

# Addressing the diversity of Loss and damage in Pacific Island countries to foster a just transition towards a climate-resilient future

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## Abstract

Pacific Island Countries and Territories (PICTs) are typically regarded as being among the world's most exposed to natural hazards. With climate change, these hazards may lead to losses and damages that pose a near existential threat for some communities. This situation is exacerbated by a range of factors which increase vulnerabilities and complicate management options, especially when viewed from outside the region. PICTs are highly diverse, but we show that they are being impacted by climate change in ways that are shared across the region, and different to most other parts of the world. The global narrative, institutionalized by the UNFCCC's Warsaw International Mechanism for Loss and Damage, is often at odds with the local priorities and realities of loss and damage from climate change in small countries with scattered populations, limited infrastructure, little access to insurance, and significant circular subsistence economies. For many in the PICTs, informal economies, religion and indigenous norms are key to social and economic life; and land and sea are fundamental to identity. In contrast to the global narrative, loss and damage is often intangible, impacting mental health, tradition, lifestyles, biodiversity, and social cohesion. This paper identifies these features and highlights the implications for tackling loss and damage. There are significant justice issues related to loss and damage in the PICTs that need to be addressed in the context of a "just transition" towards a climate resilient future.

Keywords:

Loss and damage; Pacific islands; culture; non-economic loss; climate justice.

## 1-Introduction: CCA and L&D in PICTs

In 2018, the Pacific Islands Forum signed the Boe Declaration on Regional Security, which with an 'expanded concept of security' called for recognising climate change as the single greatest threat to the livelihoods, security and wellbeing of the peoples of the Pacific (Pacific Islands Forum 2018). Political leaders and policy makers in the region widely regard climate change as a threat multiplier, with the potential to undermine water and food security, exacerbate existing grievances and contribute to conflict (Naupa et al., 2018; Pacific Elders Voice, 2023).<sup>1</sup> This message was strongly reinforced by the Pacific Islands Forum in its 2022 Communiqué, which reiterated that 'climate change remains the single biggest existential threat' facing the region and emphasised 'the urgency to limit global warming to 1.5 degrees through rapid, deep and sustained reductions in greenhouse gas emissions.' The Communiqué further stresses the threat of sea-level rise as 'the defining issue that imperils the livelihoods and wellbeing' of Pacific peoples and welcomed progress on Vanuatu's

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<sup>1</sup> Anna Naupa, Murray Ackman, Patrick Tuimaleaifano 'Boe Declaration: navigating an uncertain Pacific' *The Interpreter* 3 October 2018, <https://www.lowyinstitute.org/the-interpreter/boe-declaration-navigating-uncertain-pacific>. For a recent review emphasising that climatic conditions contribute to conflict in regions dependent on agriculture and in combination with other socioeconomic factors including low economic development and political marginalisation see: Vally Koubi 'Climate Change and Conflict' (2019) *22 Annual Review of Political Science* 343-60

request from the UN General Assembly for an advisory opinion from the International Court of Justice to clarify the legal consequences of climate change (Pacific Islands Forum 2022).

The Pacific consistently ranks as the most hazardous region on the World Risk Index, and Vanuatu consistently ranks as the most hazard-prone state in the world. One reason for this is physical exposure to both climatic and geophysical hazards. Most PICTS (Pacific Island Countries and Territories) are reporting more intense weather events associated with climate change (Walsh et al. 2019). Tropical storms and cyclones such as Tropical Cyclone Evans in December 2012, Pam in 2014, Gita in 2018, Harold in 2020 and Mawar in 2023 brought destructive winds, rain and sea surges that endangered lives, destroyed crops, homes and vital infrastructure, and contaminated the soil for future crops. That climate change acts as a threat multiplier has been highlighted by COVID-19: for example, Tonga was still recovering from Cyclone Ian in 2014 when Cyclone Gita hit in early 2018, and this was followed by Cyclone Harold in March 2020. Both the domestic and international responses to the disaster were complicated by responses to COVID-19. While there are many information gaps and deficiencies in existing knowledge of the relationship between climate change and viruses, there is general agreement that climate change has already made conditions more favourable to the spread of mosquito-borne diseases, and is likely to contribute to increased opportunities for pathogens to get into new hosts (for example as viable habitats for humans and animals are reduced) (Rodó et al., 2021; Mora et al., 2022).

The relatively slow-onset disaster of sea-level rise is regarded by both Pacific region and global intergovernmental bodies as an existential threat for Pacific Island countries (Pacific Islands Forum, 2022; IPCC, 2019). The region is home to three of the four atoll nations in the world: Kiribati, Tuvalu and Marshall Islands (the fourth being the Maldives in the Indian Ocean). These face cumulative risks from multiple drivers including atoll erosion and sea level rise; changes in rainfall ocean-atmosphere oscillation and tropical cyclone intensity; and ocean warming and acidification (Duvat et al., 2021; Weyer et al., 2019). As the vast majority of the region's towns and communities are located in coastal areas, sea level rise has significant implications for infrastructure, livelihoods and ecosystems even in the more mountainous states such as Papua New Guinea, Vanuatu, Fiji and Solomon Islands. Sea level rise and extreme weather are already claiming lives and assets, and affecting agricultural production and food security in communities across the region. The *IPCC Special Report on the Oceans* suggests that the entire coastal and urban Pacific – the places where the overwhelming majority of the population currently live – will be under water by the end of the century (IPCC 2019). For example, the Fijian Government has already identified 42 villages for relocation, with the number expected to increase (Chaudary, 2023).

These existing and likely future impacts of climate change on the livelihoods, security and wellbeing of Pacific peoples highlights the inherent injustice of climate change. The region accounts for just 0.03% of the global emissions of CO<sub>2</sub> from fuel combustion despite having around 0.12% of the world's population (about 8 million people) (Hay & Sem, 2000). It is now routine for government policies and the reports of aid donors to note that the Pacific Islands disproportionately experience the cascading risks and constrained opportunities associated with climate change (Kingdom of Tonga, 2015; Solomons Islands & IOM, 2022). The coloniality of climate change is underscored by the fact that the development of the Global North continues largely unabated, while those most affected in the Global South are accumulating debts in the name of 'climate justice' (Teaiwa, 2020; Sultana, 2022). (Note that here we may use Pacific islands, PICTS (Pacific Island Countries and Territories) and PSIDS (Pacific Small Island Developing States), interchangeably while acknowledging that there are differences.)

The aim of this paper is to expose the gap between loss and damage (L&D) as it has been conceptualised at the global level and the realities and priorities in the Pacific Islands as we

understand them based on our experience in the region and available literature. We suggest that the generalising, universalising narratives of L&D predominant in UNFCCC (UN Framework Convention on Climate Change) negotiations are problematic and often obscure, and are frequently in tension with local realities. This is not to suggest that the global processes should be set aside: but there is a case to develop the space to do things differently by allowing for inclusion of the inevitable diversity if climate justice outcomes are to be achieved. The paper begins with consideration of the global narrative on L&D; sets out some material on what is distinctive about the Pacific Islands; and then identifies key challenges for L&D in the Pacific context.

### *Approach*

We set out the global L&D narrative, about which there is little disagreement, and then contrast this with the priorities and views of the people of Pacific islands to examine the extent and implications of any difference. To do this a narrative and qualitative approach is used. This is because we identify and set out the priorities and needs of the people – so often the subject of discussion and initiatives from outside the Pacific – using as far as possible material from the islands and the people of the islands.

The literature we draw on is in two main parts reflecting the research question: loss and damage; and the Pacific Island countries. We use our knowledge of these fields and the related literatures as the basis of the material used in examining the issues.

The loss and damage literature drawn on for the present manuscript has come from a specialist continuously updated L&D literature data base (at IIASA), work on a major book on the subject which has become a standard reference in L&D (Mechler et al., 2019), and through direct recommendations by other experts and practitioners in the L&D field. This global literature is supplemented with more regionally focused L&D material for the South Pacific.

Our understanding of the relevant Pacific literature draws on some two decades of community-based research in the Pacific Islands, the extensive research underpinning one author's recent book (Monson 2023), and regular formal and informal engagement with Pacific scholars and community leaders. Our research connections with the Pacific includes work on disaster risk reduction, law and justice systems in the region, including in relation to climate adaptation and loss and damage, research and policy work on community-led climate-driven relocations in the region, and regular interaction with aid donors and government agencies with respect to these topics. This includes policy advice on settlement relocation in the Solomon Islands. We are also currently collaborating with Solomon Islands experts at institutions globally to document specific instances of climate-change related loss and damage across the country.

Unlike most regions in the world, it is still possible to be across most of the English language published material directly on the south-west Pacific, and to be conscious of and engaged in the intellectual and policy debates. Apart from when discussing the global state of L&D, we draw on this literature giving preference to Pacific Island scholars, while ensuring that publications on the themes relevant to our enquiry were well represented.

## 2-The global narrative of Loss and Damage

### *The history and current state of L&D policy and research*

Pacific people and their governments have long seen climate change as both a moral and material challenge for richer countries (Weir, Dovey & Orcherton, 2017). In 1991, Vanuatu as Chair of the

Alliance of Small Island States (AOSIS) proposed an insurance scheme to address the consequences of sea level rise as part of the UN Framework Convention on Climate Change (UNFCCC; INC, 1991). It was suggested that the revenue for the insurance fund could come from mandatory contributions from industrialised countries based on GNP and relative greenhouse gas (GHG) emissions. Although the proposal was rejected, it introduced the topic of adverse impacts associated with climate change and the notion of justice as important parts of the international climate policy discussions (Mechler et al., 2019). By 2013, the concept that polluting developed countries should compensate small island countries for the loss and damage incurred as a result of climate change had moved into the mainstream of UNFCCC climate negotiations; and at the 2013 UNFCCC conference (COP 19) the Warsaw International Mechanism on Loss and Damage was established. This is now the main mechanism for addressing ‘loss and damage associated with adverse impacts of climate change’ in developing countries ‘in a comprehensive, integrated and coherent manner.’ (WIM 2013). The L&D mechanism is about avoiding, reducing and shifting the burden of L&D, for example to insurers. It is also about finding ways of dealing with the L&D that cannot be avoided through financial or other support mechanisms. However, effort is also devoted to ensuring that rich countries are not held liable for climate risk, and in doing so undermines the global solidarity needed to address the climate crisis.

In international policy and science circles, loss and damage has significantly increased in profile as a serious policy issue in the last few years (Mechler et al., 2020; Vanhala et al., 2023). This has partly been based on Article 8 of the Paris Agreement which gives explicit recognition to L&D as a stand-alone pillar in achieving the goals of the Paris Agreement, alongside climate change mitigation and adaptation. It also further emphasises that neither adaptation nor mitigation are sufficient to prevent loss and damage, which can already be observed (Roberts & Huq, 2015; Warner & van der Geest, 2013).

Despite this profile, there is not yet agreement on the scope and definition of ‘Loss and Damage’. Literature on the issue recognises that it is a general term used in UN climate negotiations to refer to both unpreventable, unavoidable and irrecoverable ‘loss’ and avoidable, repairable or recoverable ‘damage’.<sup>2</sup> However, recently, at COP27 in 2022, a breakthrough in financing L&D was reached with the establishment of a Transitional Committee mandated to design a new L&D Fund by the end of 2023 (Serdeczny & Lissner, 2023). At the 2023 COP28 summit in Dubai, parties reached an agreement on the operationalization of the loss and damage fund and its funding arrangements. It is an important step, however the USD 700 million promised so far falls well short of potential loss and damage in the Global South.

Historically, L&D is an issue that has almost exclusively been advocated for by developing countries. However, Calliari and Ryder (2023) find that L&D is no longer seen as solely a “small islands issue”, with a growing number of Global North countries referring to the concept in their NDCs (national climate action plans). The historic focus is apparent in the development of the discourse, as well as in the number of times it is mentioned in UNFCCC member statements, which shows a strong increase since 2013 (Gach, 2019). The global scientific community has provided research showing the kinds of trends and issues that are likely to arise with increased global warming especially in

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<sup>2</sup> See eg K Warner et al (2012) ‘Evidence from the frontlines of climate change: loss and damage to communities despite coping and adaptation’ Loss and Damage in Vulnerable Countries Initiative. Policy Report No 9. United Nations University Institute for Environment and Human Security, Bonn, R Verheyen (2012) ‘Loss and Damage: Tackling Loss and Damage – a new role for the climate regime?’ Loss and Damage in Vulnerable Countries Initiative, J Morissey and A Oliver-Smith (2013) ‘Perspectives on Non-Economic Loss and Damage: Understanding Values at Risk from Climate Change’ International Centre for Climate Change and Development, Dhaka. For recent legal analysis of the term see Meinhard Dolle and Sara Seck ‘Loss and damage from climate change: from concept to remedy?’ (2020) 20(6) *Climate Policy* 669-680

places, like the Small Island Developing States, where adaptation limits are more readily reached (Mechler et al., 2019). For example, the Intergovernmental Panel on Climate Change's Special Report on Global Warming of 1.5 degrees integrated loss and damage into its report in 2018 (IPCC, 2018).

Slow onset events were the starting point of the L&D discourse, introduced by the AOSIS (Alliance of Small Island States, 1991) to address harms from sea level rise with the establishment of an insurance pool in 1991. This initiative specifically requested compensation from industrialised countries due to their perceived responsibility. Over time, the L&D debate has gradually changed from one driven by compensation claims and liability – although these remain important - towards a cooperative approach putting emphasis on knowledge and expertise sharing through the Paris Agreement and the WIM (Calliari, 2018). This also means a shift in the focus of the debate, as it now also includes other climatic hazards and issues such as migration and displacement (Durand & Huq, 2015). Despite innovations and advancements facilitated by civil society groups and LDCs, the international L&D discourse and its framing of “climate debt” have nevertheless become largely “compatible with dominant structures of hegemony and stripped of disruptive meaning and impact” (Ciplet, 2017, p. 1070).

L&D remains vague and contested in both an academic and political context, even after 30 years of debate. Few of the measures suggested by the UNFCCC go beyond current practice in disaster risk management (DRM) and climate change adaptation (CCA), although the need for novel transformational tools and instruments is frequently stressed. Important shortcomings lie in the lack of a clear distinction between L&D and CCA, and in particular whether CCA only addresses potential climatic impacts before they occur or continues afterwards, as this influences available L&D funding (Wallimann-Helmer, 2015).

#### *Unresolved L&D policy issues and research gaps*

Several issues require further deliberation in the L&D international policy discourse. This is especially the case with the WIM's function to “enhance action and support”, where a lack of results has been noted, as most of the focus has been placed on its first two functions neither of which is action oriented. They are: “enhancing knowledge and understanding” of relevant risk management; and “strengthening dialogue, coordination...and synergies” among stakeholders (see e.g. Climate Action Network, 2019; LDC Climate Change, 2019; Thomas et al., 2020). Concrete outcomes remain limited, despite the WIM forming expert groups and workstreams to implement its work plan (Hirsch, 2019). The mandate of the WIM is subject to different interpretations, with tensions surrounding the topic of finance and compensation (Anisimov & Vallejo, 2019). The issue of finance is also strongly debated in terms of sources of funding, appropriate financial schemes, calculation base, accountability and distribution (Roberts et al., 2017; Schäfer & Künzel, 2019; Williams, 2020). Despite the vague and contested nature of L & D, there is now increasing consensus that:

“L&D refers to adverse climate-related impacts and risks from both sudden-onset events, such as floods and cyclones, and slower-onset processes, including droughts, sea-level rise, glacial retreat, and desertification.” Mechler et al. (2020).

However, the definition of the term continues to lack clarity and agreement (James et al., 2014).

Despite arguments about the merging of the competing “liability and compensation”, and “risk and insurance” framings (Vanhala & Hestbaek, 2016), as well as progress in attribution science, the question of liability is not completely off the table. In addition, issues of loss estimation, sources and forms of finance (Doelle, 2014; Schäfer & Künzel, 2019), their distribution and effective use (Hirsch,

2019), as well as legal tools for displacement and international mobility (Anisimov & Vallejo, 2019), remain.

Even though L&D has a prominent position in the Paris Agreement, it has been unable to establish itself as a third pillar of climate action and still faces concerns within climate change practice and policy regarding its legitimacy (Calliari et al., 2020). Countries of the Global North in particular argue that DRM (disaster risk management) and CCA continue after harms occur, thereby moving incremental adjustments and current practices to the foreground of discussions. They further maintain that L&D cannot be discussed as “more than adaptation” without proof of causal links between climate-related risks and anthropogenic climate change, which is needed to establish liability. Here, we argue in line with Schinko et al. (2019) that the identification of L&D as “beyond adaptation” could aid in the establishment of a “risk and policy space for Loss and Damage”, which could permit moving past the political impasse which exists between those advocating for climate justice and those calling for the consideration of L&D within an adaptation framework.

With respect to L&D finance, several unresolved issues remain that research and the Transitional Committee, (founded at COP27 see above), need to address. First, the scope of L&D and related activities needs to be defined. Second, concrete activities to address slow-onset processes (e.g., sea-level rise) and the resulting non-economic impacts, need to be proposed. Third, the question of who should pay what amount into the just, in principle at least, established (at COP28, see above), L&D fund needs to be answered; and fourth, the political and economic feasibility of specific L&D measures need to be assessed (Serdeczny & Lissner, 2023). Related issues concern what measures are to be funded, and what sources of knowledge are used to inform risk reduction.

We now consider how this global narrative around L&D (Calliari and Ryder, 2023) reflects the concerns and priorities of communities in Pacific small island (developing) states and territories (PICTs), as they experience the impacts of climate change.

### 3-PICTs – shared issues and attributes

The Pacific Islands, like Small Island Developing States (SIDS) generally, are frequently described in the literature on climate change as small, isolated, and remote, and as experiencing overpopulation, economic decline (particularly since the onset of the COVID-19 pandemic), resource scarcity and land degradation. These long-standing portrayals of the Pacific have been hotly debated by Pacific Studies scholars, and we highlight two critiques here. First, such narratives often serve the interests of the Global North, for example by constructing the islands as sites of ‘lack’ and in need of solutions from the Global North. Second, such narratives homogenise a region that encompasses one third of the planet, thousands of communities, and unparalleled diversity of cultures, languages, ecologies, livelihoods and political systems.<sup>3</sup> Indigenous scholars in particular have emphasised that this diversity coexists with (and is often reinforced by) shared political, economic and environmental processes and interests that unite the region and situate it in quite particular ways with respect to loss and damage associated with climate change (Teaiwa, 2020). In this section we highlight the influence of aid and high exposure to natural hazards; questions of land tenure, urbanisation and

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<sup>3</sup> For discussion of these narratives see eg Epeli Hau’ofa (1994), ‘Our Sea of Islands’, *Contemporary Pacific* 6(1): 148-1616; Teresia Teaiwa (1996) ‘Review: A New Oceania: Rediscovery our Sea of Islands by Erica Waddell, Vijay Naidu and Epeli Hau’ofa’ 8(1) *The Contemporary Pacific* 214-217, Greg Fry ‘Framing the Islands: knowledge and power in changing Australian images of ‘the South Pacific’’ (1997) 9(2) *Contemporary Pacific* 305-344, Tarcisius Kabutaulaka ‘Mapping the Blue Pacific in a Changing Regional Order’ in Graeme Smith and Terence Wesley-Smith (eds) *The China Alternative: Changing Regional Order in the Pacific Islands* (ANU Press, 2021) 41-69

mobility; the extent of informal economic activity and subsistence livelihoods; the vitality of Indigenous or customary norms and practices; and the heterogeneous influence of religion, in particular Christianity.

### *Aid, exposure to climate risk and capacity*

Pacific small island developing states (PSIDS) are considered to be amongst the world's poorest and receive the highest rates of development assistance per capita in the world (Dornan & Pryke, 2017). As mentioned earlier, the South Pacific also consistently ranks as the world's most hazardous region due to its exposure to cyclones, and other climate and weather hazards as well as seismic and volcanic hazards (Walsh et al. 2019). COVID complicated all aspects of disaster risk reduction and climate adaptation during 2020-2021 (see above at Section 1). All this coincides to generate intense interest and investment in DRR and climate change adaptation (CCA), with the result that the region can be seen as a global leader in institutional thinking and integration of these areas (Hallwright & Handmer, 2021).

Across the region there are very real capacity constraints, particularly with respect to responding to the expectations of the international community. Many Pacific Island countries and territories have relatively small populations, with a small absolute number of staff in governments, and limited capacity to fill vacancies, or to recruit staff with the requisite skills and experience for key tasks. This results in limited capacity to fulfil the expectations of the Global North, such as those regarding public financial management or engaging with Sustainable Development Goals (Haque et al. 2012; Klock & Nunn, 2019, Table 2). The administrative burdens of engaging with UN loss and damage negotiations will be disproportionately borne by these officials.

These processes also intersect with the published literature on climate change. Many researchers who are from the region work at resource-constrained institutions; are heavily engaged in UN climate negotiations or applied policy work linked to initiatives undertaken by governments, churches, international organisations and non-government organisations; and face greater resourcing and time constraints than scholars based in many other parts of the world to devote to publishing scholarly articles (Monson, 2022). Despite the Pacific Islands being held up as examples of the global climate crisis, literature reviews have concluded that research on the nature of climate change and adaptation in the region is fragmentary (Klock & Nunn, 2019). Where climate change and adaptation is studied, it tends to focus on urban areas rather than on rural areas or outer islands. Also, Klock & Nunn (2019) show that documented adaptation in the Pacific is mainly top down.

### *Land, urbanisation and mobility*

Across the Pacific, Indigenous custom – referred to by a variety of terms including *kastom* in Melanesian Pijins, *fa'asamoa* in Samoa – shapes social life as much as, and often more than norms and institutions established by central governments. Many countries and territories have incorporated aspects of custom into the state-sanctioned legal system, with some recognising it as a general source of law (Zorn & Corrin Care, 2008). This is of particular importance with respect to land: in most countries in the region, the laws promulgated by the state expressly recognise that the vast majority of land – typically over 80% - is held under customary tenure. The details of state recognition of customary tenure vary enormously from one jurisdiction to the next, but in most it means that most land is understood to be held collectively by a kin group, rather than by an individual (AusAID, 2008). In Papua New Guinea, Vanuatu and Solomon Islands in particular, most customary land has not been subject to formal recording of ownership or mapping of land boundaries.

This means that many governments already face a shortage of land available for relocating or establishing new public infrastructure or for relocating communities impacted by climate change. In some locations, this situation is exacerbated by other factors. For example, in Kiribati, state and freehold land is concentrated on two urban atolls, which already face high population density, rapid urbanisation, high reliance on imported goods, high pollution, poor sanitation and limited resources (NAP, 2017). The demarcation of land boundaries or the acquisition of further land by the state risks crystallising nascent disputes over ownership and boundaries, and entrenching or heightening social inequality based on gender, ethnicity and class (Fitzpatrick & Monson, 2022; Monson 2023).

In all PICTS, public and freehold land tends to be concentrated in urban areas, and Pacific Island cities have some of the highest urban growth rates in the world. Urban areas across the region are also characterised by village-like settlements – that is, by settlement patterns revolving around a kin group, language group, or sometimes island group, with sociocultural arrangements regarded as customary, Indigenous or traditional (Jones, 2016). An example is the largely-informal settlement of Koa Hill in Honiara (Solomon Islands), where most people obtained access to land through family networks. The settlement was divided into governance ‘zones’ based on regional and linguistic affiliations of the Malaitan (a province of the Solomon Islands) groups that established different parts of the settlement, and these were governed by traditional chiefs and committees chosen by residents (Fitzpatrick & Monson, 2022). When Koa Hill was largely destroyed by flash floods in April 2014, many people moved to a new site, April Hill, where they settled into ‘zones’ similarly characterised by regional and linguistic affiliations, and also by church denomination, with formal decision-making authority largely held by (male) church leaders and chiefs.

Understanding customary arrangements – which in many senses persist even on alienated, registered town land – is crucial to understanding not only the economic or material aspects of sea level rise, but its moral implications and affective dimensions. Social relations and protocols are embedded in land and sea, but these places are not merely a stage upon which life plays out, nor can they be fully understood in terms of an abstract object owned by human subjects – for most Pacific Islanders, the human and non-human world are intimately connected and cannot be disentangled (Teaiwa, 2014; Monson 2023). Landscapes, seascapes and skyscapes provide the basis for cultural practices and indigenous knowledges (Monson, 2014). For example marriage, kin groups, seafaring, gift exchange, and traditional medicine all emerge from and reproduce relationships with and knowledges of land, sea and sky, as well as relationships between people, flora, fauna and places. Pacific visual and spoken languages such as stories, songs, dance, weaving and carving also reproduce emplaced economic, environmental and social knowledge which has provided the foundations for Indigenous wellbeing, economies and governance for millennia (‘Atu Emberson Bain, 1994; Bhagwan et al., 2020).

Key to understanding potential loss and damage is the fact that for many people, their relationship with landscapes, seascapes and skyscapes is not one of property rights but of kinship. This means that people are not merely ‘guardians’ of particular places, but are genealogically related to them (Case, 2019; Teaiwa, 2014), and the health of landscapes and seascapes, and the maintenance of cultural heritage and practices, is directly related to mental and physical wellbeing (McNamara & Westoby, 2011). Environmental change may therefore be devastating, and loss of or damage to places may be experienced as intimate and personal, with mental health impacts generally not experienced in non-Indigenous societies. Irrespective of actual climate change impact, discussing potential threats and losses may also have severe health and wellbeing impacts for Pacific people (Clissold et al., 2022), meaning that global discourses and UN negotiations regarding loss and damage, in and of themselves, generate harm.



As land and sea are transformed by climate change, this has multiple and ongoing impacts for biodiversity and ecosystem services, Indigenous and local knowledge, and current and future ways of being. Some forms of loss and damage are well-known outside the region and are readily quantifiable. For example, it would be difficult but possible to quantify the loss and damage impacts of ocean acidification and siltation on the coastal ecosystems that many communities in Vanuatu rely on for their livelihoods (Talakai, 2015). However, this would require input and knowledge from those most intimately affected.

### *Informal economic activity and subsistence livelihoods*

In many countries, opportunities for paid employment are relatively limited, and a large proportion of the population are involved in some sort of subsistence production. There is also a large amount of informal economic activity (ILO 2021), and some areas are dependent on remittances. For example, in Tonga – which has a large formal economy compared to many others in the region - 82% of the working age population were engaged in subsistence production (Tonga, ILO, SPC, 2018). In Solomon Islands in 2018, 85 per cent of women and 77 per cent of men were engaged in what the World Bank defined as ‘vulnerable employment’, that is, work that was unpaid, or with irregular income, and lacking formal work arrangements with social protection benefits (WB, 2018).

Overseas remittances from relatives working abroad are also crucial for many Pacific households and national incomes. In 2019, for example, almost two-sixths of Tonga’s GDP and one-sixth of Samoa’s GDP came from remittances. In Fiji, remittances earn more than traditional export markets such as sugar and garments, and now comprise the second largest source of foreign exchange after tourism (Collins, 2022).

Some literature on climate change has linked this dependence on subsistence agriculture to growing food insecurity. Communities across the region report that changing rainfall and seasonality are disrupting gardens and tree crops, and coastal inundation is threatening water sources and food crops, while ocean warming and acidification is expected to kill coral reefs and disrupt fish stocks (Jolly, 2018). However, we again emphasise the immense socio-ecological diversity within and between Pacific Island countries.

Some contexts, such as the densely populated atolls of Micronesia, are reliant on income from a narrow set of export commodities, and face increasing dependence on imported foods, which leaves them vulnerable to economic and environmental variability and undermines food security. However, this is not necessarily true of other contexts such as much of Papua New Guinea, Vanuatu and Solomon Islands. Allen (2015) has studied these issues on Malo in Vanuatu, which is likely to be similar to many other rural contexts in Melanesia. He found that the food system continues to be dependent on subsistence production, with just 20 per cent of people’s daily energy requirements coming from imported foods. Moreover, these food systems have generally been very resilient, involving wide genetic diversity of indigenous and introduced species, and innovation of ‘traditional’ practices and exchange relations (Allen, 2015). Existing scholarship often demonstrates that subsistence agriculture has underpinned flexibility and resilience in food systems, offering a buffer against external shocks such as the Global Financial Crisis and the COVID-19 pandemic (Monson et al., 2023; Leweniqila and Vunibola, 2020). However, there are exceptions to this general pattern: for example, the "Weather Coast" of Guadalcanal (Solomon Islands) experiences seasonal food shortages as a result of a combination of extreme wet weather and plant diseases. In some PICTS there are also dietary issues, from both traditional and imported food, leading to an absence of key nutrients and in some countries, high levels of diabetes (Duckworth, 2017; WFP&PC, 2018).

## Religion

The influence of Christianity in much of the Pacific has recently been described as ‘so profound that even the lives of non-Christians (for example, followers of ancestral religions or converts to other global religions like the Bahá’í Faith or Islam) might be analysed as living ‘within’ a Christian world’ (McDougall, 2020). Statistically, Pacific countries are amongst the most Christian in the world: census data indicates that in most countries across the region, virtually all the population identifies as belonging to one of the Christian churches (e.g. 99 percent in PNG).<sup>4</sup> Christianity is central to multiple forms of social ordering, law and governance, and churches provide not only a social hub, but a system of institutions, norms and governance that extend from the national (and often international) arena right through to rural villages. The churches are often critical to solidarity and collective action, and Christianity has been said to be ‘the ground and starting point for political action’ across the region (Tomlinson & McDougall, 2013).

An apparent exception is Fiji. While Fiji is a resolutely Christian country in terms of its institutions, and in the eyes of many should be constitutionally declared a Christian State, a large minority of its population are not Christians (Ryle, 2005). While virtually all indigenous Fijians are Christians, most of the 37% of the population with Indian ancestry follow Hinduism, with a smaller Muslim minority (US State Dept., 2022).

The spread of Christianity in the region was undeniably bound up with colonial expansion. However, it would be a mistake to assume that most Pacific Islanders contrast Christianity or other global religions with Indigenous, local or traditional culture. Many people regard Christianity as essential to the ‘Pacific Way’, whereas Euro-American systems of law and governance are often firmly cast as ‘foreign’ (Tomlinson & McDougall, 2020). The ideologies, practices and institutional structures associated with Christianity are of course heterogeneous, and vary greatly both within and between different denominations, even within the same linguistic and cultural area. For example, in the Western Province of the Solomon Islands, the main churches – the Seventh Day Adventists, United Church of Solomon Islands, and Christian Fellowship Church – have had very different approaches to their ancestral traditions, and to resource governance and consumption (McDougall, 2008; Monson, 2023). Pacific women’s movements recognise that Christianity has often served to deepen gender inequality, while in other instances provided a foundation for empowerment and political mobilisation (Slatter, 2012).

Models of Pacific health developed by Pacific Islander scholars consistently emphasise that concepts of ‘health’ are holistic and extend beyond physical and mental health to social, cultural and spiritual health. This extends to Christianity, with Indigenous theologies and church networks often seen as central to responding to climate change, and enhancing social and economic development, throughout the region. Throughout 2020, for example, there was a series of region-wide meetings on ‘Changing the Story of Development’ sponsored by the Pacific Islands Forum, the University of the South Pacific, the Pacific Theological College, and the Pacific Conference of Churches, focused on critiquing and reimagining mainstream models of ‘development’ (Bhagwan et al., 2020). The Pacific Conference on Churches has long been central to regional alliances such as the Pacific Climate Warriors, asserting both a regional ‘Pacific Way’ and profoundly emplaced knowledges as central to facing the global ecological crisis (Teaiwa, 2018; Monson et al., 2022). In the Solomon Islands,

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<sup>4</sup> To give just two examples, the most recent available data indicates that 88% of the population of Samoa attends one of six denominations and more than 99% of Papua New Guineans identify with a Christian church: Division of Census-Surveys and Demography (Samoa) *Samoa Socio-Economic Atlas 2016* (Government of Samoa, 2016), 28; National Statistical Office (Papua New Guinea) and ICF *Papua New Guinea Demographic and Health Survey 2016-2018* (NSO and ICF, 2019), 41.

church-based networks are likely to be crucial to facilitating the relocation of communities displaced by sea level rise (Monson & Foukona, 2014).

#### 4-L&D in the PICTs

There are numerous ways to experience loss and damage from climate change, yet policy makers and researchers have tended to focus on those that can be easily measured (see for example a review by McNamara & Jackson, 2019). These are generally those for which there are market values. However, it is often the less tangible or difficult-to-measure losses that can undermine and destroy entire societies and cultures. This tendency is exacerbated by the reality that much climate change and adaptation research and reports concerning small island developing states ...“focuses on the core or near-core, while remote rural areas or outer islands are less often examined...” (IIED & ICCCAD, 2021). So even when focused on PICTs are likely to reproduce the global narrative. We have shown that much of the global narrative is concerned with ensuring that the countries primarily responsible for climate change avoid liability, while nevertheless supporting a range of generally top-down activities to adapt to a changing climate. This is not to say that the funded activities are inappropriate or unwise, but that they are only part of the story.

In addition to our analysis, the desirability of combining the global and local is also examined in a recent SPREP (Secretariat of the Pacific Regional Environment Program, n.d.) report. This sets out and frames L & D in terms of both global environmental concerns:

“The types of loss and damage of greatest concern in the Pacific Island Countries relate to sea level rise, ocean acidification, coral bleaching, impacts on terrestrial and marine biodiversity, fisheries and aquaculture, and agriculture.”

And in terms of local community concerns, although the SREP report frames these concerns in terms of their non-monetary nature:

“there is a great concern over losses that cannot be quantified in monetary terms, such as loss of lives, loss of culture and language, loss of connectivity to customary land, and in some cases losses of entire islands or sovereign states.”

This point on community concerns is also highlighted in a recent report from Ian Fry, the UN Special Rapporteur on Human Rights and Climate Change which mentions the importance of “non-economic losses ...[which]... include, inter alia, loss of life, human health, cultural heritage and sovereignty”. (Fry, 2022, p14). Both economic as well as non-economic losses are part of the current L&D discussion in the UNFCCC. The concept of non-economic loss and damage (NELD), in its simplest definition, refers to the loss of values that are not commonly traded in markets, such as those being identified here as of concern to local communities. Such values include loss of, and damage to, the values listed above as well as mental health and well-being, culture, way of life and social cohesion, and biodiversity (Clissold et al., 2021; McNamara et al. 2021; Warrick et al., 2017), as well as the spiritual values discussed earlier. These are all important values for the Pacific (and many other areas) and ways need to be found to ensure their full inclusion.

As we highlighted, in much of the global literature, there is a tendency to assume homogeneity across the reality of the very diverse PICTs, where L&D will manifest differently for small islands, coastal areas, land-locked areas, and countries with different fiscal and administrative capacities, infrastructure and institutions. However, diversity also occurs within communities, and L&D impacts will be different for people with for example, different resources, status and health (IIED & ICCCAD, 2021). These and other issues can intersect “with race, class, ethnicity, sexuality, indigenous identity,

age, disability, income, migrant status and geographical location [to] ...compound vulnerability to climate change impacts, exacerbate inequity and create further injustice.” (Fry, 2022, p8, clause 29). The uneven impacts of climate change across these groups raise significant justice and equity issues. Fry (2022, p17) argues for ensuring that “the voices of those most affected must be heard and the losses and damages they are suffering must be understood and accounted for. Many are calling for far greater participation of and climate justice for vulnerable groups.”

#### *L & D estimates are too low:*

The idea of “building back better” becomes impractical for places seemingly in a state of constant recovery from frequent repeated events. In these circumstances, the focus is necessarily on immediate needs making it harder than usual to focus on longer term risk reduction. An example from the Pacific is provided by the West Coast of the island of Espirito Santo, Vanuatu. As a result of a combination of the direct impacts of the high winds from cyclones and severe weather on homes and people and of extensive damage to the natural environment, the people are facing a humanitarian crisis (Bharadwaj & Shakya, 2021). The environment “typically provides a high percentage of people’s daily food intake, water supply, building materials, medicines and income generation” (Bharadwaj & Shakya, 2021). In turn this pressure for food has led to the “partial collapse of tradition environmental stewardship governance (and cultural maintenance) ...” (SPREP n.d.; Bharadwaj, & Shakya, 2021).

The challenges faced by atoll countries are even more severe. These atolls are increasingly likely to be impacted in multiple ways from multiple hazards, which can act to prevent recovery and longer-term risk reduction. Examples include:

sea level rise (inundation, saline intrusion, and storm surges), diminished or depleted water resources..., coral bleaching (impacting the tourism sector, fisheries) and changes to the fisheries sector ....“

Repeated or simultaneous occurrence of these hazards, especially if extreme and accompanied by severe ecological damage, are leading to consideration and use of relocation. For people in the Pacific with semi-subsistence livelihoods depending on the sea, land and climate, ecosystem services are the key to livelihoods and resilience. One of the most important lessons learned is that the official assessments of climate L&D are severely underestimated (Bharadwaj & Shakya, 2021).

Another important issue is that “Pacific Islands have limited access to commercial risk sharing products, due to insurance markets that are small or difficult to establish.” (SPREP, n.d.). Nevertheless, there have been a few initiatives since 2007 when the Pacific Catastrophe Risk Assessment and Financing Initiative commenced. Recently, the Pacific Insurance and Climate Adaptation Programme (PICAP) was established in 2021 to (among other things) develop micro-insurance for the people of PSIDS.

#### *The risk of maladaptation:*

In November 2023, Australia and Tuvalu (a Pacific Island nation of 10,000 people) signed an agreement touted as the world’s first climate migration treaty, the “Australia-Tuvalu Falepili Union”. This gives 280 people a year from Tuvalu the right to settle in Australia as in effect climate refugees. However, in return Tuvalu appears to sign away some of its sovereignty. Without any intended irony the treaty starts by “reaffirming the Parties’ sovereignty, territorial integrity, and political independence;” before stating that “Tuvalu shall mutually agree with Australia any partnership, arrangement or engagement with any other State or entity on ... [matters including but] not limited

to defence, policing, border protection, cyber security and critical infrastructure, including ports, telecommunications and energy infrastructure.” (Article 4). The treaty has yet to be ratified by the Tuvalu Parliament. Writing for the Toda Peace Institute, Kitara and Farbotko state that the treaty "does not deliver climate justice for Tuvaluan people" and is instead a deal which delivers on Australian defence ambitions (2023). There are other less generous assessments mentioned in a National Indigenous Times article (McKay, 2023).

At the least, this raises the prospect that countries could trade key aspects of their existence as nation states for possible partial solutions to their climate risk. To some it is a solution, but to others it is maladaptive.

### *The PICTs bring a different perspective:*

The PICTs are not hapless victims of climate change and recipients of loss and damage. They bring important perspectives to the global narrative as for example when the 2017 COP was chaired by Fiji (Hasenkamp & Worliczek, 2018). The Pacific islands also bring strong arguments for climate justice – that they should be compensated for the loss and damage brought by the impacts of climate change as they have effectively no role in causing the change. Pacific youth insist that they are ‘not drowning, [but are] fighting’ (Titifanue et al., 2017) and have been at the forefront of global struggles for climate justice. A group of students from PICTs at Vanuatu’s law school took these arguments further. They have been instrumental, through the Vanuatu government and the UN General Assembly, in seeking an advisory opinion from the ICJ (International Court of Justice) on the obligations of states with respect to climate change and climate harm. As part of its procedure, the Court has asked for submissions from UN member states and is expected to give an opinion in 2024 (ICJ, 2023)<sup>5</sup>.

Compensation (reparations or restitution) should address the concerns of the people of the Pacific rather than the standard measures of global organisations. There is a case for going further and ensuring that the needs of those outside the main towns who are far less visible are addressed – as mentioned earlier in this section. We have set out many of these issues in section 3 above. Based on a review of the existing scientific literature on L&D and the manifestation of losses and damages beyond limits to adaptation in more general, we identify a number of policy-relevant research gaps. These include the need for more focus on NELD and the experiences of vulnerable groups in the Pacific and elsewhere (McNamara & Jackson, 2019; McNamara et al. 2021), as well as the inclusion of traditional and place-based knowledge held by Pacific people.

## 5-Conclusions

The global narrative on L&D largely ignores the concerns of the people confronted with the potentially existential impacts of the climate crisis, particularly in the Global South. The concept in practice needs broadening to include those it is trying to help and their knowledge, interests and values. Assessing and managing losses and damages from climate change as part of a just transition involves a procedurally fair and shared approach between the people and communities concerned, governments, civil society organisations and international donors, which includes local and traditional knowledge.

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<sup>5</sup> This is a globally significant recent legal case supporting the argument that the Pacific brings a different view: <https://www.theguardian.com/world/2022/jun/20/from-vanuatu-law-school-to-the-hague-the-fight-to-recognise-climate-harm-in-international-law>

The L&D narrative and policy discourse needs to be made much more inclusive. Focusing on the PICTS, we find that the importance of symbolism, culture, custom, religion, customary land (and sea) tenure, biodiversity, the local and the informal all need to be explicitly included in an integrated manner given their intertwined nature. This inclusion needs to keep in mind the great diversity across the Pacific both between states and territories and within their communities. Losses and damages from climate change are highly variable and have different implications for different groups such as women, youth, subsistence farmers and fishers, and marginalised people – for example.

Justice and equity issues, across distributional, procedural, compensatory, representative and transitional forms of justice, need to be fully recognised here to help ensure that changes in the way climate change impacts are managed do not worsen people's circumstances and disadvantage them further - for example, in communities that are facing the prospect of relocation. Our knowledge of how to support this to achieve fair outcomes in systems of informal and traditional governance is very limited, and needs attention in research and policy. Managing L&D as part of a just transition not only involves fostering outcome fairness in the form of distributional justice, but requires to that end a shared and procedurally just approach between the communities concerned, governments, civil society organisations and international donors. The responsibility is shared – there are other sectors with an inclusive shared cooperative approach which could be identified and drawn on for their lessons.

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