

Lismore Floods, Policy Failure, and Climate Change: The need for political ecology in policy learning

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In 2022 Australians watched the people of Lismore battle floods more devastating than those previously experienced. By applying the lens of political ecology, policy failures, not only the impact of climate change, are found to be causal factors in the devastating effects of the floods. This article argues that including political ecology as a tool for analysis during the evaluation stage of the policy cycle would result in more equitable outcomes. The article uses several case studies to support its analysis of the Lismore floods and the policy failures identified. The author calls on policymakers to include political ecology in the evaluation process of the policy cycle, and highlights the importance of the understanding of, and accountability for, policy failures resulting in policy learning necessary to prevent further repetition of problems experienced due to the intensifying effects of the Anthropocene.

KEY WORDS: Lismore floods, political ecology, Policy failure, flood risk, resilience

Introduction

In 2022, the community of Lismore endured floods unlike any floods they had experienced previously. Together, they undertook community rescues in small boats, and the media heralded the rescuers as great 'Aussie Battlers'. Many would go on to attribute the Lismore floods to inaction on climate change, but the author uses the lens of political ecology to examine the crisis and argues that the problems experienced by the people of Lismore were not only the result of climate change but evidence of policy failure.

This article uses political ecology to help understand and critically examine uneven power distributions in environmental problem solving by state-based policy interventions. Political ecology as a theoretical perspective is examined and a case study explored to evaluate its use in examining policy interventions. The concepts of policy failure and policy learning and their role in the policy cycle are explored in relation to the Lismore crisis. Three key policy failures are identified in the Lismore case. These are failures of policymakers to manage risk, to incorporate complex nature/social relationships, and to harness and support resilience in the Lismore community. The importance of utilising political ecology in the policy cycle at various stages is identified as aiding in ensuring rigour in policy learning to help meet the challenges for the people of Lismore and elsewhere in the face of the increasing impacts of climate change.

Political Ecology

Political ecology is a critical theory applied in anthropology, environmental sociology, geography, and other social sciences (West 2016). It helps to analyse uneven distributions of power caused by state-based and market-led policy interventions to environmental problems. Political ecology interrogates how policies that impact on the 'management of nature and the rights of people' (Robbins 2012: 13) are based on socially constructed concepts. Problematically, resources may be:

distributed among actors unequally... [which inevitably] reinforces or reduces existing social and economic inequalities . . . [which holds] political implications in terms of the altered power of actors in relation to other actors (Bryant and Bailey cited in Robbins 2012: 20).

'Eco scarcity' and 'modernisation' are examples of environmental problems that political ecologists explore as in the case study by Fairhead and Leach (1996) which examines the uneven power and impacts caused by environmental management policies.

Eco-scarcity adheres to Thomas Robert Malthus' theory (1766 - 1834) that population growth outstrips resources resulting in species 'die off'. As he stated:

In searching for objects of accusation, [the poor man] never adverts to the quarter from which all his misfortunes originate. The last person he would

think of accusing is himself, on whom, in fact, the whole blame lies (Malthus in Robbins 2012: 17).

Eco-scarcity remains a key concept in policymaking for environmental problems (Robbins 2012: 17), however, policies based on eco-scarcity are problematic as they lack consideration of complex causalities such as the relationship between humans and nature (Linnér 2023). Despite this, policymakers emphasise the scarcity of resources as the reason for problems rather than interrogating the management of those resources (Linnér 2023).

Modernisation emphasises that environmental problems, especially concerning the 'underdeveloped' world, are due to a lack of management, modern technologies, or involvement in global markets (West 2016). This continues to be prioritised in 'western' environmental management and conservation (Robbins 2012: 19). However political ecologist Paul Robbins (2012) demonstrated through empirical analyses and historical inquiry that modernisation resulted in policies that intensified power imbalances in communities and resulted in the uneven distribution of resources (Robbins 2012: 19). Nevertheless, modernisation remains a sticky conceptual driver in policymaking for environmental management (West 2016).

The role political ecology can play can be seen through the exemplary anthropological study undertaken by Fairhead and Leach (1996) into the collapse of ecosystems in Kissidougou, Africa which identified policies in land management as a major cause of the collapse. The policies examined were found to be influenced by 'Malthusian' and 'modernisation' paradigms. The local people had been working with the land for many generations, and new policies disrupted these highly functional human/ecological systems. The local subsistence communities were displaced, and the fragile ecosystem was damaged (Fairhead and Leach 1996). Fairhead and Leach employed political ecology to help understand how policies reified power imbalances in the community due to a narrow focus on the management of resources without a broader anthropological perspective and inclusion of local knowledge from all levels of the community.

The case study of Kissidougou demonstrates the way environmental policies have serious implications for communities on the ground. Nixon (2011) argued environmental issues impact poorer communities when 'official landscapes are enforced on vernacular ones' such as those landscapes...that 'have been devised over many generations' (2011: 17). In the process, 'webs' of cultural meaning and significance of the landscape are

severed (Nixon 2011: 17) to result in a 'slow violence' to the people (Nixon 2011). Political ecology can therefore be used to highlight potential problems caused to communities through policy impacts, on problems aggravated by environmental problems.

The Lismore Floods of 2022

Lismore is a town of 29,000 people. It sits on the Wilson's River and Leycester Creek meeting point which feed into the Richmond River's main tributary. In the 1840s early settlers were attracted to the location due to its alluvial soil (Department of Primary Industries 2020: 6). It provided for livestock and grain production for the rapid growth of cities such as Sydney and Brisbane (Lismore City Council 2022a) and the river system assisted in the transport of produce (Wilbourn 2020). At 12 metres above sea level positioned north of the catchment basin at the junction of three waterways, Lismore has experienced many fluvial floods (George et al. 2022). Since European settlement, Lismore's history of flooding has resulted in the construction of levees and the implementation of various flood strategies (Lismore Flood Plan Risk Management Plan 2014, Richmond River Flood Mapping Study 2010, and Lismore Flood Study and Floodplain Management Study, Stage one, flood study 1993). However, the latest flood of March 2022 far exceeded previous community experience. Preparation and mitigation were inadequate to cope with this flood.

Australians watched the civilian rescue responses on their televisions. Locals who had experienced floods previously found the floods of 2022 to be unmanageable, and emergency services were overstretched, resulting in community-driven rescues. Darren Slattery, a local man, rescued people in his dinghy during the highest point of the flood. His distressing narrative is one of many that portray the events of that day.

After that I headed up Casino Street to my partner's dad's house, yelling out to him and his neighbour. I heard nothing so proceeded to Centre Street to grab my daughter, after getting stuck on a submerged car...Daughter on board with her two neighbours. Five people in boat I headed back the same way...I headed back and going to calls and yelling of people in houses and units. Several trips I made this horrendous day. Pulling people from their roofs, even ripping tin off roofs to pull them out from the roof cavity. People, dogs, cats, chickens, yep got them all. I lost count of how many we pulled out of the water that day (Flood Diaries, 2022).

The 2022 Flood Inquiry (NSW Government 2022) reported that during the ongoing flood crises of 2022

nine lives were lost, 7,731 people needed crisis accommodation, and \$2.7 billion in damage was caused to infrastructure resulting in a four-billion-dollar response to the crises from the New South Wales and federal governments (NSW Government 2022). More than a year later, the people of Lismore continue to experience ongoing problems and the 2022 Flood Inquiry (NSW Government 2022) made a suite of recommendations based on findings such as improved policies for the people of Lismore.

Policy Failure and Policy Learning for Flood Management

The problems experienced by the people of Lismore in 2022 were attributed to floods, but political ecology is utilised in this article to argue these problems were exacerbated by policies that preceded the floods. The author argues that existing policies failed to manage and anticipate human responses to risks from floods in Lismore, failed to integrate complex nature and human relationships into policy making and failed to harness, support, and build community 'resilience'.

Making policies is a complicated process yet opportunities for analysis and assessment are included within the policy cycle (Althaus et al. 2018). Success or failure of policies is difficult to analyse and quantify (McConnell 2015; Dunlop 2017), and Dunlop synthesised current policy evaluation literature to find that policy learning rarely follows from evaluation of failed policies (2017: 4). However, Althaus et al. (2018: 248) state that 'learning of failure is crucial, but harder than it seems'. As the then Secretary of the Department of Prime Minister and Cabinet noted 'Our relatively weak capacity to evaluate potential success or impending failure is a capability gap in itself' (cited in Althaus et al. 2018: 248).

Recognising failure results in the policy learning required for improved policies. McConnell (2015) offers a 'primer' to help analyse policy failure. He states:

A policy fails... if it does not fundamentally achieve the goals that proponents set out to achieve, and opposition is great and/or support is virtually non-existent (McConnell 2015: 230).

Failure of Policy to Manage Risk

A principle of environmental policymaking is how to understand and manage potential risks caused by natural hazards (Stahl and Alan 2019). Conceptualisations of risk and risk management may appear to be common sense, but risk is claimed by political ecologists to be a social construction (Murphy 2010: 277) as risk estimation is neither factual nor politically neutral (Birkholz et al. 2014).

Political ecology is used in this article to highlight problems experienced by the people of Lismore due to risk management policies that had been adopted. The author highlights the way policies often prioritise maps and data over local knowledge and perspectives. People in Lismore chose to live with risks due to an enduring relationship with their town. Socioeconomic status affects personal risk assessment. Risk during floods can be increased by human-built infrastructure. Finally, as existing data on risk management has been made unreliable due to a changing climate, political ecologists assert the important role of 'safe-to-fail-measures' rather than failsafe ones.

Perceptions of risk are constructed in social systems such as 'culture, institutions, organisations, [through] values, [and] beliefs' (Birkholz et al. 2014: 18). Understanding social relationships with risks from environmental hazards highlights the 'political/economic forces' that affect who will have 'access to resources and [indicates] degrees of vulnerability amongst marginalised groups' (Birkholz et al. 2014: 16). Distribution of resources reinforces the importance of critical analysis of policies designed to manage potential 'risks' of environmental problems.

Assessing and managing risk relies on methods of analysis that are rationalistic and quantitative (Kim et al. 2017). Birkholz et al. (2014) argue that while the rationalistic and quantitative methods are relevant to successful risk management in the financial, insurance and management fields, they do not translate to the management of nature/human risks. For example, while maps and data are a key part of the assessment of a potential risk from floods, social science or diverse forms of knowledge are rarely integrated into this planning phase (Porter and Demeritt 2012; De Vries and Fraser 2017). Political ecologists see maps and data as 'problematic technologies of power' (De Vries and Fraser 2017: 934) or what critical cartographers call 'texts' with 'worldmaking' ability (Porter and Demeritt 2012: 2361). Resource management based only on maps and data without a broader humanities perspective may reify power imbalances (Fairhead and Leach 1996). Lismore's history of flooding has resulted in many hydrological studies, flood maps, plans, and policies designed to protect buildings, infrastructure, and the Lismore community. Levees have been built (Lismore City Council 2022b), and houses have been raised (NSW Government 2020), and yet, these strategies did not successfully mitigate the human issues experienced during these floods.

Failure to integrate complex nature and human relationships

After the 2022 Lismore floods, Australians asked 'why do the people of Lismore continue to live on a flood plain when they understand the risks?' (Gilmore and Naylor 2023). The answer lies in a complex interplay between risk perception, personal management of risks, and economic vulnerability (Birkholz et al. 2014: 16). It is necessary to understand that the dynamic relationships people who live in flood zones have with their homes are fostered over many generations (NSW 2022: 15). Understanding risk is not a purely rational process. Risk assessment is often personal, based on emotions, and different forms of knowledge which are found to impact on the assessment of risk and the decision-making of individuals (Bohm and Tanner 2013).

A study assessing community action during floods by Fuchs et al. (2017) found that people living in flood zones do better if they make their own assessments based on existing knowledge of the risk posed by floods. For example, if they relied on instructions from emergency services on when to leave, it was found that communities were more at risk (Fuchs et al. 2017: 3185). The same study asserted that personal and local knowledge regarding risk management and acting on risk strategies was affected by socio-economic status (Fuchs et al. 2017: 3191). Lower socio-economic communities were found less likely to have confidence in their judgements. Instead, they would wait for emergency services to tell them to leave (Fuchs et al. 2017: 3191). Rolfe et al. (2020) overlaid flood mapping with socioeconomic and health data in Lismore and found that eighty-two per cent of people living in the flood footprint area were the most socioeconomic disadvantaged (2020: 631). This may explain why the people of Lismore were more likely to wait for instructions from the emergency services.

The Flood Inquiry reported that the people of Lismore knew from previous events that the floods of 2022 were 'bad' (NSW 2022: 226), yet they waited for information from the State Emergency Services (SES). When they realised the extent of the floods, they reached out for help from the SES. The large volume of assistance calls to the SES caused the Beacon to crash (NSW 2022: 107). Instead of acting on their own risk assessments earlier, they relied on the SES which resulted in an influx of calls eventually overburdening the system and delaying their evacuation. This correlates with Robbins' (2012) assertion, that hazard and risk strategies often ignore the cultural aspect of living with those risks such as the socio-economic status of those living in the flood zones and the impact that has on personal risk assessment. The Lismore flood of 2022 demonstrates how understanding the socio-economic status of those living in high-risk areas

can predict how communities will assess risk and their resultant reliance on emergency services which should be considered in policymaking.

Political ecologists emphasise that management of potential and known risks only through expensive infrastructure may result in another type of risk to communities that is less obvious. Ulrich Beck argues that even though some risk can be predicted, the 'force of the dynamics of nature may be unexpected' (cited in Murphy 2010: 280).

In 1945 pioneer political ecologist Gilbert White called for a radical overhaul of flood management. He maintained that building expensive engineered structures such as dams and levees had little impact on the underlying flooding problem (Macdonald et al. 2012). He claimed that risk does not come from the natural world but from human-built infrastructure. As Robbins (2012) explains, White saw floods as a 'hybrid-human environment artifact, no more an act of nature than one of planning' (in Robbins 2012: 33), and Burton et al. (1978) argued that human intervention in flood management makes floods more dangerous. The 2020 Commonwealth Royal Commission into National Natural Disaster Arrangements (cited in NSW 2022: 78) stated that 'hazards on their own are not disasters... Disaster occurs when natural hazards intersect with people and things of value, and when the impacts of hazards exceed our ability to prevent, respond or recover from them (in NSW 2022: 78). As a result, engineers, planners, and policymakers need to consider 'safe-to-fail' principles rather than overly engineered 'fail-safe' ones (Kim et al. 2017: 409). Safe-to-fail design 'embraces the unforeseen' problems due to climate change. Infrastructure design 'anticipate[s], contain[s], and minimize[s] unprecedented and unexpected events' (Kim et al. 2017: 400). As a result, safe-to-fail design ensures the adaptive capacity of urban systems (Kim et al. 2017: 400).

How to protect communities from risks related to weather events such as floods is assessed and managed based on current and past data. As the climate is changing, the reliability of that data is diminished, and governments are rethinking responses to floods to encourage learning how to live with them (Deser et al. 2020; NSW 2022: 276). Rather than overly engineered solutions such as levees and dams, nature-based mitigation measures that incorporate safe-to-fail principles are an important policy direction. Political ecologists argue that responses to the unknown risks of floods need to 'couple technological constraints with social and ecological well-being' (Kim et al. 2017: 409). For example, Kim et al. (2017) cites the significant inroads made in flood management in the Netherlands through bioretention basin design and

bioswales rather than dam walls. The influence of a new approach is evident in the New South Wales Flood Inquiry Report (2022: 101) which recommended 'flood mounds' be installed to provide high ground for stranded cattle.

Failure of existing policies to manage and anticipate human responses to risks

Separate from the cultural features of risk discussed above there are other more complex social-hydrological reasons for continuing to live in flood zones such as flood ghettoization and community bonds shaped by living in a flood zone.

Communities living in flood-prone areas are often a lower socioeconomic cohort (Ilbeigi and Jagupilla 2020), and as discussed earlier, the Lismore flood zone is a low socioeconomic area (Rolfe et al. 2020). Wilbourn (2020) called for policymakers to consider how risk management strategies such as housing insurance create 'flood ghettos' that intensify poverty. These are areas where insurance premiums are raised due to increased risk from floods. These premiums decrease the house values to the point where homeowners can no longer afford to leave. Wilbourn stated '[t]hese properties start to fall down the social-economic ladder and become a major barrier to social mobility' (2020: 2). One respondent of the 2022 Flood Inquiry recounted 'We now feel economically trapped in our home' (NSW Government 2022: 229).

Many Australians living in areas of increasing flood risk are currently experiencing rising insurance affordability pressure (The Actuaries Institute 2023). The Lismore community felt they could manage floods based on generational experience and knowledge, but as climate change intensifies, the risks are increased, and insurance premiums become unaffordable. As a result, people feel there no longer is an option to leave Lismore. The federal assistant treasurer Stephen Jones recently tabled a motion calling for a parliamentary inquiry into insurer responses (Australian Government Treasury Portfolio 2023). An investigation into insurance is timely but the lack of forward planning on insurance assessment is evidence of policy failure, a policy failure with widespread implications for natural disasters across Australia made more urgent by the impact of climate change.

Social-ecological relationships are complex and require sensitive analysis. Poverty and social vulnerability may be increased through risk management such as insurance, but due to living with the threat of floods, community bonds have been found to grow (De Vries and Fraser 2017). In a case study known as 'Lincoln City' in North Carolina studies by political ecologists De Vries and Fraser (2017) found that poorer African Americans were disproportionately represented in the low-lying flood-prone

neighbourhood. Lincoln City had experienced reoccurring floods, the worst of which resulted in a relocation program. However, the program discounted the communities of these 'waterscapes' (De Vries and Fraser 2017: 937) and their reasons for living there in the first place. They felt a sense of comradery and a connection to place as they made Lincoln City their home. They developed community risk management strategies which became a point of pride and connection. After a significant flood, the houses were relocated but it was found that the relocation policy, while seemingly rational, intensified poverty and further underscored community dislocation by not considering the community bonds that grew there (De Vries and Fraser 2017).

Policies may encourage relocation of the Lismore townsite, but the community has a genuine connection to place. As one respondent stated in the Flood Inquiry:

I adore Lismore and this region generally and believe that it is truly unique and I cannot imagine wanting to live anywhere else but within the broader community here. They have carried me through extremely difficult times with creativity, much laughter and incredible love and generosity and I feel that I have an important place and role here within the Northern Rivers which I do not wish to lose (anonymous respondent in NSW Government 2022: 228).

Regardless of motivations for staying in Lismore such as increasing poverty or connection to place, communities will continue to need services, support, and material outcomes not properly administered through previous policies (NSW Government). The report recommends that a program be instated called the 'Community First Responder Program' designed to provide training and risk management to members of the community (NSW Government 2022: 123). Further, the report finds that increasing employment opportunities for the local people who stay in Lismore is key to supporting the continued economic aspirations of its people (NSW Government 2022). As previously discussed, improving economic well-being has important outcomes for handling risks from future floods.

Failure to Harness 'Resilience'

Rather than managing real problems of what Murphy calls potential and known 'material risks' (2010: 284) such as preparing for floods in Lismore, previous government policy had instead prioritised building 'resilience' through bureaucratic channels.

Resilience NSW was a peak body formed by the NSW Government in response to the bushfires of 2020

(NSW Government 2022: 123). The organisation was facilitated to provide policy support to government, welfare organisations, emergency services and the State Emergency Recovery Coordinator (NSW Government 2022: 118). The role of the organisation was to facilitate better policies for communities and government disaster preparation, lead welfare responses during crises, support organisations during recovery operations, and assist individuals (NSW Government 2022: 119). Resilience NSW was a policy response to the inadequate handling of the 2019-2022 bushfires (NSW Government 2022: 118), however, the flood inquiry found that Resilience NSW did not act within its remit, and the organisation was described as “chaotic”, “shambolic”, “disorganised” [and often] ... proved a hindrance to protecting the community’ (NSW Government 2022: 120).

Matthew Allen (2013), an adjunct professor at James Cook University, convincingly argued that resilience is used as a ‘buzzword of post-disaster scenarios’ (2013: 45). Through a discourse analysis of a 2011 Australian federal government website, Allen found a common rhetorical device prioritised the ‘resilience’ of communities regarding environmental problems. The website stated:

This Australian character of showing resilience in the face of natural disasters and the natural cycle of drought, fire and floods has helped define our language and sense of humour as well as our music, poetry, literature, and comedy (cited in Allen 2013: 47).

These discourses of the resilience and ‘toughness’ of the ‘Aussies battler’ are explored by Williamson (2012) who found such labels to be a rhetorical strategy used by leaders to ‘engender collective views of self’ (Williamson 2012: 33). However, Allen (2013) asserted that on the ground communities saw bureaucratic statements of resilience as offensive and patronising ‘government speak’ (Allen 2013: 59). The resilience discourse did not pay attention to the intersectional factors impacting on community resilience such as ongoing generational poverty, lack of services, the subsequent decreasing physical and mental health as similarly demonstrated in the Lismore community (Rolfe et al. 2020). Moreover, the report established that the ongoing weather events of 2022 caused ‘major dynamic systems’ to become ‘stuck in place’ (NSW Government 2022: 62) overwhelming the people and infrastructure of Lismore. The Flood Inquiry stated Resilience NSW was deficient and ‘community resilience [was] hard to operationalise’ in times of environmental crises (NSW Government 2022: 232). In response, the Flood Inquiry recommended that Resilience NSW be disbanded (NSW Government 2022: 232), but this does little for the ongoing problem of

generational poverty, lack of service provision, worsening environmental stressors, and decreasing physical and mental health in Lismore.

Discourses that emphasise building ‘human’ and ‘social’ capital are associated with neoliberal policies where hazard management is framed as a problem to be ‘solved’ via the social capital of communities, organisations, and individuals as opposed to infrastructure and state-based intervention (Tiernan et al. 2019: 30). As Murphy articulated, ‘the need for urgent action and a timely response is determined by the forces of nature, not by socially constructed strategies’ (2010: 283). Allen further argued that when the ‘state’ discursively frames social capital as a priority, it doesn’t answer the real needs of communities in flood zones which are ‘hard capital’ (2013: 61). Despite this, while the SES beacon system crashed, the community organised a flotilla of civilian boats known as the ‘Lismore Boatie Brigade’ (NSW Government 2022: 107). The report states that without the ad-hoc civilian-led rescues, the floods of Lismore would have been a ‘mass casualty event’ (NSW Government 2022: 108) and yet as extraordinary as the community effort was, sadly no ‘formal record’ or recognition is given to the civilian contribution to the rescues (NSW Government 2022: 107).

While Resilience NSW was found to be an organisational policy failure, the report recommended increasing community engagement through better training (NSW Government 2022: 123), increasing professionals employed by the SES, and localising operations closer to Lismore (NSW Government 2022: 112). Moreover, the current ‘rain and river gauge network [was found] not fit for purpose’ (NSW Government 2022: 72) as it was maintained and monitored by communities, not the state. The report recommended the state take ownership and responsibility for maintenance and monitoring of the gauges as there is currently no cohesive policy to do so (NSW Government 2022: 69). These are responses to flaws in previous policy designs which prioritised human capital yet neglected to provide material infrastructure, services, better collaboration between organisations, and healthier inclusion of communities.

Policy Learning

Policymakers learn by identifying and correcting design flaws in policies (Althaus et al. 2018), and a critical stage of the policy cycle is to evaluate a policy’s efficacy to result in improved future policies. Baumer and Van Horn (2014) state ‘perspectives on the effectiveness of public policy are possible when meaningful comparisons can be made’ (Baumer and Van Horn 2014: 287) highlighting the importance of policy evaluation that interrogates ‘outputs, outcomes and causality’ (Althaus et al. 2018: 205). Political ecology offers an exemplary critical theory

in policy evaluation. In the case of Lismore, political ecology has highlighted the following policy failures: a lack of a broader humanities perspective in Lismore's policies such as how human emotions and socioeconomic status affect risk assessment; not provisioning for 'safe to fail' principles; failure to address increasing poverty; not providing adequate services for a community at risk from floods; and funding of programs which failed to support community resilience.

Although the Flood Inquiry Report of 2022 makes excellent evidence-based policy recommendations, without critical engagement and accountability, it should be seen that recommendations may lack rigour affecting the potential for policy learning. The lessons learned may not be applied in the 'next run' of the policy process or what Althaus et al. (2018) call the 'policy legacy' where problems 'can accumulate without consideration of coherence' (Althaus et al. 2018: 10). Political ecology has been used to highlight policy failures. However, without proper accountability for those failures, it is possible that policy directions may not be changed. Further discussion and accountability for policy failures of the state are required.

Conclusion

While the extreme nature of the Lismore floods of 2022 was affected by intensifying weather systems exacerbated by climate change, the problems experienced by the community were a conflation of previous policy responses to risk, a lack of understanding of complex nature/human relationships, and policy responses designed to encourage 'resilience'. As the impacts of anthropocentric climate change gain momentum (IPCC 2022), the Lismore floods and response provide an important case study to examine the way complex ecologies and 'natural' disasters intensify existing inequality in Australia and the need for more nuanced policies for prevention and response. Political ecology can play an important role in evaluating risk management. As French et al. stated 'geophysical and geotechnical understanding is rarely brought together with social profiles of risk and response...[and] are still not adequately understood' (French et al. 2020: 2). Through political ecology, scholars from diverse disciplines can engage with hazard management and policy responses by including the marginalised voices of those that will be affected by those policies.

As infrastructure continues to be built in Lismore, insurance claims escalate and people are relocated to higher ground, poverty increases, and communities in flood-prone areas become stuck in flood ghettos. Climate change induced increases in natural disasters will result in Australians facing a widening economic and social divide unless evaluation and accountability for policy failures are addressed. Political ecology has helped the

author highlight and analyse the intersectional issues that contributed to and intensified the devastation of the effects of the Lismore floods of 2022, and while the 'Aussie Battler' battles through the impacts of climate change, now is the time to understand the complexity at play and improve policy design more broadly by incorporating critical theories such as political ecology into the policy cycle for a more equitable and fair future.

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