



## Research article

# Voices of hard-to-reach island communities provide inclusive and culturally appropriate climate change responses: A case study from the Torres Strait Islands, Australia

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## ABSTRACT

**Introduction:** Many island-based Indigenous communities continue to occupy, manage and live off and from their ancestral lands. For some Indigenous Islander communities, climate change is already causing destruction to fragile ecosystems, affecting traditional food supply, and impacting on the health and livelihoods of communities.

**Materials and methods:** The voices gathered through extended yarns of Torres Strait Islander Peoples was featured as a case study to describe the range of physical and psycho-social impacts from climatic changes to their Country, as well as their priority climate responses.

**Results & discussion:** In describing climate change impacts and priority responses, Torres Strait Islander community members detailed five aspects of concern to them. These were to adequately monitor climatic changes and respond appropriately by drawing on Aboriginal and Torres Strait Islander Knowledges, to consider the human rights inherent in being protected from climate change, and to develop locally led solutions that are implemented soon.

**Conclusion:** The impacts of climate change that are being seen and felt in Australia's Torres Strait Islands hold many similarities with small island nations in the Pacific whose islands are remote, climate-exposed, and their voices unheard on the political stage despite experiencing irreversible damage and gradual disappearance of their ancestral lands.

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## 1. Introduction

Many island-based Indigenous communities continue to occupy, manage and live off and from their ancestral lands, known in Australia as 'Country' (with intentional capitalization) [1–3]. These lands are often in areas that are highly exposed to extreme and changing conditions under climate change, including increasingly frequent and severe cyclones, sea level rise, and extended heatwaves, flooding, and bushfires [4]. Further conditions include saltwater intrusion of freshwater supplies and loss of traditional Country [5]. Indeed, some Pacific Island communities are already experiencing irreversible climate damage and have activated plans for relocation and

documenting cultural information for future generations who will not now have the privilege or right of returning to their islands [6].

For some Indigenous Islander communities, climate change is already causing destruction to fragile ecosystems, affecting their traditional food supply, and impacting on the health and livelihoods of communities [4,7]. Beyond physical impacts, there are psycho-social impacts from climate change [8,9]. This occurs as a changed climate threatens the interdependent relationship that Indigenous Islander peoples have with their ancestral lands and seas [10,11]. More than ever before, accelerated environmental and ecosystems changes are occurring across the continent and are compounding pre-existing susceptibilities to the economic, cultural, and spiritual health and well-being of Indigenous communities [12,13]. Unpredictable seasonal changes and weather patterns, combined with accelerated erosion due to sea level rise exacerbates existing risks, creating anxiety and emotional distress as governments stall on meeting their carbon reduction responsibilities [12,14].

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Given this situation, there is a need to attain climate justice for Indigenous Islander populations to adequately steward their lands while maintaining their livelihoods, culture and associated health and wellbeing under a changing climate [15]. For this paper, we draw the definition of climate justice from the 2002 Bali Principles where the first core principle states that “communities have the right to be free from climate change, its related impacts and other forms of ecological destruction” [16].

Building on the concept of climate justice, the United Nations' 28<sup>th</sup> Conference of Parties to the Framework Convention on Climate Change (UNFCCC COP28), held in Dubai in late 2023 culminated in an historic agreement on a 'loss and damage' fund to assist low income countries to cope with the effects of climate change and pay for the irreversible impacts [17]. In November 2024, Australia committed AU \$50 million to the global Loss and Damage Fund [18]. The announcement comes at a critical time for the Pacific as more frequent and severe weather events are contributing to economic loss [19]. However, the Torres Strait Islands are ineligible as the funding is not for use in Australia. Thus, climate justice raises concerns as exposed Pacific islands as well as Torres Strait Islander Peoples of Australia live in some of the priority communities that are highly sensitive to subtle climatic changes and that compound existing physical and social stressors [7,20].

Torres Strait Islander Peoples are a distinct cultural group with several nations of peoples whose traditional homelands lie between Australia and Papua New Guinea [21]. Their ancestral Country (traditional estate) is a formal part of Australia. With many areas low-lying and vulnerable to rising sea levels, and with peoples whose voices are frequently in the background to their former and current colonial powers, they share a similar plight with small island nation states in the Pacific [22,23]. The last formal review of climate change projections commissioned by the Australian Government identified increased temperatures, rainfall, cyclone intensity and sea level rise [22] in the Torres Strait Islands.

Despite these projections, many Torres Strait Islander peoples have documented how they feel they have been seen as one of several stakeholders or passive respondents in government-sponsored consultancies and research [24,25]. Such 'talking-heavy' approaches that focus on the climate impacts currently experienced and projected for their communities can result in community members feeling anxious and powerless. Indigenous people have long been referred to as mere victims of climate change yet actually have a vital input in sustainable management [26,27].

To focus the attention of policy decision-makers on the climate change risks of those who are most affected on small islands, this paper presents the voices of Torres Strait Islander Peoples living in their region as they describe the range of physical and psycho-social impacts from climatic changes to their Country, as well as their priority responses. The aim of this paper is to raise awareness of the urgency of climate change impact on vulnerable and 'hard to reach' island communities- from the perspective of research and policy-makers- to improve government processes for respectful engagement and inclusion in climate change research, discourse and action. In doing so, the paper presents a culturally appropriate method for collating the climate messages, knowledges and priority responses of Torres Strait Islander Peoples. The anticipated relevance for small island states from this study is that, through increased alliances with small island nations in the Pacific, Torres Strait Islanders may illuminate the plight of island communities within a larger nation state.

## 2. Methods

To explore the impacts from and responses to climate changes from the perspective of Torres Strait Islander Peoples on their Country, this research sought to collate their voices on observed local

climate change impacts, and on culturally appropriate priority responses to climate change.

### 2.1. Study setting: Torres Strait Islands

Torres Strait Islanders are one of Australia's First Peoples whose homelands lie between the northern tip of Australia and Papua New Guinea [22]. Predominately of Melanesian descent, the Torres Strait consists of many islands, 18 of which are inhabited. The islands are grouped into four clusters of shared language, culture and ancestry [28]. Historical kinship ties link the islands to the Aboriginal Peoples of mainland Australia and to some of the coastal villages of Papua New Guinea. Islands with more recent familial and social ties maintain regular cross-border visitations under the Torres Strait Treaty which allows free movement on the approval of local councilors without the need for a passport or visa [29].

The islands of the Torres Strait are topographically diverse and geographically isolated from major cities in mainland Australia and classified as 'very remote' by the Australian Bureau of Statistics [30]. Each island presents specific challenges, depending on the underlying bedrock formation, ocean currents and natural protective barriers such as reefs and mangroves [28]. Some of the very low-lying islands are composed of alluvial sediments and coral cays only meters above sea level. These islands are highly vulnerable to climate change impacts including sea level rise, storm surge, saltwater intrusion of freshwater supplies that creates brackish water, coral bleaching, loss of traditional lands, and ocean acidification. This geological and environmental diversity therefore necessitates place-based knowledge and local drivers to effectively adapt and mitigate further damage [31].

Social and economic exclusion of First Nations Australian's are legacies of colonization where they and their culture were relegated as inferior and pushed to the margins of society. Further challenges such as remoteness, limited economic opportunities and residual perceptions of inferiority tends to assure Torres Strait Islander voices and aspirations remain peripheral to climate change dialogue in Australia [32]. Therefore, decisions regarding economic, financial, governance and other concerns affecting Torres Strait Islanders' lives are often made through a 'top-down' approach with resources funneled through multiple government agencies where free, prior, and informed consent may not be delivered [31]. This can affect the rigor of the decisions made, especially with regard to whether these decisions adequately represent community perspectives.

### 2.2. Extended yarning method

Under the guidance of one Torres Strait Islander and three Aboriginal co-authors, a set of questions was developed and delivered through a narrative approach or 'extended yarning' method to engage Torres Strait Islander community members in the research. The Indigenous method of 'yarning', an Indigenous cultural form of conversation and a traditional approach that speaks with, not across people has been formalised into a qualitative data gathering method by Aboriginal scholars [33,34]. Open-ended questions were devised and delivered by the Indigenous researchers with cultural competency so that the community members understood why these questions were asked. The purpose of each question, as well as the engagement processes, was to ensure dialogue and perspective-sharing on the topic was undertaken in a culturally safe and appropriate way.

This research, including the survey and yarning circle processes used to gather data, was approved with ethical permissions from The University of Queensland (reference 2022/HE002188). Research team members visited communities in the Torres Strait Islands in person for in-depth engagement. This method enabled researchers to sit with community members on Country, and speak together in

language through shared conceptual frameworks [35]. This process has the potential to incorporate nuances that surround accessing and retrieving information that can otherwise be hidden in remote survey methods.

This extended yarning method was based on place and relationships with community members. The aim was to maximize rapport-building, clear communication, and trust with the community members regarding the use of the data and Knowledge shared. This approach sought to move away from the culturally inappropriate 'tick and flick' survey method [35,36] that is limited by legitimate financial, resource and logistical constraints and consequently can lack a depth of relationship, and commitment to community conversation, benefit, and reciprocity.

A key aspect maintained throughout the data gathering was: Who is speaking? Whose voice is this? The process enabled community members to share their experiences, knowledge and concerns regarding climate change impacts and their aspirations for adaptation and mitigation actions. It was important to keep Torres Strait Islander voices at the center of decision-making. Understanding the rationale for their voices to be included in climate change decision processes and mechanisms and elevating their engagement is important for this to happen.

Yarns were conducted verbally in person or by telephone between May and June 2023. The individual yarns lasted up to 90 minutes to allow rapport-building to allow stories to emerge and to be recorded. The total sample size was 30 community members who identified as Torres Strait Islander or Aboriginal and Torres Strait Islander heritage. The Torres Strait Interviews were conducted and written up by the first author, herself a Torres Strait Islander woman with existing connections to the islands. Interviewers were conducted in Torres Strait Islander Kriol, an English-based creole spoken across the region. Requests for time and sharing from the community members do involve a relational interaction from the interviewer to the community members, with whom they are already familiar - often through a cultural connection.

Each yarn was written up by the Aboriginal and Torres Strait Islander interviewers or a research assistant, then comprehensively analyzed against the questions posed. All comments were considered in the analysis. As much as possible, the direct voices of participants are presented verbatim as quotes in the Results section to retain the veracity of the message shared. The commitment to reproducing what has been said and contributed by community members, without adding a framework or interpretation was paramount to ensure integrity and authenticity.

### 3. Results

This section presents the collated responses to the questions explored in the extended yarns regarding observed impacts and priority responses. Where possible, verbatim quotes have been included to directly describe the lived experience and perspective of the Torres Strait Islander community members.

#### 3.1. What are the observed climate change impacts in the Torres Straits?

The Torres Strait Islander community members shared in the yarns that, over the past two decades, changes in the environment, seasons, and unusual weather patterns were more noticeable and less predictable. They identified that warming ocean temperatures have resulted in seagrass die back and coral bleaching which affects the health and reproduction of marine species and consequential loss of biodiversity.

Community members described relentless high winds, wild weather and unpredictable seasonal changes through which the livelihoods of communities are severely impacted. Due to the small size of the islands and limited holding capacity of rainwater, Torres Strait

Islanders are limited in agricultural options; therefore, they are dependent on the sea for their traditional foods and small-scale fishing activities to supplement and subsidize their relatively high cost of living and, on average, lower household income than other regions in Australia.

Community members from various islands identified that the increased frequency of severe weather events poses a significant threat to Aboriginal and Torres Strait Islander communities' infrastructure and Country. They described property damage, loss of livelihoods, displacement, and even loss of life from these impacts. One community member identified the integral connections between people, Country, wellbeing and economy:

*"Future inheritance of our children and their ability to live on the island [Climate change has] economic impact for fishermen due to lack of real jobs on island. Higher cost of living affects livelihoods."* (TSI Male #13)

Such environmental changes have associated impacts on food availability. Some community members spoke strongly about their concerns about food security from changes to rainfall patterns and signs of starvation in large marine life due to changes in the ocean temperature.

*"Prolonged wet weather is impacting traditional food crops, causing root rot and rodent damage ...which leads to food insecurity and more reliance on commercial foods that have health and economic costs".* (TSI Female #15)

*"Noticeable changes in health conditions of large marine herbivores (turtles and dugongs) in last 2 years because of depleted or destroyed seagrass meadows".* (TSI Male #22)

With the increase in unpredictable weather, Torres Strait Islander have felt that they are less able to 'read' the environment and understand the natural seasonal changes that describe the link between weather patterns, certain food sources of plants or animals, and safe weather for travelling in the open sea. An Elder spoke about this recent inability to predict the weather:

*"it's very hard nowadays because the sky can no longer tell us what's going to happen. So basically, we live day by day. We can't plan to prepare our fishing trips and journeys between islands based on our traditional ways of knowing and reading our environment."* (TSI Male #6)

Others spoke of seasonal changes that can no longer be predicted and attribute these to climate change, such as:

*"Everyone is aware of climate change but there is no language for climate change because in the past we could forecast the weather by reading the skies, the clouds, plants and animals which tells us different things.... It's affecting our culture, traditions and way of life because we are unable to read and predict our environment which was once our way of existence".* (TSI Male #6)

This change was perceived as adversely impacting the lives and livelihoods of people who rely on their lands and seas for sustenance and fulfill cultural and social obligations and practices that define the uniqueness of Torres Strait Islander identity. Rapid environmental changes, erosion, and unusual shifts in seasons is heightening anxieties, despite community members being asked to 'consult' and provide input to key Government-led strategy documents.

These changes have longer term implications both financially and on the social-emotional wellbeing of community members, deepening a sense of helplessness and disenfranchisement. Contributing the least to global warming and without recognition of their human rights and rights to self-determination were perceived by community

members as relegating them to being passive observers and stakeholders. A community member identified the emotional distress arising from loss of ability to care for family graves as climate change impacts increase:

*"Rising sea level and loss of cultural sites and family graves. The graves of my younger brothers who died as infants on [my island] have since been taken by the sea."* (TSI Female #7)

Subsequent stress and anxiety as people witness and anticipate future change was described by a senior male community member as having psychological and cultural costs.

*"These changes are scaring me most because I can no longer fall back to knowledge taught to me about the times of the seasons. I was taught to connect to the winds, the seas and the stars and when they are not connecting our emotional and spiritual connections create stress and health problems. It's part of our survival. Secondly, we can no longer depend on our traditional cultural knowledge to survive and fit into our kinship structure. A man's place and responsibility is to provide. If he is unable to provide (hunt & fish) his integrity as a man is in question. Thirdly, looking after Country is our responsibility, but the impact of climate change is beyond our power and control."* (TSI Male #10)

Another community member identified climate change as posing both a challenge and an opportunity for empowerment:

*"The mental health and overall health and wellbeing impacts on families is becoming obvious. We cannot stop this change but as a region and a people we need to be empowered to feel that we can protect ourselves, our cultural rights and create healthy, sustainable communities."* (TSI Male #20)

### 3.2. What culturally appropriate responses to climate change are identified as priorities by Torres Strait Islander Peoples?

Community members identified the need for support to vulnerable communities to be resilient and build their capacity to adapt to climate change. They also identified that policies need to be aligned with the goals of mitigating and adapting to place-specific climate change actions that:

*"promote economic and community incentives where people feel empowered to solve the problem- by community, for community and not relying on government agencies."* (TSI11M)

Other community members called for the Australian and Queensland Governments to:

*"listen, to come out in person and see what is happening"*. (TSI Male #6)

Community members expressed the need to be valued and respected as fellow Australians who know what is best for their communities:

*"It's not effective if I'm talking to someone over the phone completing a survey. We must be seen as fellow human beings with our own culture and traditions. Only then will the government be able address issue of humanitarianism"*. (TSI Male #6)

*"We have been asking government for stronger seawalls made of rocks to keep the sea water from flooding our island. They say rocks are too expensive, so they give us large sandbags instead. The sandbags are starting to come apart"*. (TSI Male #9)

Others identify the need to prepare adaptation planning and capacity in a timely way and for real solutions and resources to combat climate change.

*"...planned relocation to higher grounds in preparation for rising sea levels. This planning needs to continue"*. (TSI Male #6)

*"We need solutions as well as resources to carry out these solutions. Put actions into place, not just talk about it. Tired of talking!"* (TSI Female #3)

Torres Strait Islander community members called for accountability, identifying existing vulnerabilities as barriers for adaptation, saying:

*"We are already highly disadvantaged. Poverty will force us to exploit our natural resources in a way that is unsustainable, causing further poverty where we will not have the resilience and capacity to adapt. For example, higher gas prices are forcing people to cut more firewood."* (TSI Male #22)

*"There need to be some accountability for the money that is being thrown around on climate change-related issues. We need to see real benefits on the ground."* (TSI Female #2)

A Torres Strait Islander businessperson added that supporting change requires government investment into local organizations and initiatives:

*"Develop policies to allow people to benefit economically. Instead of government agencies trying to resolve local issues, outsource and incentivize change in the community- by community, for community. People need to feel empowered to solve the problem - not government agencies"*. (TSI Male #11)

## 4. Discussion

In describing climate change impacts and priority responses, Torres Strait Islander community members detailed aspects of concern to them. These were, in order from greatest concern, to adequately monitor climatic changes and respond appropriately by drawing on Aboriginal and Torres Strait Islander Knowledges, to consider the human rights inherent in being protected from climate change, and to respect their rights to self-determine locally-led solutions resulting in an holistic climate response implemented urgently. These five aspects are described in more detail below, reflecting on both the contributions from community members during extended yarns as well as responding to the literature. In doing so, a picture emerges of how the psycho-social health of Torres Strait Islanders might be best supported while living and responding to a changing climate [37].

### 4.1. Monitoring and responding to climate change by employing Aboriginal and Torres Strait Islander Knowledges

Understanding climate change impacts through monitoring and identifying effective mitigation and adaptation approaches for the Torres Straits is critical. For this, comprehensive data are required- yet not all relevant data have been captured in climate change research [38]. Specifically, locally relevant Aboriginal and Torres Strait Islander knowledges can contribute to climate change research on monitoring changes, as well as contribute to mitigation and adaptation options in Australia. Aboriginal and Torres Strait Islander Peoples have lived in Australia for thousands of generations and through changes in climate developed traditional knowledges that were passed down through generations to ensure ecosystem health, food sources, and sustainability of Peoples. Their survival as one of the



oldest living cultures is testament to their intimate connection to Country and knowledge of the natural environment [39,40]. Much of these Indigenous Knowledges provide insights on how to adapt to the changes occurring now and projected into the future under the more rapid and human-induced climate change scenarios. However, until the most recent IPCC Assessment Report (AR6) [41] there have been minimal inclusion of Aboriginal and Torres Strait Islander data [42].

This absence of climate data drawn from Indigenous Knowledges is a means for diverse experiences to require diverse responses [43]. This includes gathering different voices for meaningful dialogue to occur and for establishing genuine partnerships with Torres Strait Islanders to proactively prepare for climate change while ecosystems and environments are still intact. A key step is to acknowledge that diversity exists between and within the two First Nations Peoples of Australia and in the environments that they live in. This necessitates the inclusion of all voices and perspectives that risk being neglected by the research methods of Western science and academia [38]. Western science and academic writing and methods can mask the voices of whoever is speaking to maintain 'objectivity' [35,44]. Instead, Indigenous Knowledges and ways of seeing the world, with implications on how Knowledges are gained and shared and how data is gathered, acknowledged and interpreted, need to be at the forefront of any consultation processes that are truly about creating positive responses to climate change and beyond [45].

#### 4.2. Taking a rights-based approach

A response to climate change in a culturally appropriate way needs to be founded on human rights. Climate change action continues to be influenced by large carbon polluters such as mining companies and multinational corporations that hinder any meaningful bipartisan commitment by governments to respect and protect the rights of Indigenous Peoples [46]. Taking a 'rights-based approach' could better utilize and reflect the role of Indigenous peoples as leaders, co-managers and valuable knowledge holders of traditional lands and seas [25].

Such an approach is partly set out in the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) [47], to which Australia was a late and reluctant signatory [48]. Whilst not legally binding, the UNDRIP is the most comprehensive international instrument that articulates the inherent rights of First Nations and Indigenous Peoples. Self-determination and the right to participate in decision-making in matters which would affect those rights are of relevance to climate change. The lack of perceived action to ratify or consider UNDRIP in Australia formed the focus of a 2022 Federal Parliamentary Inquiry into the application of the UNDRIP [49].

To date, the principle of free, prior, informed consent enshrined by articles 27 and 32 of the UNDRIP have been relegated to consultations with apparent tokenistic inclusions of communities [24]. Conversely, a rights-based approach fundamentally rests on the right to self-determination in all levels of climate mitigation, adaptation and environmental management policy development and programs. This could include reparations funding, similar the UNFCCC's Loss and Damage fund [50], where governments, the mining and resource sector, and other large greenhouse gas emitters are financially accountable to fund current and future damages while also transitioning to clean energy [25].

Aboriginal and Torres Strait Islander Peoples of Australia have had their human rights unrecognized and treated as insignificant to the nation's interest, despite two recent landmark cases where groups of Torres Strait Islanders have sought justice through legal action. One case requested the United Nations' Human Rights Committee to consider how the Australian Government's limited action on climate change violated Torres Strait Islanders' human rights to enjoy their culture due to the adverse impacts of climate change on their Country

[51]. A second case within Australia led by two Gudamalulgal men focused on the Australian Government's lack of action to cut greenhouse gas emissions that in turn creates an existential threat from rising sea levels and will ultimately require Saibai Island communities to migrate to new locations [52].

#### 4.3. Ensuring Torres Strait Islanders can self-determine local climate change responses

The extended yarning methods applied in this research [33,34], accompanied by an explanation of less interactive survey methods, have been presented in this research to demonstrate the importance of hearing directly from affected community members.

As the Results describe, meaningful and respectful dialogue can occur when governments and other decision-makers visit - communities, to sit down with the local people, and listen. This creates the foundations for genuine partnerships and generating effective and culturally appropriate climate change solutions. Being respectfully exposed to Torres Strait Islander ways of sharing information requires recognition of oral traditions where knowledge is passed down through generations [53]. Such engagement contributes to a shift in attitude, behavior, and perspectives. It can lead to culturally-appropriate and respectful partnerships with Indigenous Peoples that enables their involvement from the inception and their inclusion in discussions, debates and decisions that directly impact their lives and future [42]. Culturally safe and collaborative approaches ensure meaningful inclusion of Indigenous practices, knowledge, and people in every aspect of engagement and protects people's rights to self-determination on matters impacting their lives [46].

As the Results described, community members need to feel that they have control over their lives, want to be involved and are willing to forge partnerships, if conducted with the foundations of fairness, justice, and self-determination. This aligns with the 'Uluru Statement from the Heart' from Indigenous representatives who invited all Australians to 'walk with us in a movement of the Australian people for a better future'[54].

#### 4.4. Enabling locally led and holistic climate responses

Funding designated for climate change policy implementation is ideally spent on community member-led initiatives that are 'on ground' [31]. This can ensure bespoke responses for the geologically diverse islands, from mangroves to reefs and seagrass beds. Such local community involvement can also ensure a holistic scope and view of the climate-related situation or issue by applying an ecological framework consisting of social, physical/natural, and political environments where monitoring and reporting on outcomes as the health of Country and people are deeply interconnected [43]. Such tailored and locally led approaches can, in turn, contribute to economic participation and inclusion of Indigenous communities who experience disproportionately lower socioeconomic status and health outcomes as a continuing and long-lasting, harmful legacy of colonization [15,55].

#### 4.5. Acting urgently on climate change

Torres Strait Islander community members communicated their hope and need for a sense of purpose to feel that they can make a difference regarding climate change. In parallel, government responses were sought that are better coordinated and led from the ground up - as community members felt that top-down approaches are inadequate to reach people on the ground. Such approaches can reduce community capacity to adapt appropriately and take a lead role in planning for the future.

Torres Strait Islander community members should therefore not only be considered 'stakeholders' but collaborators in all levels of

climate change dialogue and action [56]. This also ensures there is accountability both ways [57]. Genuine partnerships require time, continue discussion, commitment and respecting localized knowledge. These partnerships include diverse experiences and a sense of ownership on behalf of the community/representatives.

External visitors, consultants, and researchers to the Torres Strait Islands need to be cognizant of local priorities, the need for power-sharing, and for locally derived solutions that respect local sovereignty and place-based governing structures and processes [31]. Moreover, processes of community engagement must remain inclusive of grassroot community participation and input, not just relying on selected elites and government workers who may be easier to access for engagement [58].

## 5. Conclusions

Under the UNDRIP, Indigenous peoples are afforded the right to continue occupation of ancestral lands. It is in a nation's best interest to protect this right by supporting remote Indigenous communities to navigate and adapt to climate change. This is because Indigenous communities have a vital role in monitoring the health of their Country, protecting native flora and fauna and developing, designing, and implementing location specific adaptation strategies.

In Australia, the voices of Torres Strait Islanders living on Country are valuable sources of knowledge for local, national, and international communities in the fight against climate change. Their voices provide critical insight into how to engage with hard-to-reach communities in ways that are inclusive, culturally appropriate and respectful of their human rights.

For Torres Strait Islanders and their neighboring Pacific islands, climate change is already causing irreversible damage to already fragile environments and ecosystems that have sustained life on some of the remotest islands over thousands of years. The time-honored stewardship practices and Knowledges held by Torres Strait Islanders can guide adaption solutions for communities to address climate change impacts more effectively. To achieve this would require real commitment from the government and inclusive processes where people are seen as active contributors in decision-making to address climate change.

The impacts of climate change that are being seen and felt in Australia's Torres Strait Islands hold many similarities with small island nations in the Pacific whose islands are geographically remote, climate-exposed, and whose voices are unheard on the political stage despite experiencing irreversible damage and gradual disappearance of their ancestral lands. To protect the psycho-social health of Aboriginal and Torres Strait Islander peoples on climate-exposed islands, governments and other decision-makers need to listen to what people are really saying, feeling and thinking about climate change on their Country. In doing so, the first principle of the Bali Principles of climate justice will be attained, where communities uphold their right to be free from climate change and its related impacts.

## Declaration of competing interest

The authors declare no conflicts of interest.

## CRediT authorship contribution statement

**Vinnitta Mosby:** Writing – review & editing, Writing – original draft, Validation, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Bradley J. Moggridge:** Writing – review & editing, Validation, Supervision, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Geoffrey Evans:** Writing – review & editing, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Lillian Ireland:** Writing – review &

editing, Validation, Methodology, Formal analysis, Conceptualization. **Gretta Pecl:** Writing – review & editing, Supervision, Resources, Methodology, Funding acquisition, Conceptualization. **Nina Lansbury:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

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