working towards what people want to achieve (a thriving community), rather than narrowly focusing on achieving targets for daily curriculum activities (Hewitson, 2007). This permitted community leaders and parents to become engaged and committed to the education of their children, rather than feeling co-opted in a process controlled and prescribed by distant bureaucrats. Similarly, Yolngu community organisations have refused to allow climate risk in northeast Arnhem Land to be disconnected from other sources of risk and questions of governance (Petheram et al., 2010). Targeting climate risks in a silo fashion positions adaptation as a risk in itself by not being seen in relationship with the disaster colonisation that has wreaked to ancient indigenous governance structures. Recognising and engaging with networks of social interaction that connect people and the world around us is key to engaging indigenous peoples in dialogues and actions to reduce risk.

Conclusion: resourcing recovery from the disaster of colonisation and building resilience through respect for indigenous knowledges and rights

This paper advocates an approach to risk assessment, preparation, and recovery that prioritises partnerships based on recognition, respect, and commitment to justice rather than short-term expediencies and opportunistic pursuit of integration or subversion of indigenous rights and the knowledge systems that underpin them. Moving to a rights-based recovery from the anthropogenic disasters of colonisation, dispossession, exclusion, and denial is no simple matter. Recognising the existence of specific indigenous rights, the relevance of indigenous knowledge, the persistence of indigenous institutions of governance and cultural values, and the ways in which domination is embedded within existing policy frameworks and programme protocols are all avenues that states must explore and address in partnership with their indigenous citizens. In Australia - as in most states - current practice falls well short of addressing the capacity deficits of both state and non-state agencies and indigenous institutions to pursue such issues. Symbolic recognition of indigenous rights without provision of resources - including time - to fund and supply recovery is empty

rhetoric. Approaches that simply 'blame the victim' and assert the problem rests in the inherent vulnerabilities and lack of capacity of indigenous people and their culture, or patronisingly assert the capacity of governments to deliver protection and development will not do.

It would be inappropriate to pre-empt the content of possible solutions in this paper – we see that as an issue for direct negotiation with affected indigenous groups. There are, however. some clear suggestions for how to proceed. State policies should not continue to dispossess indigenous peoples, to separate indigenous children from their families, to criminalise and marginalise indigenous languages and cultures, to re-colonise indigenous territories or penalise indigenous communities for the past policies and actions of states and settler societies. Similarly, recognising that indigenous groups face an enormous and growing burden from uncompensated and unaddressed state actions in the historical and recent past, and that resources (in other contexts, the term reparations would be unambiguously appropriate) are required. Both emergency and long-term funding is required to support sustainable recovery - just as it is required in any large-scale emergency situation. Indigenous underdevelopment and vulnerability is often a direct product of state policy and the practices of dominant cultures. This should blind neither national governments nor the international community to the need to foster building resilience and adaptive capacity in recovering from the unnatural disaster of colonisation experienced by indigenous peoples, and the natural disasters to which it has made them so vulnerable.

NOTES

- A brief summary of human rights declarations, conventions, and protocols can be found at http://www. hrweb.org/legal/undocs.html. It is worth noting that the right to self-determination for nations and individuals is referred to in the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights (both adopted in 1966).
- The full text of the Declaration is available at http:// www.un.org/esa/socdev/unpfii/en/drip.html. Useful commentaries and supplementary materials can be found at http://www.un.org/esa/socdev/unpfii/en/declaration. html, http://www.iwgia.org/sw248.asp, and http://www. hreoc.gov.au/social_justice/internat_develop.html
- See http://www.bom.gov.au/cyclone/history/abigail. shtml
- 4. For a summary of events and subsequent issues that arose, see the community website, Hindes (2009) and the Australian Government Fact Sheets available online at http://www.ag.gov.au/www/emaweb/rwpattach.nsf/

VAP/%283A6790B96C927794AF1031D9395C5C20% 29~Kiwirrkurra+-+Community+Information+Fact+ Sheets.PDF/\$file/Kiwirrkurra+-+Community+ Information+Fact+Sheets.PDF

5. For further discussion on mobility, vulnerability, and service delivery, see Prout and Howitt (2009).

REFERENCES

- Adger, W.N., 2006: Vulnerabilty. Global Environmental Change 16, 268–281.
- Adger, W.N., Lorenzoni, I. and O'Brien, K.L., 2009: Adaptation now. In Adger, W.N., Lorenzoni, I. and O'Brien, K.L. (eds) Adapting to Climate Change: Thresholds, Values, Governance. Cambridge University Press, Cambridge.
- Altman, J. and Hinkson, M. (eds), 2007: Coercive Reconciliation: Stabilise, Normalise, Exit Aboriginal Australia. Arena Publications, Melbourne.
- Bankoff, G., 2001: Rendering the world unsafe: 'vulnerability' as western discourse. *Disasters* 25, 19–35.
- Beck, U., 1992: Risk Society: Towards a New Modernity. Sage, London.
- Blaut, J.M., 1993: The Colonizer's Model of the World: Geographical Diffusionism and Eurocentric History. Guilford Press, New York; London.
- Brinkley, C., 2009: Kiwirrkurra: the flood in the desert. Australian Journal of Emergency Management 24, 67– 70.
- Corn, A. and Gumbula, N., 2004: Now Balada say we lost our land in 1788: challenges to the recognition of Yolngu law in contemporary Australia. In Langton, M., Teehan, L., Palmer, L. and Shain, K. (eds) *Honour among Nations? Treaties and Agreements with Indigenous People*. Melbourne University Press, Melbourne, 101–114.
- Cross, S., 2008: The Scale Politics of Reconciliation. Department of Human Geography, Macquarie University, Sydney. Unpublished PhD dissertation.
- Curry, G.N., 2003: Moving beyond postdevelopment: facilitating indigenous alternatives for 'development'. *Economic Geography* 79, 405–423.
- Davis, D.K., 2005: Indigenous knowledge and the desertification debate: problematising expert knowledge in North Africa. *Geoforum* 36, 509–524.
- Ellemor, H., 2005: Reconsidering emergency management and indigenous communities in Australia. *Global Environmental Change Part B: Environmental Hazards* 6, 1–7.
- Emergency Management Australia, no date: Kiwirrkurra Flood Recovery Fact Sheets 1-8. Canberra: Emergency Management Australia. Retrieved: 2 July 2011 from <http://www.ema.gov.au/www/emaweb/emaweb.nsf/ Page/EmergencyManagement_CommunityEngagement_ Kiwirrkurra-theKiwirrkurraFloodRecoveryProject?open &query=kiwirrkurra>.
- Environmental Health Needs Coordinating Committee, 2008: Environmental Health Needs of Aboriginal Communities in Western Australia: The 2008 Survey and Its Findings. Western Australian Departments of Health and Indigenous Affairs, Perth. Retrieved: 2 July 2011 from http://indigenouspeoplesissues.com/attachments/5293_EnvironmentalHealth-2008.pdf>
- Escobar, A., 1998: *Imagining a post-development era*. In Crush, J. (ed.) *Power of Development*. Routledge, London, 211–227.
- Escobar, A., 2001: 'Culture sits in places: reflections of globalism and subaltern strategies of localisation.' *Political Geography* 20, 139–174.

- Green, D., Jackson, S. and Morrison, J. (eds), 2009: *Risks* from Climate Change to Indigenous Communities in the Tropical North of Australia. Department of Climate Change and Energy Efficiency, Canberra.
- Hewitson, R., 2007: Climbing the educational mountain: a metaphor for real culture change for Indigenous students in remote schools. *The Australian Journal of Indigenous Education* 36, 15.
- Hewitt, K., 1995: Sustainable disasters? Perspectives and powers in the discourse of calamity. In Crush, J. (ed.) *Power of Development*. Routledge, London, 115– 129.
- Hindes, C. (director and producer), 2009: Worrying for Kiwirrkurra. Fire and Emergency Services Authority of Western Australia and Attorney-General's Department, Commonwealth of Australia (Documentary film, 25 minutes 6 seconds). Retrieved: 2 July 2011 from http://bitethedust.com.au/bitingthedust/2009/10/13/worrying-for-kiwirrkurra/.
- Hocke, I. and O'Brien, A., 2003: Strengthening the capacity of remote Indigenous communities through emergency management. *Australian Journal of Emergency Management* 18, 62–70.
- Howard-Wagner, D., 2010: From denial to emergency: governing indigenous communities in Australia. In Fassin, D. and Pandolfi, M. (eds) *Contemporary States of Emergency: The Politics of Military and Humanitarian Interventions*. Zone Books, New York, 217–239.
- Howitt, R., 1991: Aborigines and restructuring in the mining sector: vested and representative interests. *Australian Geographer* 22, 117–119.
- Howitt, R., 2006: Scales of coexistence: tackling the tension between legal and cultural landscapes in post-Mabo Australia. *Macquarie Law Journal* 6, 49–64.
- Howitt, R., 2010: Sustainable indigenous futures in remote Indigenous areas: relationships, processes and failed state approaches. *GeoJournal* 75. DOI: 10.1007/s10708-010-9377-3.
- Howitt, R. and Suchet-Pearson, S., 2006: Rethinking the building blocks: ontological pluralism and the idea of 'management'. *Geografiska Annaler. Series B, Human Geography* 88, 323–335.
- Howitt, R., Doohan, K., Lunkapis, G., Muller, S., Lawrence, R., Prout, S., Tilmouth, T., Russell, T., Veland, S. and Cross, S., 2010: Nurturing new geographies of coexistence: rethinking cultural interfaces in land and sea governance. Institute of Australian Geographers and New Zealand Geographical Society Conference, Christchurch.
- Hunt, J., Smith, D., Garling, S. and Sanders, W., 2008: Contested Governance: Culture, Power and Institutions in Indigenous Australia. Centre for Aboriginal Economic Policy Research, Australian National University, Canberra.
- International Panel on Climate Change, 2007: Climate Change 2007: Impacts, Adaptation and Vulnerability. Working Group II Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report. Summary for Policy Makers. United Nations Environment Program.
- International Strategy for Disaster Risk Reduction, 2008: Indigenous knowledge for disaster risk reduction: good practices and lessons learned from experiences in the Asia-Pacific region. International Strategy for Disaster Risk Reduction, Kyoto University and the European Union.
- International Working Group for Indigenous Affairs, 2001: Challenging Politics: Indigenous Peoples' Experiences

with Political Parties and Elections. International Working Group for Indigenous Affairs (IWGIA), Copenhagen.

- Jonas, W.J., 2002: Recognising Aboriginal sovereignty – implications for the treaty process. Retrieved: 2 July 2011 from http://www.hreoc.gov.au/about/media/speeches/social_justice/recognising_sovereignty.html>.
- Kiwirrkurra Community, no date: Welcome to our community. Retrieved: 2 July 2011 from http://kiwirrkurra.ngurra.org/>.
- Komeie, T., 2006: Colonial environmentalism and shifting cultivation in Korea: Japanese mapping, research, and representation. *Geographical Review of Japan* 79, 664– 679.
- Lawrence, R., 2007: Corporate social responsibility, supplychains and Saami claims: tracing the political in the Finnish forestry industry. *Geographical Research* 45, 167– 176.
- Lynch, A.H. and Brunner, R.D., 2005: Context and climate change: an integrated assessment for Barrow, Alaska. *Climatic Change* 82, 93–111.
- Marika, R., Yunupingu, Y., Marika-Mununggiritj, R. and Muller, S., 2009: Leaching the poison – the importance of process and partnership in working with Yolngu. *Journal of Rural Studies* 25, 404–413.
- Morales, W.Q., 2010: A Brief History of Bolivia. Facts on File, New York.
- O'Brien, K., Eriksen, S., Nygaard, L. and Schjolden, A., 2007: Why different interpretations of vulnerability matter in climate change discourses. *Climate Policy* 7, 73–88.
- Papastergiadis, N., 2006: The invasion complex: the abject other and spaces of violence. *Geografiska Annaler. Series B, Human Geography* 88, 429–442.
- Petheram, L., Zander, K.K., Campbell, B.M., High, C. and Stacey, N., 2010: 'Strange changes': indigenous perspectives of climate change and adaptation in NE Arnhem Land (Australia). *Global Environmental Change* 20, 681–692.
- Postero, N.G., 2007: Now We Are Citizens: Indigenous Politics in Postmulticultural Bolivia. Stanford University Press, Stanford CA.
- Prout, S. and Howitt, R., 2009: Frontier imaginings and subversive Indigenous spatialities. *Journal of Rural Studies* 25, 396–403.
- Remote Indigenous Communities Advisory Committee, 2007: Keeping Our Mob Safe: A National Emergency

Management Strategy for Remote Indigenous Communities. Australian Government, Canberra. 40 pp. Retrieved 2 July 2011 from http://www.ag.gov.au/www/emaweb/ rwpattach.nsf/VAP/%283273BD3F76A7A5DEDAE 36942A54D7D90%29~RICAC_KeepingOurMobSafe_ July2007.pdf/%file/RICAC_KeepingOurMobSafe_ July2007.pdf/%

- Rose, D.B., 1999: Indigenous ecologies and an ethic of connection. In Low, N. (ed.) *Global Ethics and Environment*. Routledge, London, 175–187.
- Simon, D., 2006: Fifty Key Thinkers on Development. Routledge, London.
- Stoffle, R. and Minnis, J., 2008: Resilience at risk: epistemological and social construction barriers to risk communication. *Journal of Risk Research* 11, 55–68.
- Stoffle, R. and Stoffle, B., forthcoming: Contested time horizons. In Bond, A., Morrison-Saunders, A. and Howitt, R. (eds) Sustainability Assessment: Pluralism, Practice and Progress. Routledge, London.
- Stoffle, R., Rogers, G., Grayman, F., Benson, G.B., van Vlack, K. and Medwied-Savage, J., 2008: Timescapes in conflict: cumulative impacts on a solar calendar. *Impact* Assessment & Project Appraisal 26, 209–218.
- Stoffle, R.W. and Arnold, R., 2003: Confronting the angry rock: American Indian's situated risks from radioactivity. *Ethnos* 68, 1–20.
- Stoffle, R.W. and Arnold, R., 2008: Facing the unimaginable: the limits of resilience and the risk society. *First International Sociology Association Forum on 'Sociology and Public Debate'*. Barcelona.
- Veland, S., Howitt, R. and Dominey-Howes, D., 2010: Invisible institutions in emergencies: evacuating the remote Indigenous community of Warruwi, Northern Territory Australia, from Cyclone Monica. *Environmental Hazards* 9, 197–214.
- Wild, R. and Anderson, P., 2007: Ampe Akelyernemane Meke Mekarle – 'Little Children Are Sacred': Report of the Northern Territory Board of Inquiry into the Protection of Aboriginal Children from Sexual Abuse. Northern Territory Government, Darwin.
- Yu, P., Duncan, M. and Gray, W., 2008: Northern Territory Emergency Response: Report of the NTER Review Board, October 2008. Department of Families, Housing, Community Services and Indigenous Affairs, Canberra.