



TREADING GENTLY: Building on positive environmental practice in the Tonga volcano response



PRACTICE PAPER SERIES



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pp. 8, 14-15, 18: Low tide, Nuku'alofa, Tonga. Adli Wahid / Unsplash.

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About CSFT

The **Civil Society Forum of Tonga** is the umbrella body for Tonga's non-government organisations (NGO) and civil society organisations (CSO).

About MORDI Tonga Trust

MORDI is a Tongan NGO that helps Tonga's rural communities to reduce poverty. Its key objective is to increase the sustainability of the livelihoods of vulnerable communities in rural areas in Tonga through the provision of skill development training and implementation of community development projects.

About Humanitarian Advisory Group

Humanitarian Advisory Group (HAG) was founded in 2012 to elevate the profile of humanitarian action in Asia and the Pacific. Set up as a social enterprise, HAG provides a unique space for thinking, research, technical advice and training that contributes to excellence in humanitarian practice. As an ethically driven business, we combine humanitarian passion with entrepreneurial agility to think and do things differently.

About the Humanitarian Horizons program

Humanitarian Horizons 2021–24 is the second iteration of HAG's partnership-based, sector-wide research program. Focusing on Asia and the Pacific, Humanitarian Horizons aims to progress thinking on the role of the humanitarian sector and produce evidence about ways to achieve better outcomes for crisis-affected people. The program is funded by the Australian Department of Foreign Affairs and Trade (DFAT).

The research program for 2021–24 builds on achievements of the 2018–21 iteration and HAG's experience supporting the sector for almost 10 years. Humanitarian Horizons has three interlocking streams: 1) Power, People and Local Leadership 2) Greening the System and 3) Real-Time Analysis and Influence. It is underpinned by a fourth stream comprised of governance, accountability and monitoring, evaluation and learning processes.

The Real-Time Analysis and Influence Stream aims to provide timely exploration of emerging issues and thematic areas across the humanitarian sector and produce practice papers. Practice papers like this one are concise and high-level analysis pieces intended to inform practices within response and recovery efforts and support decision-making and discussions about future action.

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Abbreviations

AAP	Accountability to Affected Populations
CSFT	Civil Society Forum of Tonga
CSO	Community Service Organisation
DFAT	Department of Foreign Affairs and Trade [Australia]
EHA	Environment and Humanitarian Action [Network]
HAG	Humanitarian Advisory Group
HMAF	His Majesty's Armed Forces [Tonga]
IFRC	International Federation of Red Cross and Red Crescent Societies
IUCN	International Union for Conservation of Nature
NEMO	National Emergency Management Office
NGO	Non-Governmental Organisation
TRCS	Tonga Red Cross Society
UBD	Unsolicited Bilateral Donation
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
WASH	Water, Sanitation and Hygiene
WWF	World Wildlife Fund

Introduction

“It all starts with our strategic planning phase and how we scope out the problems and their solutions. But we must not only focus on how we resolve these problems, but we should also plan how our resolutions may also have a negative impact on other things such as the environment.” (Local actor)¹

The Hunga Tonga-Hunga Ha’apai (henceforth, Tonga) volcano sits 65km north of Tonga’s largest island. Its eruption on Sunday 15 January, 2022, was the biggest ever by any volcano measured by modern instruments, and caused a 58km-high ash plume and a Pacific-wide tsunami.² Many of Tonga’s 169 islands were affected. Residents and first responders had to deal with the breakdown of communications systems. This made it particularly challenging to understand the needs, but also tailor immediate response actions to the requirements of communities in the initial phase. As the response continued it faced the challenge of implementing actions in the context of restrictions in place to prevent the spread of a COVID-19 outbreak.

The response faced the challenges of multiple needs and practical constraints, but it was also tested by another factor of great importance in the Pacific region and globally: the need to consider the environmental impacts of humanitarian action. Globally, humanitarian actors are increasing their focus and recognition towards the importance of environmental considerations as part of effective, principled aid and the accountability to affected populations – a ‘green’ way of responding (See Box 1). This ambition is supported by many within the sector, yet collectively the sector requires a shift to ensure this ambition is matched with action.

“This is the environment in which the people that we support have to live on afterwards. So if we leave an environment behind that’s polluted, we are diminishing the quality of the aid that we’re providing.”³ (Kathrine Vad)

Box 1: What is green humanitarian action?

Green humanitarian action refers to strengthening environmentally friendly approaches to meeting humanitarian needs and measurably reducing harmful impacts of the humanitarian system on the climate and environment.⁴ It has gained momentum within the sector over the past few years, with the establishment of initiatives including the Climate and Environment Charter⁵ and the Inter-Agency Standing Committee’s common narrative on the climate emergency and humanitarian action.⁶

Effective humanitarian action is increasingly understood as programming that seeks to minimise environmental impact. Evidence emerging from other regions and global initiatives suggests that effective action relies on a principle of ‘do no harm’ that includes environmental impacts of aid and ensures AAP. As a result, considering environmental impacts, or supporting a ‘green response’, is increasingly critical.⁷ Greater environmental awareness and media attention globally have supported this momentum for change.⁸

1 Interview 26

2 Pacific Beat (2022) ‘Tonga’s volcanic eruption was the biggest recorded by modern instruments’, ABC, May 24

3 Vad. K (2021), Episode: ‘Reducing emissions in the aid sector’, *Rethinking Humanitarianism*, October 27

4 IFRC (2021), *Green response introduction*

5 *The climate and environment charter for humanitarian organisations*

6 Inter-agency standing committee (2020) *IASC key messages on climate change, humanitarian action and COVID-19*

7 IFRC (2021) *Green response introduction*; Groupe-URD (2020) *Environmental footprint of humanitarian assistance scoping review*; EHA Connect (2019) *Environment and Humanitarian Action in the age of global reform agendas*

8 Clarke PN (2021) *Climate change and humanitarian action*, p. 13



Despite the pressing importance of environmental concerns in the Pacific, the region's exposure to disasters, and its leadership in relation to climate action, evidence about what enables green humanitarian action comes largely from other regions and other types of responses. This paper takes a first step towards filling that gap.

The research discovered promising practices that provide concrete ways to mitigate and improve environmental impacts through coordinated and collective efforts across the humanitarian sector in the region. At the same time, it also identified opportunities to overcome barriers to mainstreaming green approaches into humanitarian action. These barriers include lack of awareness of greener options, gaps in Pacific-focused frameworks and policies, and reliance on short-term or ad hoc or default response approaches. Stakeholders in the Pacific are yet to implement strategies for a green humanitarian agenda that seem to be advancing in other regions.

What does this paper do?

This practice paper explores the response to the Tonga volcanic eruption and tsunami through a 'green response' lens. It provides a rapid analysis of emerging evidence to generate conversations for response and recovery planning, and to inform decision-making and review processes for humanitarian stakeholders in Tonga and the Pacific more widely.

This paper explores three questions:

1. What is the relationship between effective humanitarian aid and green practices in the Tonga response?
2. What are the barriers to effective green humanitarian action?
3. What opportunities to are there to build momentum towards a greener humanitarian system during the recovery in Tonga and more broadly across the Pacific?

The paper has three sections. The first section gives an overview of the context for green response with respect to Tonga. The second section explores opportunities for green response. The final section summarises ways to strengthen green initiatives in Tonga's recovery and across the region in the future.

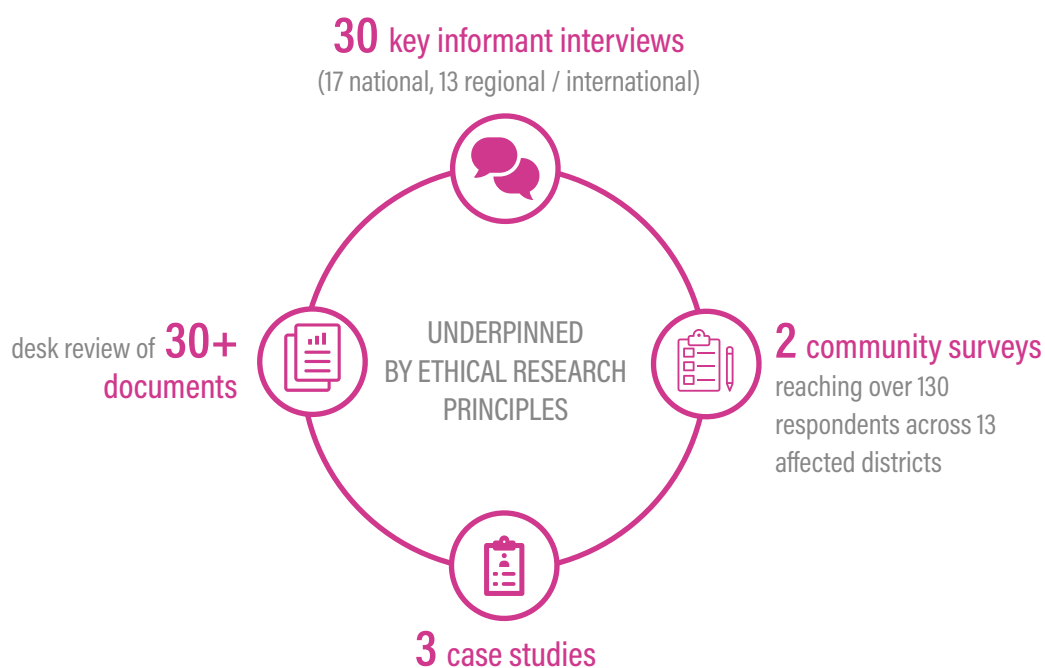


Throughout this paper, opportunities for consideration are identified using this symbol.

METHODOLOGY

This practice paper is based on mixed methods research involving interviews, community perception surveys, document analysis and case studies. Humanitarian Advisory Group's (HAG) partner organisations – the Civil Society Forum of Tonga (CSFT) and MORDI, a national non-governmental organisation (NGO) – led data collection in Tonga, including surveys with affected communities and interviews with key stakeholders. Figure 1 below provides an overview of the methodology.

Figure 1: Methodology



Underpinning our approach to research and support locally led research

Our approach to conducting research under the Humanitarian Horizons program is founded on working in partnership. CSFT and MORDI are key national stakeholders involved in the Tonga volcano response, as well as contributing to broader climate change action efforts in Tonga. Working together on a rapid analysis allowed us to leverage our respective networks, skills and knowledge to understand how national actors are leading and positioned on 'greening' their responses, as well as the roles of international actors, and how these efforts can improve recovery efforts and future responses across the region.

Limitations

- **Scope:** This paper describes a rapid review of emerging issues. It does not seek to comprehensively document or assess the environmental impacts of the Tonga volcano response. It is limited in focus to good practices and opportunities, rather than technical assessments of program interventions and impacts from an environmental perspective.
- **Time and contextual challenges:** The research was undertaken in the two months after the disaster, during which time Tonga experienced several COVID-19 lockdowns. Data collection was opportunistic to maintain the safety of stakeholders and communities. It is not expected that the full range of environmental impacts was observed within this short period.
- **Coverage:** The research did not include a representative sample of affected communities, nor did it include engagement with all national and international stakeholders involved in the Tonga volcano response.



SECTION 1: SETTING THE SCENE

Box 1: About Tonga

The Kingdom of Tonga is located in the Central South Pacific Ocean and consists of 169 islands, 36 of which are inhabited. Its population was estimated at 104,500 in 2019, with 70% residing on the island of Tongatapu. Tonga is highly vulnerable to climate change impacts and natural hazards, ranked as the 3rd most vulnerable country to disaster risk and 52nd most vulnerable to climate change impacts.⁹ Additionally, the island nation is home to six active volcanoes. Tonga's economy is highly dependent on sectors vulnerable to climate change and natural hazards, such as agriculture, tourism and hospitality. The agricultural sector generates most of the population's cash income and food supply, contributing to 16% of the country's Gross Domestic Product (GDP).¹⁰

The context: green humanitarian action in Tonga and the Pacific

Environmental sustainability is firmly on the agenda in Tonga and the Pacific region. The Tongan Government's counterparts and partners across the Pacific have individually and collectively made strong commitments and statements on climate action and other environmental issues. These priorities are reflected in policy, strategies and action at the regional and national levels.

“The seriousness of this [impacts of climate change] cannot be underestimated. Tonga cannot afford to sit and wait for the sea level to rise, for more severe droughts and floods, and for more damaging cyclones, while emissions of fossil fuels continue unabated. A bold vision is required which must be translated into action that is supported by the international community.”¹¹ (Tonga Climate Change Policy 2016)

9 Bündnis Entwicklung Hilft (2021); *World Risk Report 2021*

10 World Bank (2021) *Climate risk country profile: Tonga*; SPC (2022), *The Tonga agriculture policy bank*

11 Government of Tonga (2016) *Tonga climate change policy: a resilient Tonga by 2035*, p.8

Figure 2 provides a snapshot of international, regional and national policies and frameworks pertinent to the Tonga volcano response.

Figure 2: Snapshot of climate policies and frameworks relevant to the Tonga volcano response



These frameworks provide a strong basis for more environmentally responsible humanitarian action by recognising environmental considerations as an essential component of effective support and action across the region. However, few Pacific actors have used them as a foundation for policy or action, and many still separate green humanitarian response from broader concepts of effective and sustainable humanitarian action.¹³ Tonga has no overarching framework or guidance for national or international stakeholders to reduce the environmental impacts of emergency response, despite it being a key issue for the government.¹⁴ The National Emergency Management Office (NEMO) has indicated that it is working with the Department of Environment to develop a policy for greener emergency response, and overall disaster risk management is a key priority.¹⁵

¹² Government of Tonga (2016) *Tonga climate change policy: a resilient Tonga by 2035*

¹³ Interviews 1, 7, 29

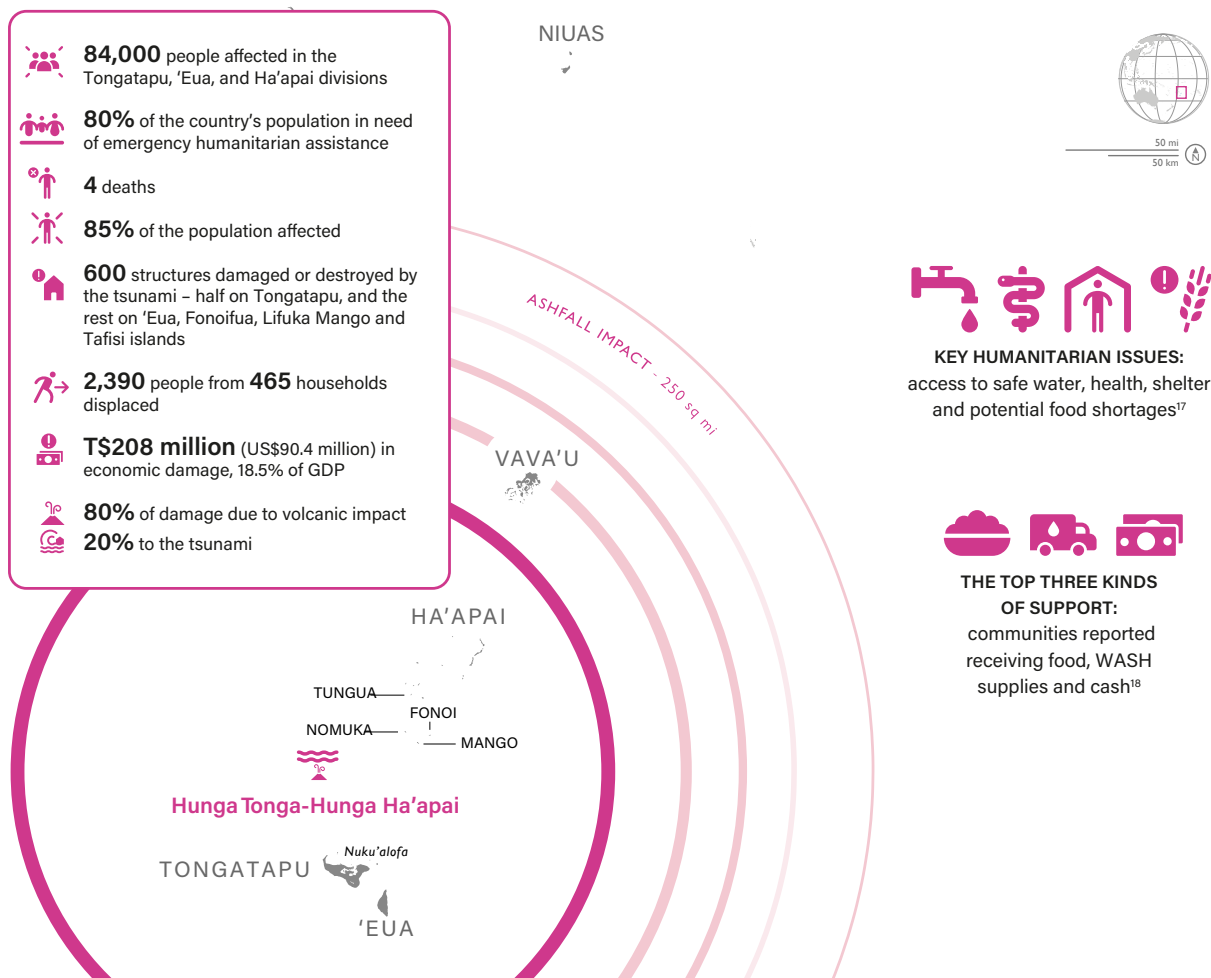
¹⁴ Interview 19

¹⁵ Interview 9

OVERVIEW OF THE TONGA VOLCANO ERUPTION AND TSUNAMI

Tonga's volcanic eruption of 15 January 2022, which reached 5 out of 7 on the volcanic explosivity index, was the largest in the 21st century to date. It generated a tsunami that travelled across the Pacific Ocean basin and a plume of ash, steam and gas that spread across Tonga's main island groups. Its impact in Tonga has been extensive, including infrastructure damage, inundation by sea water and ashfall on housing and crops, with the western coast of Tongatapu (Tonga's largest island) the most affected area. It also caused a communications blackout that lasted several weeks, hindering information-gathering about needs and priorities. In addition, part-way into the response, the Tongan government reported a COVID-19 outbreak and implemented public health protocols for managing contactless delivery of international aid.¹⁶

Figure 3: Impact of the volcanic eruption, tsunami and earthquake



Map of Tonga and volcanic eruption adapted from USAID map located at reliefweb.int

16 World Bank (2022) *Tonga volcanic eruption and tsunami: World Bank disaster assessment report estimates damages at US\$90M*; Kingdom of Tonga – National Emergency Management Office (2022), *Situation report*; IFRC (2022), *Tonga: Red Cross tackles triple disaster – COVID-19, volcanic fallout, tsunami*

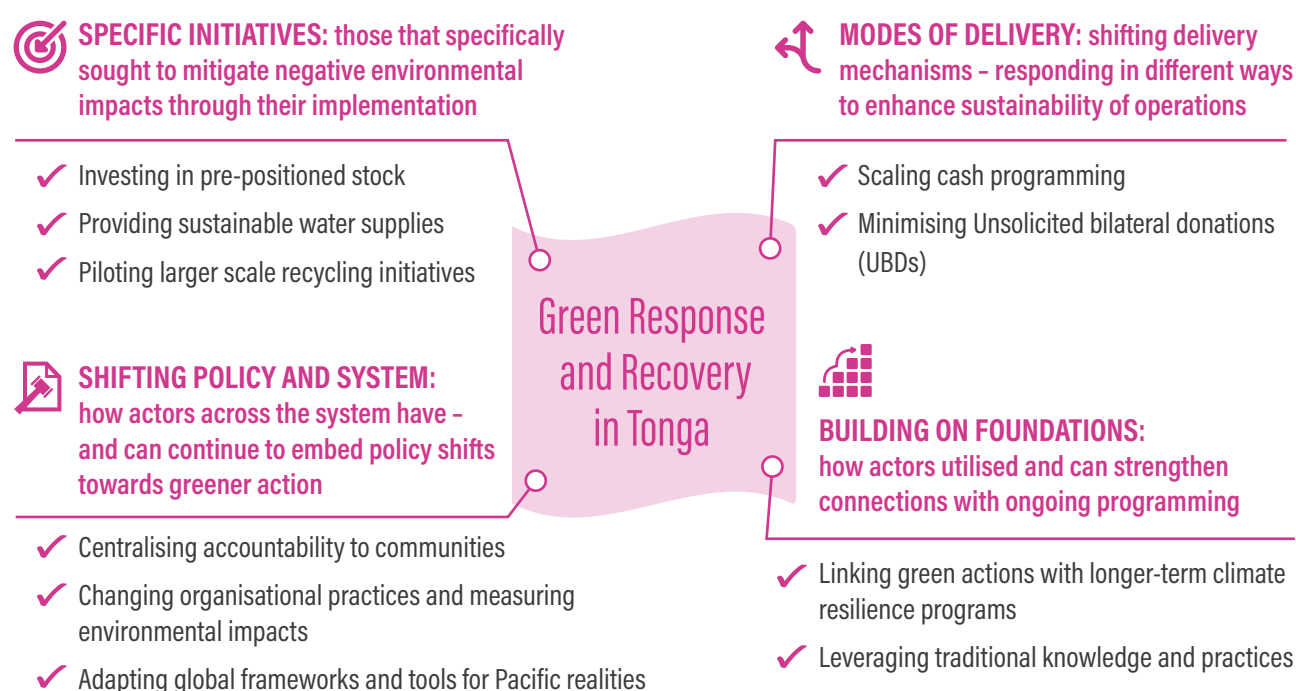
17 World Bank (2022) *Tonga volcanic eruption and tsunami: World Bank disaster assessment report estimates damages at US\$90M*; Kingdom of Tonga – National Emergency Management Office (2022) *Situation report*; Srinivasan P & Seselja E (2022) *'Tonga faces \$125 million damage bill, a month after volcano, tsunami devastate Pacific island'*, ABC, 16 February; ReliefWeb (2022) *Tonga: volcanic eruption and tsunami – Jan 2022*

18 Community perception survey data

Greening the response in Tonga

Evidence collected throughout this research suggests that momentum is gathering in favour of increased focus on greening humanitarian action in practice. Community perceptions highlight there is awareness of the importance of environmental considerations for support they receive, such as NFIs and packaging of supplies. This presents an opportunity to continue to build awareness and momentum with communities towards greener humanitarian action. Specific areas that provide evidence and opportunities for promising practice sit in four areas which will be explored further below. The categories of action that have emerged that can drive greener response and recovery are outlined in figure 4 below.

Figure 4: Possibilities for greening humanitarian action in Tonga



Box 2: Leveraging and resourcing positive practices to drive change

Promising practices, such as those outlined in this section, are not consistently documented, shared, invested in or scaled in Tonga. As a result, little is measured or known about the impact of greener approaches.¹⁹

Many humanitarian actors reported a lack of resourcing for implementation, monitoring and evaluation that could support change. Furthermore, some approaches to monitoring undermine change – for example, value-for-money assessments that do not consider the impact of greener aid.²⁰

‘There is little consistency in the approach, commitment or allocation of resources to address the environmental concerns in emergency, humanitarian and security operations.’²¹ (EHA Network)

19 Interviews 2, 3, 5, 16, 17, 27

20 Interviews 1, 3, 5, 7, 8, 11, 29

21 EHA (2017) *Environment and Humanitarian Action*, p. 2

SPECIFIC INITIATIVES: THOSE THAT SPECIFICALLY SOUGHT TO MITIGATE NEGATIVE ENVIRONMENTAL IMPACTS THROUGH THEIR IMPLEMENTATION

Investing in pre-positioned stock

Availability of sufficient pre-positioned stock was cited as important in reducing the amount of supplies needing to be transported into the country rapidly, thereby minimising associated carbon emissions and other waste.²² Several organisations, including the Tonga Red Cross Society (TRCS), Caritas Tonga, other NGOs and churches, in addition to the government, have pre-positioned supplies on several islands, while DFAT is funding NEMO and TCRS to increase pre-positioned supplies. Other agencies have either considered or started to consider how pre-positioned stock can be more environmentally responsible by assessing supply chains, how and where stock is manufactured, what is available locally, and the waste generated and options to deal with it. Some agencies suggested that they would do the same when replenishing stocks for the rest of the cyclone season and future responses, but this had not yet been operationalised.²³

Box 3: Red Cross and Red Crescent Movement – green response approaches in Tonga and the Pacific

The TRCS, with the support of Australian Red Cross and the International Federation of Red Cross and Red Crescent Societies (IFRC), have been developing green responses approaches and supporting wider initiatives in Tonga in recent years, including exploring greener options for pre-positioned stock. These considerations are planned to be mainstreamed in TCRS' upcoming Tonga Volcano and Tsunami Operational Strategy, which will build on the regional work being undertaken.²⁴ Australian Red Cross have also supported a pilot program with TRCS aimed at promoting nature-based solutions, involving plantings around pre-positioned stock warehouses to restore vegetation cover, protect stock and promote environmental resilience.



When looking to replenish stock, consider i) pre-positioning stock in country rather than relying on external supplies, ii) evaluating where stock is manufactured and its composition through an environmental lens

Providing sustainable water supplies

Access to safe drinking water in the aftermath of the eruption was critical because water supplies were contaminated by the ashfall.²⁵ International organisations initially transported large quantities of bottled water, or water in plastic containers, via plane or ship to Tonga to meet needs, resulting in large amounts of plastic waste.²⁶



approximately **86,000** plastic water bottles were transported to Tonga during the response.²⁷

22 Interviews 1, 3

23 Interview 1

24 TCRS (in preparation) *Tonga volcano and tsunami operational strategy*

25 World Bank (2022) *Global rapid post disaster damage estimation (grade) report*, p. 22

26 Interviews 14, 15, 19, 20, 21

27 Enoka TK (2022) ['86,000 bottles of water on the wall: Tonga struggles with post-volcano waste problem'](#), *The Guardian*, 18 April

Communities identified that water was vital but recognised the environmental shortfalls of the emergency supply. The highest percentage of community members surveyed (28%) reported that drinking water was the most useful support they received, but that the plastic waste generated was problematic and needed more thought in the future; *'water should be distributed in large containers, not in small bottles'*.²⁸ At the same time, DFAT received advice from NEMO that there was a strong preference for bottled water from many communities, as this was perceived in many instances as safer to consume than desalinated water. Such hesitation toward any water supply method emphasises the need for significant community engagement which, as per the Sphere minimum standards, must accompany any water-related response. Beyond compliance, however, greater emphasis on community engagement presents significant opportunity to build trust, disseminate information, normalise alternative supply methods, and address community concerns that may otherwise present barriers to uptake more environmentally sustainable water supply options. Both the negative environmental impacts of bottled water and the benefits and utility of more environmentally sustainable humanitarian water supply options can be addressed with greater community engagement and information sharing.²⁹

The review documented a diverse range of sustainable practices.³⁰ These included supplying tanks and water filters, working with communities to clean and set up water supply and management systems, and providing desalination materials and machinery (some of it transported on Australian and New Zealand military vessels). NEMO, together with HMAF and MORDI provided tanks to affected areas which were filled with water delivered by the Australian and New Zealand Navies. Civil society initiatives from around the region also sought to support more sustainable practices. Tongan diaspora groups from Fiji transported buckets with taps in preference to bottled water, also recognising that these were more appropriate for elderly individuals and people with disabilities.³¹ Civil society platforms and organisations, including CSFT and MORDI (see Box 4), also advocated for the use of tanks over single-use plastic options in their partnerships with international actors.³²



Ensure that future water provision initiatives prioritise sustainable alternatives to single use plastic bottles.

Box 4: MORDI's response: good practices and green initiatives

As a key actor in Tonga's humanitarian landscape, MORDI played a critical role in responding to the needs of vulnerable communities affected by the disaster, working within key clusters such as WASH, shelter, food security and livelihoods, and protection. As part of its commitment to uphold environmental integrity throughout its operations, MORDI has adopted a Social, Environment and Climate Safeguard Framework, which aims at mitigating negative environmental impacts during response and ensuring accountability is upheld through environmental assessment processes. During the response, MORDI utilised jerry cans for water distribution, refilling them from large water tanks in order to reduce plastic waste. Additionally, MORDI has been a strong advocate for greater water supply sustainability, and has promoted sustainable and secure water use in Tonga by supporting households to invest in water tanks to store rainwater.³³

28 Survey respondent

29 The Sphere Handbook (2018), [Essential concepts in water supply, sanitation and hygiene promotion](#)

30 Interviews 3, 25

31 Interview 26

32 Interview 14

33 MORDI – response case study

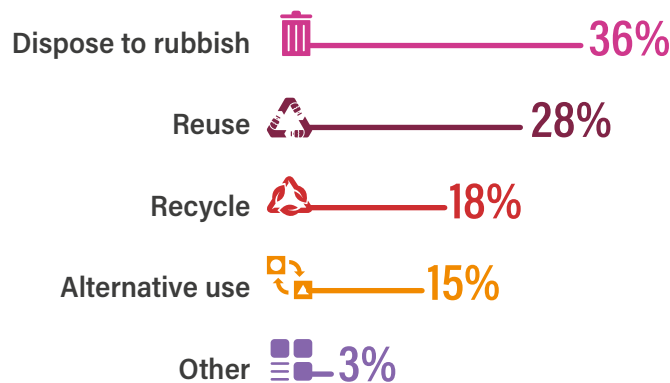
Piloting larger-scale recycling initiatives

Humanitarian actors and community members referred to the large amount of plastic and non-recyclable materials associated with the provision of water, food, medical supplies and other donated materials as an ongoing issue needing more attention. This is a key consideration not only for sudden-onset response planning, but to incorporate into future planning due to the long-term nature of the waste and recycling challenges in Tonga, with few waste management and recycling options available in country.³⁴

“If you’re bringing something into Tonga you need to be responsible for its recycling. The Pacific is drowning in waste, batteries are terrible. Having good guidelines around waste recycling is critical. We need to get to this—a good start is formalising this into frameworks and policies.”³⁵
(International actor)

Significantly, 36% of community members indicated they would dispose of supplies once they were no longer needed (see Figure 5) rather than reuse, repurpose or recycle them. Considering the large amount of supplies provided, this creates a significant waste problem.

Figure 5: Community survey question – What will you do with supplies when you’re finished with them?



Initiatives from regional actors to build waste management capacities such as DFAT’s support to the Tongan Ministry of Health can help address waste issues³⁶, while multiple stakeholders referenced the ‘No Pelesitiki’ campaign as an important initiative (see Box 5 below). One of the critical aspects of this initiative was the investment and recognition by an international donor partner (DFAT) of the need to support management of the waste created by the aid they provide.



Promote community-led initiatives in recovery that address plastic waste.

34 Interviews 7–9

35 Interview 2

36 DFAT (2020), [Tonga COVID-19 Development Response Plan](#)

Box 5: No Pelesitiki campaign

The No Pelesitiki campaign is a volunteer-run initiative aimed at the elimination of single-use plastics in Tonga and advocacy for sustainable alternatives (particularly traditional and local materials).³⁷ No Pelesitiki has received funding from the New Zealand Government, while the Australian Government funded its plastic waste collection initiative following the tsunami response.³⁸ Volunteers and staff collected around 3,000kg of plastic waste, which was then compacted by machines provided by DFAT and loaded onto Her Majesty's Australian Ship (HMAS) *Canberra* to be transported out of the country. No Pelesitiki also raised awareness of the plastic waste problem in the communities where collections took place through social media, text messages/phone calls and word-of-mouth activities.³⁹



Photos courtesy of the No Pelisitiki Campaign - The Kindom of Tonga, [Facebook Page](#)

'Supporting the NO PELESITIKI campaign was a message used by CSOs particularly during the time there was water shortage and hundreds and thousands of plastic water bottles was being distributed throughout Tonga.'⁴⁰ (National civil society actor)

37 Clarke-Morris J (2021) 'Tongan Anglicans build climate resilience', *Anglican Tonga*, 19 October; Interview 20.

38 Tonga Broadcasting Commission (2022), *NZ donates monetary assistance to the "No Pelesitiki" campaign*, 27 April; No Pelesitiki Campaign – case study

39 No Pelesitiki Campaign – case study

40 Interview 14

MODES OF DELIVERY: SHIFTING DELIVERY MECHANISMS – RESPONDING IN DIFFERENT WAYS TO ENHANCE SUSTAINABILITY OF OPERATIONS

Unsolicited bilateral donations

A concerted campaign led by the Australian Council for International Development (ACFID), Council for International Development (CID) and other partners to prioritise donating cash in recent years⁴¹ has increased awareness of the negative environmental impacts of unsolicited bilateral donations (UBDs) in the Pacific region. Despite this, a large amount of UBDs appears to have been sent to Tonga.⁴²



Approximately **60** large shipping containers of UBDs were left on the wharf during the response

With limited waste disposal and recycling facilities in Tonga, UBDs present a major issue for the government, in addition to the extra environmental impacts and carbon emissions of transport, logistics and quarantining processes. Evidence from other responses in the region has demonstrated the significant strain UBDs put on the environment, as well as logistical and supply chain systems in country.⁴³

There is a need for closer engagement between humanitarian agencies, donors, governments and the Tongan diaspora and to better understand the drivers for providing support after crises and strengthen messaging around effective and sustainable assistance. Whilst a large amount of cash was provided through remittances,⁴⁴ there remains an overall preference for sending materials and goods due to a perception that these goods are less expensive outside Tonga.



Continue to work collectively with stakeholders across the system – including members of diaspora groups – to communicate widely on the environmental impacts of UBDs.

Scaling cash programming

Cash programming has been cited as having the potential to mitigate waste and carbon emissions when used appropriately, because it can reduce the need to purchase or transport relief supplies.⁴⁵

Cash programming was not used extensively in the Tonga volcano response. Power outages caused by the disaster prevented people from accessing money through online banking,⁴⁶ yet the provision of satellite phones to enable banking access can help mitigate such situations. Examples of cash-based programming included one-off top up payments for households sustaining significant damage, government social protection schemes for elderly individuals and people with disabilities,⁴⁷ and CSFT and partners' 'cash for crops' scheme implemented for agricultural producers (see Box 6). The feasibility of cash programming in the Pacific has been studied, and some large international NGOs have begun prioritising cash, yet cash programming by international actors in Tonga was limited.



Consider cash as a viable delivery mode that minimises direct environmental harm. Build upon initiatives that have been piloted in the response; consider the implications of broader cash-based programming in future responses in Tonga.

41 ACFID (2019), *The real story ends in landfill*

42 Interviews 4, 7, 8, 29; Seselja, E (2022), *Tonga crisis prompts aid organisations to call for cash, warn physical donations could delay critical relief*, ABC, January 21

43 ACFID & Australian Red Cross (2017), *The challenges of Unsolicited Bilateral Donations in Pacific humanitarian responses*

44 Interview 28

45 Groupe URD (2020), *The environmental impact of cash and voucher assistance*

46 Interview 30

47 Government of Tonga (2022), *Tongan Government provides financial support for affected families and vulnerable groups*

BUILDING ON FOUNDATIONS: HOW ACTORS UTILISED AND CAN STRENGTHEN CONNECTIONS WITH ONGOING PROGRAMMING

Linking green actions with longer-term climate resilience programs

A range of actors spoke about how their responses had leveraged existing climate resilience or adaptation programming or intentionally linked into their longer-term development programming. Anglican Mission, Act for Peace, Tearfund, the Tonga Council of Churches and individual churches conducted a joint needs assessment and distributed pre-positioned supplies in Tonga and relief items from Fiji. These items were familiar to Tongan communities, and their pre-positioning reduced international freight logistics.

During the recovery phase, church partners implemented soil recovery programs to reverse environmental damage and support Tonga's agricultural sector.⁴⁸ Live and Learn, together with the Pacific Community, leveraged its existing climate resilience program to meet food needs resulting from soil disruption and contamination, distributing 200 garden bed systems and seeds. Live and Learn also implemented a natural habitat rehabilitation program, planting and restoring mangroves in disaster-affected coastal areas.⁴⁹ MORDI distributed tools to district officers in affected communities, enabling them to start communal plots, while the Ministry of Infrastructure provided machinery to allow for debris clearing.



Seek opportunities to leverage existing initiatives that promote environmental sustainability and strengthen climate adaptation and resilience.

Box 6: Action led by civil society platforms

CSFT and partners supported a novel 'cash for crops' initiative designed to mitigate the impacts of agricultural/soil damage and loss of homes and land, and to enable a sustainable recovery of Tonga's agricultural sector. The program targeted the most vulnerable and hardest-hit groups such as women, children, elderly, people with a disability, agricultural workers and fishers, pursuing three priorities: funding to assist affected farmers and labourers, food procurement initiatives, and crop distribution to affected families.

Environmental considerations were integrated into the response, such as replanting and germination of vegetables and crops to replenish carbon sinks as well as revive the food and agriculture sector. Organic farming practices were encouraged to revitalise agricultural sites, distribution and use of solar lamps to displaced communities, use of amalgamated bio-debris to fill open pits and spaces, and using recyclable materials during relief distributions to minimise single-use plastics. Communities, the private sector and government ministries such as the Ministry of Health and the Tonga Waste Authority removed waste that had accumulated as a result of the tsunami, and separated biodegradable and non-biodegradable waste.⁵⁰

48 Interview 5

49 Interview 2

50 CSFT-Cash for crops case study

Leveraging traditional knowledge and practices

Tongan traditional knowledge, custom, environmental management systems and disaster response practices avoid or minimise environmental harm and, in many cases, support improvements.⁵¹ However, the review found little evidence of agencies drawing on or incorporating traditional knowledge and practices into their programs throughout the response, despite several actors citing the importance and benefits of doing so.⁵²

“We can see this through our local partners, they have the knowledge, practices, environmental activities without thinking about it, they already doing it.”⁵³ (International actor)

Community leaders highlighted how native species and biodiversity are generally overlooked in humanitarian response, even though action in this area is important and demonstrably possible. For example, a project in partnership with the Tongan Advisory Council focused on protecting bees, after approximately 85% of hives were lost in the disaster.⁵⁴

“For years we've struggled to get our community and its initiatives to be recognised by all the NGOs.”⁵⁵ (Community leader)

National actors also spoke about the need to engage with international partners on consulting with communities about newly introduced sustainable or environmentally friendly supplies or practices.⁵⁶

Some participants reflected on cumulative disasters eroding traditional knowledge and practices. Many large-scale international responses involve large amounts of imported pre-packaged food and non-food items, and the Tonga response involved large amounts of plastic water bottles, which were strongly requested by some communities. Over multiple disasters, communities may be increasingly hesitant to use traditional methods instead of receiving international supplies.⁵⁷

This again emphasises the importance of and opportunity for greater community engagement that emphasises the benefits of environmentally sustainable practices and materials in humanitarian response. As with community engagement around sustainable water supplies (see page 13), environmentally sustainable humanitarian response can be fostered through greater centralisation of and respect for traditional knowledge and practices.



Centralise existing traditional knowledge and practices – build on these in recovery and future responses.



Strengthen understandings of the impact of cumulative disasters on traditional knowledge and practices.

51 Interviews 1, 2, 5, 7, 13, 28; Government of Tonga (2020) *MET Office conducts 2 days training for joint collection of traditional knowledge on weather and climate*

52 Interviews 7, 20, 28, 29

53 Interview 1

54 Interview 28

55 Interview 28

56 Interviews 18, 29

57 Interview 29

SHIFTING POLICY AND SYSTEMS: HOW ACTORS ACROSS THE SYSTEM HAVE AND CAN CONTINUE TO SUPPORT POLICY SHIFTS TOWARDS GREENER ACTION

Centralising accountability to communities

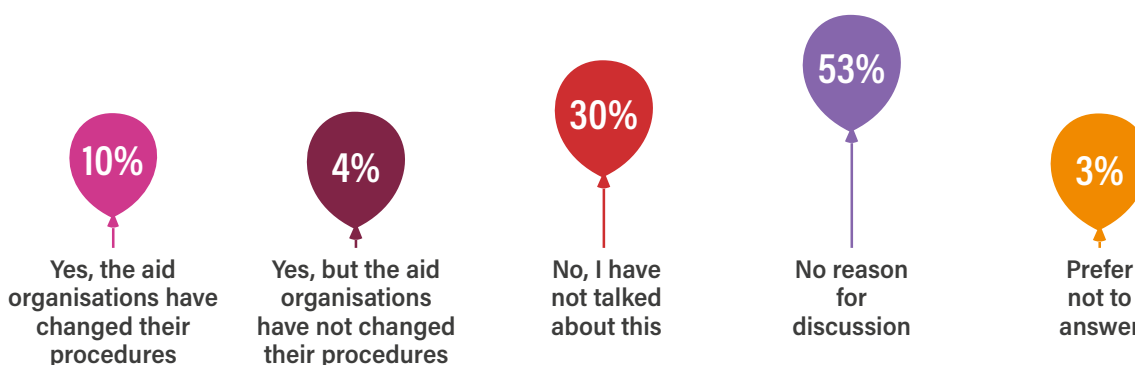
There is awareness and agreement amongst responding actors that accountability to those affected by crises and the principle of 'do no harm' are important conceptual and policy drivers of green humanitarian action. Communities consulted during this research provided concrete recommendations as to how responders could reduce environmental impact, as highlighted in Figure 6.

Figure 6: Community priorities for greener support



However, two-way communication between communities and humanitarian agencies about environmental issues needs to be improved. When asked whether community members had raised concerns about environmental harm with humanitarian agencies, 83% of community members indicated they had not. Of the 14% that reported raising concerns, 10% stated that the agencies had changed their practices and 4% stated that they had not (Figure 7).

Figure 7: Community survey question – Have you raised concerns about negative environmental impacts with organisations providing assistance?



This under-engagement reflects two dynamics: poor awareness of environmental impacts, and, among those who perceive negative impacts, a lack of reporting to agencies. Broadly speaking, community perspectives on the topic are rarely elevated or well understood; this represents a gap in terms of how humanitarian actors understand and achieve accountability to communities. National stakeholders spoke about seeking community feedback on this issue as a priority for the future, in addition to promoting awareness of the environmental impacts of aid.⁵⁸

⁵⁸ Interviews 14, 21



Continue to collect evidence about community perceptions of the impact of humanitarian action on the environment in the Pacific.



Build understanding of green response as inherently linked with quality, accountability and effectiveness.

Changing organisational practices and measuring environmental impacts

Some international actors mentioned progress in measuring and mitigating environmental harm in internal policies and practices, but more as a focus for development than humanitarian programming. Caritas Australia, Caritas Aotearoa, Oxfam, Australian Red Cross and Anglican Mission are examples of organisations that have begun to assess their organisational carbon footprint, environmental sustainability and impacts, and considered initiatives such as minimising travel.⁵⁹ Many agencies struggle to embed systematic approaches to measuring their own environmental footprint in a response.⁶⁰

“Once we build this into our systems, we will fall into this as habit. If we don't know about the needs beforehand, the environment is always going to come second.”⁶¹ (International actor)

Awareness of green humanitarian action among major regional donors such as DFAT and MFAT is increasing, and the review revealed some examples of greener practices such as assessing procurement processes and warehousing, internal compliance measures,⁶² and ad hoc response activities. However, similarly to operational agencies, there has been little progress in developing policies or frameworks to guide or assess their funded activities. The Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG-ECHO) has provided some global leadership in this area, developing guidelines to support its partners' adherence to standards to reduce the environmental impact of humanitarian operations.⁶³

“I think there's a massive role for donors to be supporting this, they're the largest actors, I think in New Zealand it's the NGOs which will push this change, [they are] already thinking about it and will put the pressure on governments and donors...If changes are made here, it will change the sector significantly.”⁶⁴ (International actor)



Integrate alternative default processes to strengthen green action, including action by donors.



Prioritise green response considerations prior to emergencies and build them into planning and decision-making processes.



Build on existing momentum and motivation for change in organisational practices and individual behaviours.

59 Interviews 1, 3, 5, 6, 7, 27

60 Interviews 1, 4, 11, 30

61 Interview 9

62 Interviews 9, 20; Australian Government (2022), *Australian assistance for the Hunga Tonga -Hunga Ha'apai volcanic eruption and tsunami*; Australian Government (2022), *Australia's COVID-19 support to Tonga*

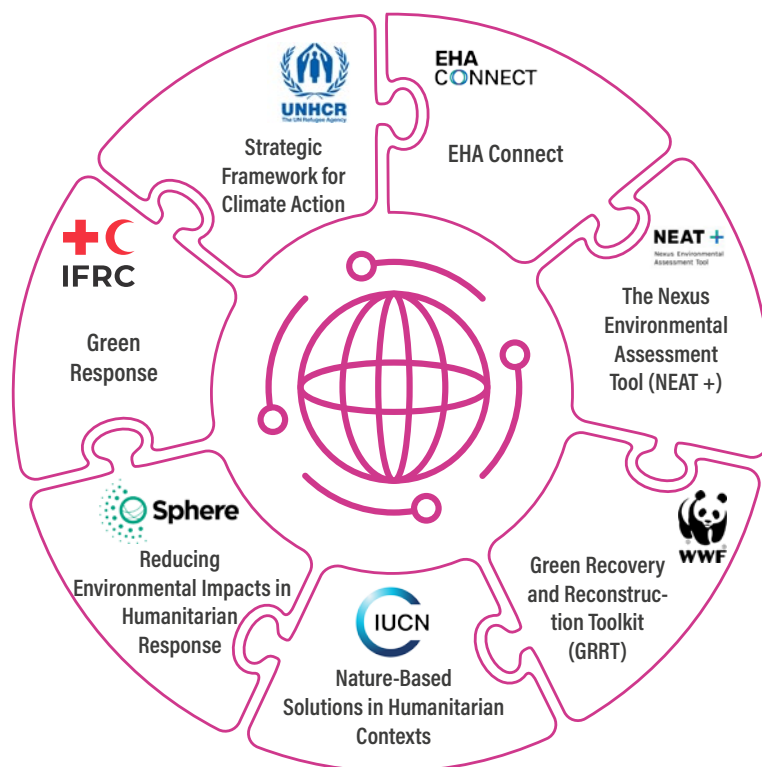
63 Interview 10

64 Interview 1

Adapting global frameworks and tools for Pacific realities

Global-level tools, or tools developed by large non-government actors to green their own responses (see Figure 8), have yet to be systematically applied or tested in the region.⁶⁵ Community priorities and national practices can inform the contextualisation and testing of existing frameworks to Pacific needs.

Figure 8: Snapshot of global tools/frameworks for environmentally responsible humanitarian action



While the opportunity for green humanitarian action exists, the lack of systemic knowledge and drive among relevant actors in the Pacific means it has not yet been seized. Shifting default practices and behaviours is challenging; without internal organisational commitment and external accountability to communities and donors, there is a tendency to return to default processes and systems and a lack of incentives to shift practices.

“ [There is a] cookie cutter approach in the Pacific, [a mindset of] “we’ll do the same thing as last time, we’ll provide the same stuff” – rather than looking at if they worked from an environmental sustainability or impact perspective.⁶⁶ (International actor)



Continue to increase understanding and application of global tools and frameworks by contextualising them for the Pacific. Embed them in organisations and promote widely across the system at all levels.

65 UNDRR (2021) *Asia-Pacific takes steps to accelerate progress on climate action*; UNESCAP, EU, ILO & UNDP (2014) *Climate change and migration issues in the Pacific*; CHL (2019) *Crossing the divide: Pacific diaspora in humanitarian response to natural disasters. A diasporic perspective*

66 Interview 8

Building a greener response – opportunities for recovery and the future in the Pacific

As has been recognised across the region, particularly by Pacific governments, climate change and increasingly severe and frequent disasters are going to continue to stretch the humanitarian system’s capacity to meet the needs of affected communities. At the same time, actors in the sector must not compound the problem by adding to carbon emissions and environmental damage every time they respond. By centralising communities, building on existing practices and framing principled responses as environmentally sustainable, significant shifts are possible. The Tonga volcano and tsunami response has showcased opportunities for the humanitarian sector to shift towards a systematic green approach in the Pacific.

Figure 9: Summary of opportunities and guiding questions



When looking to replenish stock, consider i) pre-positioning stock in country rather than relying on external supplies, ii) evaluating where stock is manufactured and what it is made of through an environmental lens



P What environmental metrics can be factored into re-stocking? Are there supplies available in country/elsewhere in the region that are made from sustainable/recyclable materials?



Ensure that future water provision and hygiene initiatives prioritise sustainable alternatives to single use plastic bottles and NFIs.



P What options can be considered and pre-positioned that avoid distribution of plastic bottles? For example, water tanks, water bladders or desalination machinery.



P Are items that are procured, manufactured or pre-positioned locally shippable to outer islands in bulk quantities? For example, are water tanks stackable?



P If large scale and/or complex machinery/equipment is being considered as a viable water provision solution – are you planning/budgeting for reverse logistics to mitigate the risk of machinery being discarded/wasted after the response period has finished.



Promote community-led initiatives in recovery that address plastic waste.



A How can preparedness and recovery plans address waste levels in communities? How can future interventions plan for waste issues and factor them into response considerations from the outset?



Continue to work collectively with stakeholders across the system – including members of diaspora groups – to communicate widely on the environmental impacts of UBDs.



A Is your agency actively supporting sector-wide messaging dissuading UBDs? Does this messaging reinforce the environmental impacts of UBDs?



P Does your procurement, donations and/or partnerships policy framework specify how to respond to UBDs, including responsibilities?

RESPONSE PHASE

P Preparedness

R Recovery

A All phases



Consider cash as a viable delivery mode that also mitigates environmental harm. Build upon initiatives that have been piloted in the response; consider the implications of broader cash-based programming in future responses in Tonga.

A

Has your agency considered the feasibility of cash transfer programming in future responses in Pacific countries? Has an environmental lens been factored into any existing plans to scale transfer programs to ensure that if chosen as a response modality they do not contribute to further environmental degradation?



Seek opportunities to leverage the knowledge and footprint of existing initiatives that promote environmental sustainability and strengthen climate adaptation and resilience.

P

Has your agency sought linkages with existing climate adaptation and resilience building programs (either through development programs, partners or other agencies)?

A

How can these linkages be systematically prioritised in future responses to leverage and scale sustainable approaches?



Centralise existing traditional knowledge and practices – build on these in recovery and future responses

P

Does your agency have established relationships, learning and reflexivity processes through which traditional knowledge and practices inform your response?

A

How can your proposed interventions leverage and scale existing practices that mitigate environmental harm?



Strengthen understandings of the impact of cumulative disasters on traditional knowledge and practices.

A

Have you considered the role of traditional knowledge and practices in your response options? How have these been impacted by individual, or collective responses?



Analyse how alternative default processes for planning and decision-making can be built in that strengthen green action, including action by donors.

P

Do procurement frameworks, policies and tools provide ready means of comparing environmental outcomes as part of decision-making processes?

P

Is green response duly prioritised and/or weighted against potential competing factors, including financial cost?

A

Do your agencies' reflection/evaluation processes consider how the response and recovery are impacting the environment? If not, are there opportunities to advocate for an environmental lens to these processes to promote learning, adapting and improving processes?



Build on existing momentum and motivation for change in organisational practices and individual behaviours.

A

Are you identifying and building upon examples of good practice? If not, are there opportunities to interrogate what works well, and share widely to promote greater uptake?



Continue to build awareness of global tools and frameworks. Find what resonates and seek to contextualise/embed within organisations. Promote widely across the system to build momentum at all levels.

A

What level of engagement is there with existing global tools within your agency? What opportunities are there to strengthen this engagement and contextualise existing resources to suit your needs?

A

How can your agency support greater momentum across the sector?



Despite the positive momentum of greening practices observed in Tonga, there is a long way to go across the region. Many actors articulated that we are at the very beginning of this journey and that we must collectively invest far more in thinking about and implementing green humanitarian action.⁶⁷ Building the humanitarian system's knowledge base by reflecting upon the positive and negative examples in the Tonga volcano response will support meaningful steps towards greener action. These steps can be taken with a willing and committed approach from all actors in the region. There is no time or space for inaction.

⁶⁷ Interviews 1, 6, 8, 9, 11, 20

Treading gently: building on positive environmental practice in the Tonga volcano response



