

# Social inequalities and vulnerabilities revealed by the flooding event on Cabbage Tree Island in March 2022

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## Abstract

Disasters disproportionately affect marginalised communities, exacerbating pre-existing social inequalities and intensifying vulnerabilities. The March 2022 flooding of Cabbage Tree Island, a predominantly Aboriginal community in northern New South Wales, illustrated how systemic inequities heighten the susceptibility of Indigenous populations to environmental catastrophes. Aboriginal communities are overrepresented in disaster-affected areas and often under-resourced during response and recovery efforts, a reflection of historical and ongoing structural failures. These failures include the exclusion of Indigenous leadership in emergency and disaster planning and the neglect of Indigenous knowledge systems in preparedness, response and recovery strategies.

This paper critically examines the 2022 Cabbage Tree Island flooding event and related literature through the lenses of disaster risk reduction, Indigenous knowledge systems and social justice. The paper advocates for inclusive emergency and disaster management practices that address specific cultural and social needs.

## Introduction

Disasters do not affect all communities equally. The flooding of Cabbage Tree Island in 2022 demonstrated how such events disproportionately affect Indigenous populations, exposing longstanding systemic inequalities. Ismail-Zadeh (2014) introduce the concept of vulnerability amplification, which explains how pre-existing social inequalities (such as poverty, inadequate infrastructure and, limited access to resources) are magnified during emergencies and disasters.

For Cabbage Tree Island, the failure to incorporate Indigenous perspectives into disaster risk reduction strategies deepened the community's vulnerabilities.

The 2022 Flood Inquiry report (O'Kane and Fuller 2022) revealed significant shortcomings in the emergency response and noted, that the response was severely under-resourced and ill-prepared to address the needs of vulnerable communities, including those on Cabbage Tree Island. Similarly, the Bundjalung Nation's submission underscored that Aboriginal communities were forced to rely heavily on their resources during the crisis, receiving minimal support from government agencies (Bundjalung 2022). These experiences underscore the systemic neglect Indigenous populations face and highlight the critical need for inclusive emergency and disaster management practices that prioritises local knowledge and Indigenous leadership (Krüger et al. 2015). The exclusion of Indigenous perspectives from disaster risk reduction, as seen in the Cabbage Tree Island floods, runs counter to the United Nations *Sendai Framework for Disaster Risk Reduction 2015-2030* (Sendai Framework), which calls for inclusive governance that incorporates vulnerable and marginalised communities in decision-making processes (UNISDR 2015).

Although the community was relocated to new homes by November 2022 (ABC News 2022), the ongoing flood risks associated with rebuilding in vulnerable areas (ABC News 2023) suggests that long-term recovery efforts have not adequately accounted for the cultural and social contexts of the affected Indigenous populations. By incorporating Indigenous knowledge systems into preparedness and recovery strategies, the community could have addressed the physical damage while strengthening cultural resilience

for long-term recovery (Mercer et al. 2008). However, there is still potential for positive change. Including Indigenous leadership in decision-making would improve management strategies so that they are culturally and socially responsive, leading to more effective outcomes.

Lenkunyar Roberts-Hickling, Chairperson of the Jali Local Aboriginal Land Council, highlighted the systemic failures in preparedness, noting that the community was given only 3 hours' notice to evacuate, which resulted in a rushed and traumatic departure (Roberts-Hickling 2022). This incident exemplifies broader infrastructural deficiencies and the exclusion of Indigenous voices from critical emergency and disaster management decisions. The exclusion of Indigenous perspectives from disaster risk reduction strategies deepened the community's vulnerabilities and underscores the urgent need for more inclusive disaster management practices that respond to cultural contexts (Ismail-Zadeh 2014).

## Literature review

### Indigenous knowledge and disaster resilience

The exclusion of Indigenous voices in emergency and disaster planning was a critical factor in the inadequate response to the 2022 floods. The Bundjalung Nation's submission to the NSW Flood Inquiry detailed how local communities were left without sufficient government support during the crisis, forcing them to rely on their limited resources (Bundjalung 2022). This sentiment is echoed in the Independent Flood Inquiry Report, which highlighted widespread dissatisfaction with the government's slow and poorly coordinated response, further marginalising already vulnerable Aboriginal communities (O'Kane and Fuller 2022).

Indigenous cultural knowledge plays a vital role in building resilience within Indigenous communities. As Janke (2015) argued, safeguarding this knowledge through intellectual property rights and research protocols is essential for sustaining community resilience. As Howitt et al. (2012) argued, the response to natural disasters must be grounded in respect for Indigenous rights and knowledge systems. They assert that the failure to do so not only exacerbates vulnerabilities but also violates the rights of Indigenous peoples to manage their land and resources according to their cultural practices. However, in the case of Cabbage Tree Island, Indigenous knowledge systems related to environmental management and disaster risk reduction were disregarded mainly during the recovery process. As Leck (2023) writes, 'Many members of the community endured weeks of discrimination and increasing isolation. Confusion and uncertainty were met by miscommunication in all aspects of their now displaced lives'.

Similar to the traditional knowledge Indigenous communities use in Australia, local coping strategies have proven effective in flood-prone regions globally. Mathura et al. (2013) highlight how Indigenous knowledge in Zimbabwe was vital for community resilience to floods, paralleling the potential of Indigenous strategies on Cabbage Tree Island. This represents a significant missed opportunity to use cultural wisdom to enhance recovery efforts (Dobbs et al., 2016; Krüger et al. 2015).

The connection between social inequalities and disaster vulnerability shows that marginalised communities often bear the brunt of natural hazards due to pre-existing disparities. In Cabbage Tree Island, excluding Indigenous leadership and knowledge from risk reduction strategies compounded these vulnerabilities and led to a significant loss of potential. By disregarding the expertise embedded in Indigenous practices that could inform resilient recovery measures, mainstream emergency management policies exacerbated the community's susceptibility to harm, delayed recovery and perpetuated cycles of marginalisation and risk.

This underscores the urgent need for a shift in emergency and disaster management strategies to be inclusive of Indigenous knowledge and leadership, which are crucial for creating more effective and equitable responses.

### Collaborative approaches and Indigenous land and water management

Wright et al. (2021) underscore the significance of Indigenous-led environmental management programs, such as ranger initiatives, which promote cultural resilience and community wellbeing by fostering deep connections to the land. These programs have proven effective in enhancing community resilience. Similar principles could have been applied to disaster management on Cabbage Tree Island. By incorporating Indigenous knowledge systems into preparedness and recovery strategies, the community could have addressed the physical damage while strengthening cultural resilience for long-term recovery.

Moggridge et al. (2019) highlight the significant potential for improvement in emergency and disaster management strategies by effectively integrating Aboriginal cultural values into contemporary water planning in New South Wales. Adopting this approach widely could significantly enhance flood management in Indigenous communities and, address ecological and cultural concerns. Sangha et al. (2019) stress the importance of Indigenous land management practices in mitigating the effects of climate change and natural hazards. They argue that Indigenous natural and cultural resource management provides essential ecosystem services and strengthens cultural and community resilience, both critical during recovery. Had disaster recovery efforts on Cabbage Tree Island drawn

on Indigenous cultural and ecological knowledge, the community could have experienced a robust physical and social recovery.

Additionally, Paton (2006) provides a comprehensive framework for disaster resilience, emphasising the importance of community-led initiatives and governance structures. His work underscores the potential for local communities, such as Cabbage Tree Island, to foster resilience and empower themselves. Applying Paton’s framework to emergency management on Cabbage Tree Island could have facilitated an effective recovery by centring Indigenous leadership and community-driven approaches. For example, Indigenous ranger programs align with Paton’s emphasis on local governance and could have played an instrumental role in fostering a more resilient and sustainable recovery.

### Engaging Indigenous communities

Leck (2023) underscores the importance of culturally sensitive engagement with Indigenous communities in emergency and disaster management. This notion is supported by Mercer et al. (2008), who argued that participatory research fosters community ownership and more effective disaster management.

The connection between social inequalities and disaster vulnerability posits that marginalised communities often bear the brunt of natural hazards due to pre-existing disparities. Climate change further intensifies these vulnerabilities, particularly in health outcomes (Lee et al. 2023). The vulnerabilities faced by Cabbage Tree Island residents are not limited to disaster management; systemic neglect in other areas, such as education, exacerbates the community’s challenges. For example, during the COVID-19 pandemic, the Cabbage Tree Island School was overlooked in the distribution of homeschooling technology, leaving students without critical resources (ABC News 2020). This oversight reflects broader infrastructure inequities that hinder the community’s ability to recover from crises like the 2022 floods. These inequities (socioeconomic deprivation, insufficient infrastructure and, restricted access to essential resources) amplify the effects of disasters, leaving communities more exposed and less capable of recovering (Tierney 2006; Ismail-Zadeh, 2014).

The Northern Rivers Community Healing Hub in New South Wales, discussed by Atkinson (2022), exemplifies a community-led, Indigenous-informed response to disaster events. This initiative, driven by Indigenous leaders and grounded in cultural healing practices, provided holistic support to affected communities. A similar model could have significantly improved recovery efforts on Cabbage Tree Island, where the exclusion of Indigenous voices exacerbated vulnerabilities. Healing hubs centred on Indigenous perspectives could play a vital role in disaster recovery, addressing material and cultural needs.

### Cultural effects

For Indigenous peoples, land and water are integral to their cultural identity and spirituality. The forced displacement of the Cabbage Tree Island community severed ancestral ties to the land, worsening the trauma of the flood. Kennedy et al. (2022) highlighted how disruptions to cultural and spiritual connections, especially during crises, have profound effects on people of Aboriginal and Torres Strait Islander background. The relocation of the Cabbage Tree Island community similarly compounded the cultural and psychological effects of the disaster (National Indigenous Radio Service, 2023).

The flooding of Cabbage Tree Island deeply affected the material and cultural aspects of the community’s life. As Kennedy et al. (2022) noted, disconnection from the land leads to severe psychological and spiritual consequences for Indigenous peoples, for whom the land is core to their identity.

This loss is captured in the song ‘*Wanna Go Home*’ by the Cabbo Crew, an Indigenous group from Cabbage Tree Island (DesertPeaMedia 2023). Released in 2023, the song is an emotional response to the flood and expresses the community’s deep yearning to return to their ancestral lands. The song symbolises the broader struggle of Indigenous peoples to preserve their cultural identities amid environmental disasters and marginalisation. It, stresses the importance of social justice and the inclusion of Indigenous voices in recovery efforts. Incorporating cultural expressions like ‘*Wanna Go Home*’ into recovery plans can make these efforts more culturally sensitive, supporting physical recovery and emotional and spiritual healing. This holistic approach is critical to address trauma and preserve cultural ties to the land.

The cultural loss amplifies the trauma endured by the community and shows, the need for recovery efforts to go beyond rebuilding homes. Quinn et al. (2022a) argue that disconnection from land has profound spiritual and psychological consequences, as land is inseparable from Indigenous identity. Crooks et al. (2020) assert that Indigenous-led disaster responses enhance resilience, yet these were neglected in the Cabbage Tree Island case.

Rebuilding in an area classified as ‘unacceptably high risk’ for future flooding (ABC News, 2023) shows the failure to integrate Indigenous knowledge into long-term recovery planning. Including Indigenous voices is crucial for cultural preservation and resilience (Quinn et al., 2022a).

In a significant development following the floods, the Jali Local Aboriginal Land Council voted to rebuild on Cabbage Tree Island, despite its known flood risks. This decision underscores the community’s commitment to preserving cultural ties and exercising self-determination. The council’s choice reflects Indigenous resilience, a powerful statement of agency that aligns with the principles of ‘Caring for

Country' (Williamson 2022a). It also serves as an example of culturally responsive disaster management that values Indigenous knowledge in rebuilding efforts, an approach advocated by the Sendai Framework (UNISDR 2015).

### Economic effects

The economic vulnerabilities of the Cabbage Tree Island community were already significant before the flood, and the disaster only exacerbated the challenges. The destruction of land-based livelihoods, such as farming and fishing, left the community in a precarious economic position. While rebuilding efforts have been undertaken, the community remains dependent on external aid, and concerns about the region's sustainability hinder long-term economic recovery (ABC News 2023). The Jali Council's decision to rebuild shows the need for support systems that align with Indigenous priorities for cultural and economic resilience. (ABC News 2024). Quinn et al. (2022b) emphasise that community-led recovery initiatives are essential to foster economic resilience. However, Cabbage Tree Island's future remains uncertain without sustainable long-term planning that incorporates Indigenous perspectives. While external aid provides short-term relief, it fails to address the underlying causes of economic instability, which are critical to long-term recovery (Tierney 2014).

Disasters also have gendered effects, with Chowdhury et al. (2022) noting that Indigenous women, who often play vital roles in maintaining livelihoods and households, are disproportionately affected. These gendered aspects further complicate the economic and social recovery of Cabbage Tree Island. Foote et al. (2023) argued that recognising and supporting Indigenous women's leadership in disaster recovery could significantly bolster economic resilience and help drive sustainable recovery efforts.

### Health and psychological effects

The forced displacement, cultural dislocation and loss of livelihoods caused significant trauma to the Cabbage Tree Island community. Smith (2024) noted that climate-induced displacement often triggers severe mental health challenges, significantly when cultural practices are disrupted and communities are separated from their ancestral lands.

Indigenous communities face specific health challenges after disasters, worsened by the loss of cultural connections. Lee et al. (2023) highlight that climate-related health issues disproportionately affect Indigenous populations, stressing the need to integrate health planning into disaster recovery to address these vulnerabilities.

Wind et al. (2012) argue that marginalised communities experience more significant mental health challenges post-disaster, notably when recovery lacks inclusivity.

Strengthening social capital through community cohesion could help alleviate mental health stressors for the Cabbage Tree Island community, promoting psychological recovery.

Women's experiences in disasters present distinct emotional challenges. Chowdhury et al. (2022) emphasised that the trauma of displacement, loss of livelihoods and, cultural ties have deeply affected women on Cabbage Tree Island. Addressing the specific needs of women in recovery is essential for inclusivity (Krüger et al. 2015).

Indigenous health challenges increase when cultural connections erode after disasters. Watego et al. (2021) advocate for an Indigenist Health Humanities approach focusing on Indigenous cultural practices in health. This framework could offer culturally sensitive mental health support for the Cabbage Tree Island community, addressing both trauma and cultural dislocation.

Incorporating trauma-informed public health frameworks is crucial for comprehensive and culturally appropriate recovery efforts. Graham et al. (2022) emphasise that Indigenous communities need frameworks addressing the physical and emotional effects of disaster events. Trauma-informed care, aligned with Indigenous values, can support mental health and long-term recovery for communities (Krüger et al. 2015).

### Social cohesion and community resilience

The 2022 flood exposed the Cabbage Tree Island community's vulnerabilities, including poverty, poor infrastructure and, limited services. Rolfe et al. (2020) note that rural and Indigenous communities in New South Wales face systemic inequalities, making recovery more complex. Social cohesion was severely disrupted by the flood. The displacement fractured the community's social capital that is essential for recovery. While relocating residents provided physical stability (ABC News 2022), rebuilding social cohesion requires restoring the social bonds the disaster broke.

Quinn et al. (2022a) argue that social capital is vital for post-disaster recovery and to foster belonging and inclusivity, especially for marginalised communities. The failure to prioritise Indigenous-led efforts in Cabbage Tree Island hindered social cohesion. An inclusive framework that engages Indigenous leadership, as demonstrated by the Jali Council's rebuilding decision, would strengthen resilience and social cohesion (ABC News 2024; Krüger et al. 2015).

### Conclusion and recommendations

The flooding of Cabbage Tree Island revealed deep-rooted systemic inequalities that continue to marginalise Indigenous communities in Australia. Despite the relocation of residents (ABC News 2022), persistent challenges, including the risk of future flooding (ABC News

2023), highlight the inadequacy of emergency and disaster management strategies. Culturally responsive approaches that leverage Indigenous knowledge and leadership are essential for long-term recovery (Williamson, 2022b; Quinn et al., 2022a, 2022b; Wright et al. 2021). The Jali Council's decision to rebuild on Cabbage Tree Island signals a commitment to Indigenous self-determination and resilience, showing that culturally responsive approaches are essential for long-term recovery (ABC News 2024).

Community-driven recovery practices are necessary to engage marginalised populations (Krüger et al. 2015). The Sendai Framework stresses prioritising vulnerable populations and integrating Indigenous knowledge into resilience and preparedness (UNDRR 2015). The Australian Institute for Disaster Resilience (2022) offers guidelines to incorporate Indigenous leadership into post-disaster recovery and emphasises the need for culturally sensitive, community-led approaches. For Cabbage Tree Island, this means embedding Indigenous voices in disaster planning, addressing physical infrastructure and cultural preservation.

Government agencies must adopt culturally appropriate frameworks to improve recovery outcomes for Indigenous communities, such as the Management Plan for Aboriginal and Torres Strait Islander Populations (Department of Health and Aged Care 2020). This plan emphasises the inclusion of Indigenous leaders and traditional health practices, ensuring recovery addresses physical and psychological resilience.

Critical recommendations to improve recovery:

- Incorporating Elders in emergency and disaster management to bring Indigenous perspectives to planning (Ali et al. 2021). This could prevent future disasters from disproportionately affecting Indigenous communities, as recommended by the Bundjalung Nation (Bundjalung 2022).
- Establishing partnerships between Indigenous communities and the emergency management sector to integrate Indigenous knowledge into risk reduction activities (Ali et al., 2021; Krüger et al. 2015).
- Addressing immediate and long-term resilience, including economic initiatives led by Indigenous communities (Quinn et al. 2022a). Effective recovery must consider cultural, social, and economic dimensions (Ismail-Zadeh 2014).
- Engaging in participatory research with Indigenous leaders to improve disaster planning (Mercer et al., 2008) and address health vulnerabilities related to climate change (Lee et al. 2023).
- Implementing community-led recovery that focus on cultural preservation and provide mental health services tailored to Indigenous peoples' needs (Luk and Longman 2024).

By integrating these recommendations, emergency and disaster management can become inclusive, equitable and effective and address the needs of marginalised Indigenous communities, such as those on Cabbage Tree Island.

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### About the author

**Wade Charles** is an Indigenous researcher at Charles Darwin University. His multi-disciplinary background informs a practice-based approach to disaster research, grounded in frontline service, community engagement and cultural governance. His focus is on strengthening disaster resilience in communities that are often under-represented in formal planning processes. He has a practical and culturally grounded approach that combines experience with a deep respect for Indigenous knowledge systems and governance.