Political Geography 99 (2022) 102740

Contents lists available at ScienceDirect

Political Geography

journal homepage: www.elsevier.com/locate/polgeo

Full Length Article

Climates of control: Violent adaptation and climate change in the Philippines

Will Smith

The Alfred Deakin Institute for Citizenship and Globalisation, Deakin University, Building C, Level 1, 221 Burwood Hwy, Burwood, VIC, 3125, Australia

A B S T R A C T

This paper considers the limits of adaptation as a concept in global environmental governance and advocacy by examining the climate change policy of the populist Philippine president Rodrigo Duterte. By focusing on heterogenous state responses to the 2018–2019 El Niño drought, I demonstrate how the Duterte administration has worked to achieve a violent vision of climate adaptation through a jarring combination of practices: exhorting the devastating reality of climate change; denigrating multilateral mitigation efforts as colonial injustices; subverting indigenous peoples' land rights; and fostering the extrajudicial assassination of activists. Though Duterte's wider climate change policies are often viewed as a strategic distraction or the isolated product of an erratic populist, I argue that these recent responses to climate change in the Philippines, which fuse decolonial and nationalist sensibilities to confrontational forms of illiberalism, should be examined as part of the larger unfurling of illiberal adaptation politics across Philippine history and the Global South. These politics, and their considerable (though far from total) local resonance, challenge both universalist Western political rationalities and new directions in climate justice movement calling for ontological inclusivity. I highlight the need for a closer examination of the origins, practices and implications of violent adaptions.

1. Introduction

> "Hear us, we desire to live.
> Prolonged drought is depriving us of the fruits of our toil;
> Low water supply means hunger and thirst for most of us;
> El Nino continues to threaten our relationship with one another.
> O Lord, this is a very hostile phenomenon that we beg for You to end.
> At this time of looming catastrophe, dear Lord, dwell in our hearts."

Over 2018 and 2019, a lengthy El Niño drought unfolded in the Philippines and disrupted regular patterns of rainfall across the archipelago. While by no means the most serious event in recent history, especially relative to the particularly disastrous 1997/8 El Niño, the length and impact of the drought on the capital of Manila meant that the event received disproportionate attention from politicians and national media. The state of calamity was deemed so severe that the Archbishop of Cebu issued an *Oratio Imperata*, or obligatory prayer, that implored Church-goers at Sunday mass to request that God "Shower us with rain, provide us with water that we need.", in what has become a traditional part of contemporary mass during El Niño events in the Philippines. This moment is important, as it not only highlights the significance of climate and climate change in Philippine society but emphasises that "climate" is understood and acted on in many nations beyond Euro-American political and scientific rationalities that a scientific and progressive left against a retrograde right-wing and populist movements that thrive on climate change denial. And what heightens the significance of this particular El Niño event is that it took place during the administration of the populist President Rodrigo Duterte, elected in 2016, whose responses to the ensuing water crisis seamlessly blended with the president's violent and authoritarian techniques of government.

Researchers concerned with quantifying experiences of vulnerability and practices of adaptation, at a national level, often cast the Philippines as one of the world's most vulnerable nations to climate change and extreme weather events (Holden, 2019). The negative impacts of severe typhoons and droughts are devastating and routine features of daily life that cuts, albeit unevenly, across class divides to devastate entire cities or regions. In response, the Philippine state has developed over the last two decades perhaps the world's most comprehensive climate change response policy infrastructure. Drawing on the international language of climate change governance, government policy now emphasises risk reduction, the devolution of adaptation to local governments and an all-of-government focus on climate change as an existential risk. At the same time, climate change has also increasingly become the concern of the nation's highly personalised, combative and often violent electoral politics, as would-be presidents jostle over who would be most able to provide effective relief during catastrophic storms or secure a comfortable life in the context of increasing environmental stress on water and food supplies for the precarious poor. As this paper charts, the Philippines has become a society and government-oriented, with staggering comprehensiveness (and contested efficacy), to the management

E-mail address: will.smith@deakin.edu.au.

https://doi.org/10.1016/j.polgeo.2022.102740
Received 20 February 2022; Received in revised form 22 August 2022; Accepted 23 August 2022
Available online 1 October 2022

of climate change impacts in the form of conjoined and globally-distinct disaster relief practices, risk reduction efforts and adaptation policies. This comprehensive political and societal response in places like the Philippines should be of foremost concern to scholars concerned with understanding the plurality of adaptation futures that might guide governmental response to climate change, and with what effect (Haverkamp, 2021).

Recent critical scholarship on climate justice has emphasised the need for wider ontological inclusivity in the formation of adaptation schemes and visions that look beyond Western traditions to, for example, fully account for the uneven impacts of environmental change beyond universalist political philosophies (Nightingale et al., 2020). Scholars have therefore increasingly looked to the experiences of peoples most violently impacted by climate change (Tschakert et al., 2021; Whyte, 2017), yet rarely "take seriously" experiences from places like the Philippines nor the actions of powerful but ethically unsavoury actors such as Duterte who challenge both liberal-humanist norms of climate action and ascendant posthumanist critiques. This paper describes an increasingly prevalent alternative adaptation future: the "violent adaptation" to climate change of the Duterte administration. I do so by examining the Philippine state's responses to the 2018–2019 El Niño event. Before Duterte's election, successive presidential administrations in the Philippines have enthusiastically embraced the global governance of climate change through the United Nations Framework Convention on Climate Change and other multilateral arrangements to facilitate national adaptation and support mitigation efforts. However, in 2016 the nation elected the internationally controversial and provocative populist Rodrigo Duterte in what the Philippine national media and foreign commentators saw as a harsh rebuke, proximately, of the liberalism of the previous Benigno Aquino III administration and ultimately of the social and economic failures of the post-Marcos era. In contrast to the Aquino government's overt embrace of multilateralism and neoliberalism as the path to prosperity, Duterte has sought to personally champion adaptation to climate change, exemplified in his responses to the 2018–2019 El Niño, through a jarring combination of practices: exhorting the devastating reality of climate change for developing nations; denigrating multilateral mitigation efforts as colonial injustices; subverting indigenous peoples' land rights; and fostering extrajudicial assassination of activists opposed to water securitization projects.

While popular media critiques of Duterte often frame him as a disguised neoliberal or freakish aberration, I build on a growing body of scholarly work focused on authoritarianism and the environment to suggest that his climate change policies instead reference a culturally specific populism and must be understood in the larger historical relationship between climate, government and politics in the Philippines that will endure beyond his term. I argue that there is a need to examine actually existing, and increasingly prevalent, "violent adaptations" as a global trajectory that blends extrajudiciality, political cronyism and nationalism in responding to climate change. To do so, this paper first explores recent developments in the critical literature surrounding adaptation to climate change. I then chart the historical blending of politics and climate governance in the Philippines, in the form of disaster response and climate change policies, which have rapidly thickened over the past twenty years. Finally, I examine the recent responses of the Duterte administration, particularly Duterte's extralegislative actions, to the recent 2018–2019 El-Niño-driven water crisis as a concrete and confronting example of adaptation to climate change.

Methodologically, this paper relies on the analysis of secondary resources in place of, ideally, ethnographic work given the risks associated with inquiry regarding politics and rural development in the Philippines for both researchers and their participants. As such, the paper augments a close examination of the existing historical and policy literature surrounding climate and climate change governance in the Philippines with a review of: 1) the Philippine news media focused on the Duterte's administration, spanning climate change and the Kaliwa Dam project and as well the Philippine and international media coverage of climate change policies and responses by previous administrations since the early 2000s; and 2), the policy documentation from key state organisations relevant to the Kaliwa Dam project (e.g., MWSS and NCIP) since Duterte's election in 2016. The paper also draws on a comprehensive and geolocated database of extrajudicial killings of environmental defenders in the Philippines, created as part of a larger project and used here for contextual data.

2. Adaptation futures

The concept of adaptation, alongside its inverted companion mitigation, is central to contemporary climate change governance, global development practice and environmental advocacy. Even under the most successful envisioned mitigation scenarios, already unlikely to be achieved, all nations will confront, as a fundamental feature of state policy, the need to reconfigure sweeping segments of society in ways that can sustain economic growth (or, in some cases, simply survival) in the face of increasingly intense weather events. In place of earlier efforts to prescriptively define adaptation in terms of systems thinking (e.g, Neil Adger et al., 2005), critical scholars have instead positioned the concept to signify the grand, intensely political and overlapping visions that chart out how and why to reorganise individuals, communities and nations in anticipation of catastrophic future climate conditions (Dolšak & Prakash, 2018). These visions of adaptation, and the translation of these visions in ways that impact people and places, have recently been referred to variously as "adaptation machines" (Grove & Pugh, 2018), "imaginaries" (Haverkamp, 2021), "adaptation regimes" or the "discursive politics" of adaptation (Mikulewicz, 2020). Critiques emerging from these spheres of scholarship often charge that these formations, imposed by a constellation of nation-states, large international organisations and the work of multilateral institutions, are limited because they too often envision, for example, a flattened world of responsibility and culpability, erase the socio-political origins of vulnerability, co-opt adaptation in service of existing political-economic interests, or present narrow conceptions of what adaptation might be (Grove, 2014; Haverkamp, 2021; Nightingale, 2017; Scoville-Simonds et al., 2020).

The recognition of adaptation as a pliable grand vision that charts significant, and perhaps deleterious, effects has prompted recent calls to consider *alternative* adaptations as a means to address the injustices of existing climate change response mechanisms: that is, what are the possibilities of ontological pluralism for climate adaptation (e.g., Haverkamp, 2021; Mikulewicz, 2020; Nightingale et al., 2020)? In a recent article, for example, Nightingale and others (2020) powerfully argue, for "more time, consideration –and respect – to understand the meaning of climate change in diverse settings and across different perspectives". Here, diverse perspectives refer to indigenous or broadly non-Western practices that actively engage with climatic changes, yet are erased from the formal tabulation of "adaptive capacities", as part of a larger quest to decolonize climate change research (e.g., Whyte, 2017; Bronen & Cochran, 2021 Rarai, Parsons, Nursey-Bray, & Crease, 2021; among many others). This is a helpful perspective that reminds us that, within formal climate change governance and much of the academic literature, nations such as the Philippines remain places where *vulnerabilities* occur, rather than where *adaptations* are made (Bankoff, 2001).

Without aiming to negate the emancipatory potential of these arguments, this paper aims to productively complicate the unbridled enthusiasm for ontological inclusivity as a resource for a more just vision of adaptation. Much of this recent enthusiasm largely assumes that a close harmony can be achieved between the goals and ethics of the climate justice movement and non-Western collaborators. However, in doing so it bypasses existing warnings that ontological multiplicity can complicate, rather than simply enhance, both calls for climate adaptation and justice (Fabricant, 2013; Goldman et al., 2018; Smith, 2020)

and environmental protection more broadly (Blaser, 2009; Theriault, 2017; Nadasdy, 2007). The Philippines is precisely the kind of nation whose longstanding and underrecognized experiences of climate change might serve as inspiration for a more inclusive global regime of adaptation under recent calls for ontological plurality in climate justice. However, many of the specific adaptive practices and broader ethical visions of climate change response championed by the Philippine government are profoundly incongruent with the main thrusts of visions for climate change adaptation emanating from the contemporary critical scholarship within geography and allied disciplines. To explore these tensions, I draw and comment on an emerging body of critical environmental literature that considers the intersection between the rise of recent populist movements and the environment.

Recent concerns around what has been termed the "hybridization" of authoritarianism and populism focus on a reflexive critique of right-wing populist governments and their environmental policies as crypto-neoliberal, climate change denialist and/or anti-science (Dillon et al., 2019; Huber, 2020; Middeldorp & Le Billon, 2019; Scoones et al., 2018). The Duterte administration arguably is positioned amongst the rise of such authoritarian and populist leaders in democratic nations during the 2010s, exemplified by masculinist figures such as Donald Trump and Jair Bolsonaro, who have been, justly, proclaimed as an environmental disaster. Rhetoric emerging from this global wave of "new populists" have explicitly pitted the environment against economic development agendas in a zero-sum game, largely borne out in formal policies or disinformation tactics that have facilitated the accelerated extraction of fossil fuels or rapid deforestation in the service of, for example, national revival (Kojola, 2019). Crucially, however, some scholars have also pointed to the unsettling possibilities of authoritarian movements wielding, not rejecting, ecological and climate crises to entrench political power and revanchist objectives (McCarthy, 2019; Cortes-Vazquez & Jose, 2020). The most comprehensive examples of illiberal climate responses have focused primarily on extremely authoritarian states – China and Myanmar, for example – that can tightly control opposition and information flows (Beeson, 2018; Borras et al., 2020; Lo, 2020; Wilson, 2019). However, outside of these states, the possibility largely remains speculative within the critical literature on populism, in the form of scholarly predictions focused on "ecofascism" and "climate barbarism" (Klein, 2020). Ofstehage et al.'s (2022) review of recent critical literature across geography, agrarian studies and related disciplines provide tantalizing, but minor, examples of populist groups leveraging imagery of nature to advance their objectives – mostly from provincial government actors or right-wing social movements rather than at the national level. I suggest that recent climate change responses in the Philippines under the Duterte administration offers a tangible and significant case study of authoritarian responses to climate crisis – in the form of both violent adaptive practices and populist climate justice – in ways that trouble calls for ontological diversity in climate change adaptation. In contrast to case studies from secretive governments with strong state capacity such as China and Myanmar, the Philippines presents climate authoritarianism in which governmental responses to environmental change require considerable and multi-faceted performative labour to produce the outward appearance of progress, consent and success amidst considerable local and international resistance (Curato & Yonaha, 2021).

Philippine President Rodrigo Duterte, often lazily glossed as "Asia's Trump", has been characterised by international media and many political scientists as both a buffoonish and dangerous character whose environmental practices are, at best, negligent or absent. Perhaps as a consequence, recent Philippine government practices rarely taken seriously as forms of climate change adaptation. In their comprehensive review of recent work engaging populism and the environment, Ofstehage et al. (2022) for example, frame Duterte's ecological discourse as "rhetorical lip service" that simply masks extractivism or other unsavoury practices. This kind of framing, while not necessarily untrue in its implications for people and places, is ultimately unsatisfying as it collapses the complex political terrain in the Philippines on which issues of economy, environment and disaster often seamlessly intermingle (cf. Rafael, 2021). This paper, in contrast, examines Duterte's environmental governance as a violent response to climate change rooted in historical Philippine experiences of disaster and politics, in addition to growing public concern around anthropogenic climate change.

3. Governing weather in the Philippines

The Philippines is widely considered to be one of the most vulnerable nations on earth to the impacts of climate change. It is a rote trope of scholarly and popular articles focusing on climate change impacts to reference a range of rankings that place the country at or near the top of the vulnerability scale.[1] In addition to the socio-economic histories of colonialism and capitalism that structure highly uneven forms of exposure, alongside colonial and post-colonial environmental destruction, part of this vulnerability lies in the archipelago's unique geographic position within Southeast Asia that leaves it exposed to intense weather events. The Pacific Typhoon Belt batters much of the eastern seaboard with the full force of cyclonic activity generated in the Pacific Ocean. An average of twenty typhoons famously cross the nation each year with varying levels of intensity, more than any other area of responsibility (PAGASA 2022). Similarly, the archipelago's position in the pacific means it is highly exposed to the impacts of the shifting extremes of the El Niño-Southern Oscillation (ENSO) phenomenon, in which alternating droughts (during El Niño phases) and deluges (during La Niña phases) have significant impacts across the country. The impacts of these climate events are also largely pervasive: they unfold across wealthy metropolitan centres, coastal villages and forested uplands. The intensity and frequency of climate disruptions to lives and economies have produced a whole of government, largely uncontested across the electoral spectrum, orientation towards addressing climate change in the form of scaled policy "mainstreaming". It is also a context in which politics and climate adaptation practices seamlessly flow into each other.

This fusion of politics and weather is far from new and has historically been precipitated by particularly devastating climate events that demand a highly visible response for impacted publics. Climate variability and change have been the object of scientific concern and a field of governmental intervention in which the state has adopted ever-increasing burdens of responsibility for knowing, preventing and ameliorating the impact of extreme weather events. This trajectory of climate response has been coproduced within shifting colonial and postcolonial political economies in which scientific knowledge production has been increasingly incorporated into anticipatory disaster management, often at the forefront of global trends in disaster management. The Manila Observatory, established by Jesuit priests under the Spanish colonial government was, for example, one of the earliest and most advanced efforts in the Asia-Pacific. In Warren's (2015, 221) estimation, the Observatory was "a world standard meteorological observatory". Its creation was driven by the devastating impacts of typhoons on the colonial economy, particularly shipping, and allowed by the 1880s the coarse prediction of cyclonic activity and, by contemporary standards, crude preparatory efforts (Hennessey, 1960). Despite these novel predictive capabilities, the focus of governmental "adaptation" to climate extremes was the management of agrarian discontent and potential rural uprising through post-disaster relief provision (Bankoff, 2007). During US colonial rule, administrators facilitated the modernization of this meteorological infrastructure through a formalised weather bureau. Alongside improved agricultural statistics, this

[1] For example, the Department of Environment and Natural Resource's Climate Change service prominently features such a ranking on the home page of their website, emphasising to readers the nation's precarity https://climatechange.denr.gov.ph/.

revolution in climate data provided American colonial officials with relatively precise quantification of the impact of extreme weather events on economic activity throughout the archipelago (Bankoff, 2007).

During the Spanish administration, the conjoined management of popular unrest, food insecurity and climate impacts was undertaken by regional governors (*alcalde mayores*). Late in the US colonial administration, however, the nominally-independent Filipino commonwealth government created the "Civilian Emergency Administration" to provide a more centralized disaster management system less dependent on regional politicians. This administration was concerned primarily with the civilian role in preparing for a potential Japanese invasion but provided the institutional template for a national approach to disaster management in the post-war period. Following independence from the United States in 1946, the then-independent Philippine national government took on responsibility for the management of extreme weather events under the purview of broader disaster management policy. In the aftermath of a particularly severe series of typhoons in the 1970s that impacted the politically significant Metro Manila area, the Marcos administration implemented institutional reforms focused on disaster management. These included the formation of a national disaster preparedness plan in the months directly following the impact of Typhoon Sening (1970), the reformation and rapid modernization of the weather bureau in 1972 (renamed as the Philippine Atmospheric Geophysical and Astronomical Services Administration, or PAGASA, meaning hope in the Tagalog language), and the creation of a national disaster coordinating council in 1978 with a vast cross-sectoral membership. Beyond these legislative efforts, calamity associated with extreme weather also fed into the cronyism and authoritarianism of the martial law years of the Marcos administration by, for example, justifying the favourable distribution of domestic relief goods to political allies and their constituents, enabling the creation of personal slush-funds for the Marcos family from money nominally marked for disaster relief and obscuring the appropriation of international aid that flowed during times of crisis for military and paramilitary purposes (Warren, 2013).

The late 2000s and 2010s were another punctuated moment of high-profile climate disaster that entailed an extraordinary "thickening" of the Philippine climate bureaucracy and even closer and more sustained integration of politics and weather.[2] During this period, the Philippine state took up the conceptual architecture of international climate change governance, marked by both the Hyogo Framework (2005) and further emphasised by the Sendai Framework (2015), with staggering comprehensiveness. Specifically, the government embraced the notion of Disaster Risk Reduction (DRR) as advocated within both frameworks as a cross-scalar endeavour that should occupy not only the focus of the national government but the lowest levels of political administration such as the local *barangay*. Emphasising the role of the barangay, roughly a village or neighbourhood, brought adaptation to the intimate scale of everyday interaction. In 2009, the Philippine congress passed the Climate Change Act (Republic Act No. 9729), which created the Climate Change Commission and a national strategy to guide mitigation and adaptation activities, spurred on by the impact of Typhoon Ondoy throughout the populous and politically important island of Luzon. This was followed in 2010 by the passage of the Philippine Disaster Risk Reduction and Management Act (Republic Act No. 10121). The National Disaster Coordinating Council (largely unchanged since its establishment in the Marcos era) was renamed the National Disaster Risk Reduction and Management Council in 2010. Remarkable by global standards, by 2010 the language of "Climate Change Adaptation" and "Disaster Risk Reduction" had become both fused and forcefully mandated across all state sectors and levels of government. In the subsequent five years, further legislation by successive administrations has built up a dense mesh of overlapping institutional frameworks and policy prescriptions that increasingly take both climate and the impacts of climate as objects of governance.[3] Climate change "mainstreaming" of this conceptual architecture has produced a bewildering and all-encompassing governmental focus on climate change across nearly all government departments.

However, as in the Marcos era, sweeping policy transformation operated alongside the increasing politicization of climate change both internationally and domestically. Within the realm of international politics, issues of climate justice informed the Philippines' geopolitical positioning. The ritualized work of establishing victimhood and comparative carbon innocence has been a consistent feature of Philippine foreign policy and climate negotiations for the past 20 years. During COP15 in 2009, for example, the then-president Gloria Macapagal Arroyo emphasised on the international stage that the Philippines was a "climate taker not a climate maker" in a world of differentiated responsibility for climate change by virtue of its minimal contribution to CO2 emissions and, as such, should be the beneficiary of retributive transfers from wealthier, more culpable nations (in this case, in the form of carbon credit mechanisms) (Government of the Philippines, 2009). This moral articulation was reinforced during the subsequent administration by Benigno Aquino III at COP21, who noted the "stark reality that countries like the Philippines bear a disproportionate amount of the burden when it comes to climate change" (Tupaz, 2015).

Domestically, the ability to respond effectively to "climate change" as a distinct political problem became significant for would-be presidents during the 2000s and beyond. Despite this vast bureaucratic infrastructure and expansive mandate for coordination among varied departments, arguably at the cutting edge of global policy responses to climate impacts, the Philippine disaster risk reduction and management system is understood by the public as sclerotic in the face of repeated crisis, particularly in response to regular and high-impact typhoons. As in decades past, public perception of official responses to climate change is intensely negative, allowing charismatic media personalities and politicians (blurred categories in the Philippines) to occupy the visible space of disaster recovery (Ong, 2015). This deficiency was brought home in a shattering fashion in the response to Typhoon Yolanda in 2013, which devastated the city of Tacloban and killed over six thousand Filipinos. The delayed and often chaotic response of the Aquino administration ceded the public face of disaster management to high-profile politicians and would-be presidents and would come to feature in the rise of Duterte several years later (Eadie, 2019).

4. The election of Rodrigo Duterte and the entrenchment of adaptation politics

In 2016, the Philippines elected firebrand President Rodrigo Duterte on a platform centrally concerned with the punitive and openly extra-judicial treatment of both drug users and "pushers". In many ways, Duterte represented many of the classic features of populist leaders: appeals to "the people", the leveraging of anti-elite sentiments, and a harsh law and order campaign. Duterte's rise has subsequently been seen as a part of a wave of populists who were elected partly as a reaction to the global failure of neoliberalism to produce equitable outcomes and public dissatisfaction with the perceived elitism of progressive liberalism and career politicians. At the same time, Duterte's rule may be viewed as distinctly Filipino, applying technics of rule that combine brutal and masculinist rhetoric with humbling self-deprecation and vulnerability (Bello, 2017; Rafael, 2021). In the Philippines, Duterte

[2] Climate change has been taken very seriously as an existential threat by policy makers in the Philippines as early as the 1999 "initial national communication on climate change", however it was not until the late 2000s that it emerged in legislation (DENR, 1999).

[3] This includes legislation such as the PAGASA Modernization Act of 2015 (RA 10692) and the Children's Emergency Relief and Protection Act of 2016 (RA 10821).

stood as a marked contrast to the out-going "Noynoy" Aquino. "Noynoy" was calm, outwardly espoused progressive values, and oversaw a relative decline in the violent extrajudicial killings of human rights defenders that has plagued the Philippines for decades, while also quietly continuing the neoliberalism that had dominated Philippine economic policy since the 1990s. The end of his six-year term was marked by widespread disappointment that he had neither delivered on promises to spread the benefits of the Philippines' then-booming economic growth nor meaningfully curb enduring environmental destruction brought about by rapid development and illegal logging. There was a sense of exhaustion at the failure of the Philippines' famously dynastic politics, and the post-Marcos era more broadly, given that Aquino was the scion of the country's most famous political heroes who re-ushered democracy to the nation. Rodrigo Duterte, in turn, presented himself as the antithesis of Aquino: an outsider from the peripheral Mindanao region, brutal and vulgar, but also with a clear focus on environmental protection and disaster response as a matter of justice for the poor. However, placing the Duterte administration's environmental policies is a tricky endeavour for several reasons, and sharpens conceptual focus on many of the still-open ended questions surrounding populism and the environment. Critical explorations of Duterte's ecopopulism have been more comprehensively charted elsewhere (Dressler, 2021; Theriault, 2019), but requires briefly summarizing here: From the inception of Duterte's electoral campaign, he adopted strongly pro-environmental and, at times, markedly anti-market rhetoric. Indeed, perhaps more than any recent Philippine president, the environment has featured as an element of presidential discourse, if not mirrored practical action, but one that oscillates between imperatives for environmental protection and the periodic loosening of regulations and backtracking.

This complex tension has been most evident in Duterte's wildly shifting stance toward the nation's controversial but lucrative mining sector (his administration's treatment of tourism is another example). While the mayor of Davao, Duterte had a decades-long anti-mining stance, incredulously on the grounds that mining was associated with violence. Following his election as president in 2016, he surprised many of the nation's elite by appointing one of the Philippines' most prominent environmental activists, the now-deceased Gina Lopez, as the powerful Department of Environment and Natural Resources secretary. During this period, Duterte attacked the industry personally and accused the Chamber of Mines of funding his political opponents as part of a targeted destabilization campaign (Gonzales, 2017). Lopez quickly moved to order the closure of 28 mines, more than half of all operating mines in the Philippines, based on a compliance audit of existing environmental regulations, in addition to mandating other progressive social and environmental practices for the sector. Lopez's confirmation was, however, ultimately rejected by the Congressional appointments commission amid fierce lobbying by mining groups, and her closures were never fully implemented by her more conservative successor, former military general Roy Cimatu. In 2018, Super Typhoon Manghkut led to landslides that killed over 50 small-scale indigenous miners in the central Cordilleras. In response, Duterte revived anti-mining and anti-market rhetoric, suggesting that "I will decide one of these days, I will end mining … It is a very destructive activity though you would call it economic activity" (Casey, 2018). However, despite a longstanding personal grudge against the sector, in 2021 he shocked anti-mining and environmental activists by reversing a nearly decade-old ban on new mining activity enacted during the Aquino administration based on its economic necessity.[4]

While Duterte's style has been characterised as baffling and often remains inscrutable to international commentators, recent work – particularly from Philippine scholars – has emphasised the logic and distinct techniques of his style of governance (Rafael, 2021; Curato & Yonaha, 2021; Curato & Ong, 2018). Environmental scholars, too, have argued for understanding the logic and ecological effect of his governance on resource management in ways that builds on long histories of violence and resource use across the archipelago (Dressler, 2021; Saguin, 2022; Theriault, 2019). Together, this literature suggests that Duterte's similarly confounding climate change policies are less a mask than the seamless blending of politics and environmental issues dependent not only on personal stylings and idiosyncratic techniques of government but, as this paper's case study explores, long historical experiences of climate impact and governance.[5] As I discuss, these responses include wild shifts in tone, expansive yet nebulous policy aspirations and the foregrounding of personal relationships (particularly enmity and direct threats) between Duterte himself and his perceived opponents in industry and politics. As with his other environmental policies, I suggest that his position and practices cannot be fully explained as a mask for regressive economics but requires taking seriously long histories of climate governance in the Philippines, routine experiences of disaster and disaster relief provision and the significant appeal that Duterte and his policies have for much of the Philippine electorate.

In contrast to other contemporary populist leaders, Duterte's presidential campaign made addressing climate change issues a relative focal point and positioned himself as an experienced coordinator of disaster relief. The slow response of the Aquino government to Typhoon Yolanda was a central feature of Duterte's election campaign.[6] In what would be a prescient trip, Duterte was one of the first Filipino politicians to arrive in Tacloban, only four days after Yolanda, and his teary-eyed responses to the human suffering were widely reported by the national press (Espejo, 2013). He has linked these climate disasters, such as the impacts of Yolanda, consistently to anthropogenic climate change, and in 2018 he noted that "climate change is not a typhoon that visits your country once or twice a year. Climate change is a day-to-day problem" (Placido, 2018). Similarly, he has reiterated the moral framing of his predecessors at global and regional forums to emphasise that the Philippines is disproportionately impacted by climate change, and yet contributes little to carbon emissions, noting in a regional forum that he "… was very strong in my language about the people who contribute a lot in global warming and anong pinakita nila sa atin, tayo Philippines we only have a few factories running here," (Galvez, 2020). In contrast to predecessors Arroyo and Aquino who aimed to address issues of equity in global climate change responses, Duterte has consistently has used the same moral platform to challenge and undermine multilateral approaches to climate mitigation as structurally unjust[7] – beginning with comments during his electoral campaign disparaging UN efforts to manage climate change mitigation as ineffective and hypocritical. In-office, this has involved publicly denigrating the Paris Agreement, and broadly all multilateral efforts, as a wasteful and pointless exercise captured by special interest groups. Prominently, Duterte baulked at signing the Paris agreement and relented only when the majority of his cabinet voted to sign off on the document (Ranada, 2017). He continued in subsequent years to routinely disparage UN climate change summits as a "waste of time and money" (Ranada, 2019).

[4] Similarly, Duterte has also fostered an institutional and public culture of impunity that has resulted in marked increases in violence against environmental defenders, particularly mining (Dressler, 2021; Dressler & Smith, 2022).

[5] The small body of literature that specifically addresses issues of power in relation to disaster management at a provincial level or is sustained within Local Government Units indicates that the Duterte administration represents perhaps a national amplification of already-existing tendencies within government (Curato, 2018; Yee, 2018; Alvarez and Cardenas, 2019).

[6] Following the surprise devastation following Typhoon Odette unfolding over 2021–22, Duterte was strongly criticized within the national news and social media for a similarly tepid response.

[7] Although, in the 2020, he reiterated support for regional efforts to address climate change, this was a rare speech delivered "on script" without the usual elaboration or digression (Colcol, 2020).

As I discuss further in the following section, in place of multilateral cooperation and mitigation efforts, Duterte's approach has instead been to rescale international adaptation to a national climate change response, focused tightly on high-modernist engineering solutions that align with geopolitical objectives in ways that also sustain his own authority. For example, the Duterte administration's signature economic policy "Build, Build, Build", a loose but overarching emphasise on large-scale infrastructure development, is dependent not only on a particular vision of infrastructure as the solution to climate change and other problems facing the nation but a geopolitical realignment from traditional allies and funders (particularly former colonial occupiers, the United States and Japan) whose funding is often associated with considerable oversight. As Camba (2020) notes, Duterte has rapidly shifted development strategies from the previous Aquino administration to favour Chinese funding and construction companies as part of Beijing's Belt and Road Initiative. For example, rather than multilateral efforts to mitigate climate change through UN-backed forums, Duterte's preference leans on Chinese cooperation in the form of financing and technology transfers to facilitate the "green development" of the Philippines (Kabiling, 2019). This has rescaled climate change responses from an, ideally, apolitical international effort to an overtly geopolitical and nationalist endeavour.

I now turn here to the Duterte administration's response to the 2018-19 drought, which provides a tangible manifestation of the Philippine state's climate change governance efforts, or what might be termed "violent adaptation": a strategy in which adaptive practices and illiberal politics (e.g., autocratic tendencies, extrajudicial violence and cronyism) blend seamlessly alongside a scalar politics that operate within Duterte's broader populist environmental governance.

5. Strongman against the drought: responding to the 2018–19 El Niño event

Cyclically recurring El Niño events, as part of the larger ENSO phenomenon, are a significant element of Philippine political and economic life. Like other climate events, the El Niño phenomenon has been enveloped in a formal bureaucracy that cuts across sectoral boundaries and is targeted by a language of risk reduction and increasingly sophisticated predictive services. While the phenomenon has been an ever-present feature of colonial and pre-colonial worlds and known to Philippine scientists since the 1970s (Bankoff, 2003), a series of particularly intense El Niño events in the 1980s and 1990s produced impacts that were widely reported both in the national and international press, augmented by the growing capability of the PAGASA to more effectively predict and communicate the risk of El Niño events beginning in the late 1980s. The 1997/8 event was particularly severe across Southeast Asia, with significant impacts on food security among the rural and urban poor in the Philippines. In response to the crisis in the Philippines, the Fidel Ramos administration activated an interagency task force – headed by the National Economic and Development Authority (NEDA) – to provide disaster relief during El Niño events. The task force was permanently institutionalised in 2001 under the Arroyo administration and reactivated again in 2010. In 2015–16, another strong El Niño event led the Aquino government to reactivate the El Niño Taskforce with a clearer anticipatory focus. This shift in focus meant that, alongside the usual disaster relief responses such as releasing emergency funding to local government units, the task force was charged with formulating a more proactive approach to future events in line with the Philippine state's wider pivot towards Disaster Risk Reduction terminology, known as the "Roadmap for Addressing the Impacts of El Niño" or RAIN. Throughout the 2010s, concern for drought, as with other climate hazards, became interwoven across a vast swath of government departments and initiatives, focused primarily on guiding farmers and fisherfolk into a range of livelihoods and practices deemed to be resilient against future droughts. While concerns around drought have become enmeshed in the language of climate governance, efforts to adapt to El Niño events remain cyclically tied to the event itself, where significant leaps occur as a punctuated response to well-publicized disaster and are, often, soon forgotten once the drought recedes. Furthermore, as noted, under Duterte governance of climate change has become even further tied to highly personalised presidential responses to calamity. To examine the interplay between the thickening but impersonal climate bureaucracy and the highly personalised responses of politicians, both comprising "the state's" governance of climate change, I focus here on the 2018–2019 El Niño event and attendant governmental responses. These heterogeneous responses exemplify the shifting politics of adaptive practices that span decades and envelopes personal grudges, geopolitical objectives and the cyclical authoritarianism of Philippine politics.

In July of 2018, PAGASA issued an "El Niño Watch" that indicated a high likelihood of an El Niño-driven drought event in the coming dry season. The Philippines subsequently experienced "weak" El Niño conditions first beginning in October 2018. This entailed below-average rainfall in many parts of the country, particularly the densely populated island of Luzon, lasting until July 2019. Drought-like conditions across key agricultural regions decreased rice and corn production, an impact felt most acutely by poor farmers with limited access to irrigation infrastructure (Mercado, 2019). Like all El Niño events, the impacts were also far broader than agricultural production. For example, lower than expected rainfall hindered hydroelectric energy production, a significant element of the nation's energy mix, resulting in an attendant rise in coal-powered electricity generation on the southern island of Mindanao (Francisco, 2019). These impacts, though cross-cutting and significant, were muted relative to prior El Niño events and, in rural areas, prompted only routine responses from relevant government departments. These include the typically reactive, and highly performative, measures of increasing food imports to offset local shortfalls in production and alleviate politically disastrous increases in staple food prices, and a widespread campaign of cloud seeding from the Philippine Airforce and various governmental departments to replenish dams across the country for both agriculture and energy production. However, amid these relatively small impacts, this El Niño event was lent particular political urgency because of the significant impact on the nation's wealthier urban centres. Perhaps most significantly, the capital of Manila experienced chronic and highly visible water shortages that were blamed on El Niño conditions.

The revived El Niño Task Force, reactivated only at the tail end of the drought in August of 2019, was again focused on immediate disaster relief efforts and an expanded vision for the still largely unrealised Roadmap for Addressing the Impact of El Niño, known as E-RAIN. In response to the political theatre enveloping Manila's water supply, water security was now added as a distinct priority area for the first time (previously enveloped into the "Health" priority). However, as in the previous iteration of the Task Force, the focus was on immediate amelioration of suffering, and the roadmap's long-term goals remained particularly nebulous (e.g., one key goal is simply "seed distribution" to farmers with no elaboration on what seeds might go to what farmers).

Alongside the slow-moving national adaptation bureaucracy, water security became the object of concern for Duterte himself who championed a personal campaign to alleviate the water crisis through a constellation of tactics. Early in 2019 as relentless reporting showed long lines of Manila residents queuing for rationed water, Duterte's ire was directed toward Manila's state-owned Metropolitan Waterworks and Sewerage System (MWSS) that provides oversight of the city's two private concessionaires. In a characteristically bombastic off-script speech during a political rally in 2019, Duterte explained that "This week I will be firing …. You know that MWSS. You knew that every — it's seasonal. It comes with regularity that El Niño. Sons of bitches, how many years have you already been there and you do not prepare for it? And when it comes, people already had no water" (Villanueva, 2019). During the prior 2015–2016 event Manila and other major urban centres experienced similar water shortages (Porio et al., 2019), although the

visibility, reportage and politicization of the 2019 shortage far outmatched previous crises.

Throughout 2019 and 2020 as the fallout of the water crisis continued, Duterte placed the blame for the crisis specifically on the city's two private water concessionaires, Manilyad and Manila Water, in a series of chaotic press conferences. Duterte ordered the Department of Justice to review their existing contracts and threatened to renationalise the water services. Early in 2020, Duterte echoed threats to imprison owners of both companies if they refused new contracts with more favourable terms, suggesting that "in one night, I would send them to jail. You will rot there. When would I release you? You'd stay there as long as I want to. Marcos had 27 years. It would be 30 years for me. Sons of bitches. I told you so" (Rappler, 2020). Yet this was far from an impersonal quest for water security as both concessionaires were controlled by Duterte's political opponents, whom Duterte had previously charged with corruption and membership in the country's destructive oligarchy (Regilme, 2021). While a presidential spokesperson would quickly clarify that the president would follow legal procedures, this bombastic rhetoric had the desired chilling effect on both companies, who dropped years-long efforts to collect damages from the Philippine government, the Ayala corporation (with the Ayala family being longstanding political enemies of Duterte) sold off a controlling portion of Manila Water and, ultimately, by companies signed new contracts that contained key provisions to keep fees low and limit revenues. Duterte's drug war, with a body count numbering in the tens of thousands, has been promulgated through similarly deniable "jokes" or exaggerations, meaning that these threats are far from baseless and carry significant weight as a negotiating tactic.

6. The Kaliwa dam project

Duterte also leveraged the crisis as an opportunity to renew stalled plans for the proposed New Centennial Water Source–Kaliwa Dam project, a significant infrastructure project long deemed necessary for Manila's future water supply to accommodate both the rapid rise in population and the recurring (and intensifying) shortages the city experiences during El Niño events. A series of dams in Rizal province was originally proposed during the Marcos dictatorship, but went ultimately uncompleted before his downfall and the project went through several decades of continued on-and-off investigation. In response to ongoing concerns around urban water security in Manila, the project was revived during the Aquino administration under then-popular public-private partnership arrangements (Camba, 2020). Duterte's signature "Build, Build, Build" economic policy instead favoured funding such projects through direct foreign loans, particularly from the Chinese state's Belt and Road Initiative as part of a wider rapprochement with Beijing that included, for example, limiting contestation over islands in the South China Sea and adopting a cooler relationship with the United States, against whom Duterte held a personal grudge. By 2017, the New Centennial Water Source project had secured funding from the Export-Import Bank of China, under terms typical of other BRI projects that involve limited scrutiny of potential human rights abuses in exchange for heavy involvement of Chinese firms (in this case, China Energy) and labor in the construction process (Camba, 2021). The Kaliwa dam was the first and smallest instalment of three dams forming the New Centennial Water Source system that would secure Manila's water supplies.

However, the dam's proposed location, in the Sierra Madre mountain range in the province of Quezon, posed a significant hurdle for both MWSS and the Duterte administration's large-scale infrastructure development agenda. The proposed project would impact vanishingly rare forest cover as well as indigenous Dumagat-Remontado hamlets in the area, sparking protests and condemnation from environmentalists and indigenous groups who formed an activist alliance that galvanized anti-dam sentiment. In 2018, following the finalization of funding, the project was the target of widespread and highly publicized resistance from a constellation of non-governmental organisations. While eventually the Department of Environment and Natural Resources would submit to pressure from the Duterte administration and supply an environmental compliance certificate (Subingsubing & Ramos, 2021), the project faced stiff resistance from indigenous groups through the statutorily mandated Free and Prior Informed Consent (FPIC) process under the nation's Indigenous Peoples' Rights Act of 1997, which came to be seen as the primary barrier to the project's completion. In 2019, MWSS's Chief Regulator noted, for example, the government's lack of resolve towards poor, rural peoples and their activist allies: "It's our fault. It's the government because the Kaliwa Dam, Laiban Dam has been proposed since the Marcos time and due to lot of oppositions and accommodations for the IPs [indigenous peoples], from the informal settlers, from this leftist group, church group, these projects keep on getting moved" (Viray, 2019).

These blockages coincided with the water crisis of 2019. Duterte, angered by the slow pace of the administration's high-profile development agenda during the fallout of the El Niño in late 2019 threatened to nebulously "wield extraordinary powers" in the form of "expropriation or outright police powers" to advance the project (Corrales, 2019). The use of extrajudicial means was justified in classically populist terms, with Duterte emphasising that "I cannot just allow people to go about without water even for drinking" and placing himself as a key actor in the struggle: "you just go to court and file a case if you want. I am there and I will start to find a way to connect the water to the people". These kinds of statements that vaguely imply extrajudicial action are not simply rhetorical flourishes, but are a key part of Duterte's broader strategy for enabling extrajudicial violence against political opponents and "enemies of the people". This has been most visible internationally through the semi-official war on drug users and pushers, resulting in over 20,000 deaths, which Duterte has consistently denied orchestrating under the guise of highly public jokes or exaggerations. The same strategy has been extended to extrajudicial killings of environmental defenders across the nation to remove opposition to agribusiness, mining and significant state infrastructure development (Dressler, 2021; Dressler & Smith, 2022). The Kaliwa Dam project, despite its high profile, has not escaped this kind of violence established through a diffused chain of culpability.

Since 2019, Duterte has overseen the steady militarization of the Kaliwa Dam project's implementation and protection in ways that are both insidious and overt. For example, in 2019 Duterte appointed Allen Capuyan as the head of the National Commission on Indigenous Peoples (NCIP), the institution primarily responsible for ensuring that indigenous peoples' rights are safeguarded during development activities (Delfin & Mallari, 2022). Capuyan, a retired colonel of dubious indigenous ancestry whose experience with indigenous communities primarily derives from leading national counter-insurgency efforts, was a controversial choice. The NCIP has subsequently been accused of "railroading" the FPIC process by strategically excluding indigenous community members opposed to the dam from crucial consultation meetings. At the same time, Duterte also led the appointment of a former Philippine marine general to the MWSS board, alongside the deployment of the military to guard the preliminary infrastructure surrounding the dam's construction (e.g, roads, construction equipment). This deployment followed claims by the Maoist New People's Army that they would attack Chinese-funded infrastructure projects and the Kaliwa site in particular (Chavez, 2019). The ongoing rebel activity in the area created an ambiguous atmosphere in which any state opponents could be plausibly labelled as communist rebels (also known as "red-tagging") and, therefore, be targets of counter-insurgent violence. Unsurprisingly, two high profile indigenous Dumagat activists involved in anti-Kaliwa activity were killed by Philippine police and special forces in March of 2021 as part of large-scale raids against suspected communist insurgents in Luzon that resulted in the deaths of nine people who putatively resisted arrest (also known as "Bloody Sunday"). The targeted assassination of activists is not unique to the Kaliwa project but is a systemic

feature of the development process in which state security forces aim to erode community resistance to infrastructure projects under the guise of counter-insurgency and presidentially authorised immunity to prosecution (Dressler & Smith, 2022). In the broader field of violence against environmental defenders across the nation, the targets of such are violence are often disproportionately indigenous communities.

This constellation of tactics, bringing together slow and insidious militarization of environmental institutions and stark extrajudicial violence, would eventually yield results for Duterte. In early 2022, a heavily contested FPIC process facilitated by the NCIP resulted in an agreement between the indigenous community and MWSS, with construction anticipated to begin in June.

7. Discussion and conclusion

The imperative to adapt to climate change has no longer come to refer to a readily identifiable set of practices. While earlier literature sought to map precise definitions, often through the language and logic of systems thinking, the term is now deployed by both practitioners and scholars in increasingly diffuse, overlapping and even contradictory ways. The challenge, therefore, has become identifying the multiplicity of these formations and understanding their political effect. This paper has aimed to explore the adaptive practices of the Philippine climate bureaucracy and the Duterte administration, two symbiotic elements of a heterogenous state response, and positioned these recent responses within a longer history in which climate governance – in form of knowledge production projects, disaster relief efforts and risk reduction strategies – and politics are tightly bound together. This blending has increasingly become a visible feature of everyday life and routine politics over the past 20 years as the Philippine nation and its leaders grapple with the staggering costs of recurring climate disasters, manifesting in what I have termed here "violent adaptations". The aim of focusing on violent adaptations should not be to codify them as a desired or hopeful pathway but to emphasise that there are two forms of vital work to be done surrounding their operation.

The first lies in charting their origins, practices and differential impacts. Experiences in the Philippines, in which populist leaders not only accept but leverage climate change in ways that reinforce personal power, are explicitly decolonial and have genuine "adaptive" intent, remain relatively unique on the global stage. This combination is likely a product of the brutal and routine realities of the nation's climate vulnerabilities that render denialism electorally unviable. Yet, as anthropogenic climate change becomes manifest in other nations that flirt with populism, I suggest that illiberal responses will become an increasingly viable adaptation future, presenting an alternative to both the established liberal-humanist climate governance of the multilateral institutions or the radical propositions of contemporary climate adaptation researchers (Smith and Dressler, 2019). This possibility should remain a key concern for the climate justice movement and its academic allies as hybridized authoritarian populism remains, if not in ascendance, powerfully stubborn across the globe. This is particularly true in much of the Global South already experiencing the shattering impacts of climate change. There is a threat of violent adaptations being routinized given the growing anxiety to securitize life in the face of climate extremes and in places where extrajudicial violence is already deployed and normalized in populist terms. Modi's India, for example, Indonesia's subnational politics, and much of the rest of Southeast Asia are all key sites where violence is increasingly creeping into routine religious and ethnic conflict, agrarian change and other realms of contestation.

In the Philippines itself, Duterte is often cast as an exceptional aberration, whose distinct techniques of government will end with his term. Yet, as this paper has described, the blurring of adaptation and political power has been a key feature of Philippine climate change and disaster management policy, in varied and changing forms, since the colonial period. Locating recent characteristics of climate change governance in these histories also suggests that seemingly ephemeral or outrageous characteristics of Duterte's administration – the inseparability of personal patronage and disaster response, extrajudicial and militarized violence against environmental defenders – are arguably institutionalised features of Philippine politics, and have been in large part since the highly controlled experiments with electoral politics of the commonwealth period (Rafael, 2021). Furthermore, Duterte has also enjoyed enduring popularity over his term often because of, not in spite of, his illiberal actions. While Duterte's policies are by no means universally supported and have at times sparked considerable protest, he remains one of the most popular Philippine presidents. At the end of 2021, amid the ongoing impacts of the COVID-19 pandemic, Duterte enjoyed a personal approval rating of 65%, a rating that often exceeded 75% for much of his six-year term. This popularity indicates a significant (though hardly uncontested) and longstanding public appetite for violent adaptation that exists as a foil to the sclerotic climate bureaucracy. Indeed, the perceived failure of formal institutional responses may vest further public support in national or regional political leaders who blur the line between legal and extrajudicial action to provide tangible results. At the time of this paper's writing in 2022, Ferdinand Marcos Jnr and Sara Duterte-Caprio were elected in what was a crushingly affirmation of Duterte's presidency, style of government and public tolerance for extrajudicial violence. While Marcos' climate change goals remain nebulous, there is little expectation that his administration will significantly reverse or repudiate in any fashion the now-entrenched violence surrounding the Kaliwa Dam and other critical projects that seek to explicitly secure life and economic prosperity in the face of climate change.

Secondly, taking seriously actually existing examples of diverse adaptations, such as those in the Philippines in which a vast bureaucracy operates symbiotically with violent extrajudicial power, opens critical attention to a plurality of uncomfortable and ontologically diverse adaptation futures This engagement with violent adaptations also challenges a core charge of recent critical literature that has argued for ontological inclusivity and the need for greater respect for alternative ways of knowing and responding to climate change. In particular, calling attention to violent adaptations troubles recent and powerful arguments within researcher communities focused on adaptation, and beyond in the climate justice movement, for the blanket valorisation of ontological multiplicity (often without actually engaging the perspectives of such peoples). Political ecologists have responded to similar challenges around post-truth politics by calling for sharp distinctions between, for example, the ontologies of oil companies and those of indigenous or marginalised peoples (Neimark et al., 2019). Yet, in the Philippines and many other places, the worldviews of autocratic leaders and the marginalised groups intermingle in unsettling ways as populists such as Duterte tactically appropriate and refashion various forms of agrarian angst or decolonial sentiment in the service of violence.

These kinds of situations raise difficult questions within the burgeoning literature on climate justice: what visions of decolonial climate justice are worthy of respect, and how and by whom should such decisions be made? Undeniably, primarily Western-based or trained scholars perform considerable intellectual labour to create a highly selective list of appropriate climate change visions that operate in conversation with social movements concerned with climate justice. While I am invested and supportive in this process, I also balance my advocacy with the conclusion it is dangerous given the frankly limited resonance of these ideas in significant swaths of the non-Western world where authoritarian forms of populism enjoy considerable support. The uncomfortable reality that the targeted beneficiaries of climate justice movements and critical adaptation studies, those most impacted by climate change and least involved in decisions around adaptation or mitigation (Newell et al., 2021), might support violence-tinged adaptation indicates a need to develop strategies for reaching out to, rather than ignoring, such groups and adopt a more nuanced language that catalogue unsettling difference without necessarily endorsing or

valorising it.

Declaration of competing interest

None.

References

Bankoff, G. (2001). Rendering the world unsafe: 'Vulnerability'as western discourse. *Disasters, 25*(1), 19–35.

Bankoff, G. (2003). *Cultures of disaster: Society and natural hazard in the Philippines*. London: Routledge.

Bankoff, Greg (2007). Storms of history: Water, hazard and society in the Philippines 1565-1930. In Peter Boomhard (Ed.), *A world of waterWorld ofWater: Rains, Rivers and Seas in Southeast Asian Histories* (pp. 153–186). Singapore: NUS Press.

Beeson, M. (2018). Coming to terms with the authoritarian alternative: The implications and motivations of China's environmental policies. *Asia & the Pacific Policy Studies, 5*(1), 34–46.

Bello, W. (2017). Rodrigo Duterte: A fascist original. *A Duterte Reader: Critical Essays on Rodrigo Duterte's Early Presidency*, 77–91.

Blaser, M. (2009). The threat of the Yrmo: The political ontology of a sustainable hunting program. *American Anthropologist, 111*(1), 10–20.

Borras, , Jr., Saturnino, M., Franco, J. C., & Nam, Z. (2020). Climate change and land: Insights from Myanmar. *World Development, 129*, Article 104864.

Bronen, R., & Cochran, P. (2021). Decolonize climate adaptation research. *Science, 372*(6548).

Camba, A. (2020). The Sino-Centric capital Export regime: State-backed and flexible capital in the Philippines. *Development and Change, 51*(4), 970–997. https://doi.org/10.1111/dech.12604

Camba, A. (2021). *How Duterte strong-armed Chinese dam-builders but weakened Philippine institutions*. Carnegie Endowment for International Peace. https://carnegieendowment.org/files/202106Camba_Philippines_final1.pdf.

Casey, J. P. (September 19, 2018). Duterte vows to end all Philippines mining following disaster." *mining technology* (blog). https://www.mining-technology.com/news/duterte-vows-end-philippines-mining-following-disaster/.

Chavez, L. (2019 November 5). A philippine tribe that defeated a dam prepares to fight its reincarnation." Mongabay Environmental News. https://news.mongabay.com/2019/11/a-philippine-tribe-that-defeated-a-dam-prepares-to-fight-its-reincarnation/.

Colcol, E. (2020). *Duterte calls on world leaders to multilateralism on COVID response, climate action during east Asia summit*. GMA News Online, 2020 https://www.gmanetwork.com/news/news/nation/764175/duterte-calls-on-world-leaders-to-multilateralism-on-covid-response-climate-action-during-east-asia-summit/story/.

Corrales, N. (2019 October 28). Duterte to use 'extraordinary powers' for start of Kaliwa dam." INQUIRER.Net. https://newsinfo.inquirer.net/1182774/duterte-to-use-extraordinary-powers-to-start-of-kaliwa-dam.

Cortes-Vazquez, & Jose, A. (2020). In the name of the people: The populist redefinition of nature conservation in post-crisis Spain. *Geoforum, 108*, 110–118.

Curato, N., & Ong, J. C. (2018). Who laughs at a rape joke? Illiberal responsiveness in Rodrigo Duterte's Philippines. In T Deher, & A Mondal (Eds.), *Ethical responsiveness and the politics of difference* (pp. 117–132). London: Palgrave.

Curato, N., & Yonaha, Y. Y. (2021). Rodrigo Duterte: Macho populism and authoritarian practice. In Klaus Larres (Ed.), *Dictators and autocrats* (pp. 384–398). London: Routledge.

Delfin, & Mallari, T. (2022 January 27). Groups protest 'risky' mass gathering for Kaliwa dam project amid pandemic." INQUIRER.Net. https://newsinfo.inquirer.net/1546276/groups-protest-risky-mass-gathering-for-kaliwa-dam-project-amid-pandemic.

DENR. (1999). *The Philippines' initial national communication on climate change*. Manila: Department of Environment and Natural Resources.

Dillon, L., Lave, R., Mansfield, B., Wylie, S., Shapiro, N., Chan, A. S., & Murphy, M. (2019). Situating data in a trumpian era: The environmental data and governance initiative. *Annals of the Association of American Geographers, 109*(2), 545–555. https://doi.org/10.1080/24694452.2018.1511410

Dolšak, N., & Prakash, A. (2018). The politics of climate change adaptation. *Annual Review of Environment and Resources, 43*(1), 317–341. https://doi.org/10.1146/annurev-environ-102017-025739

Dressler, W. H. (2021). Quarantining activism: COVID-19, frontline defenders and intensifying extractivism in the Philippines. *Journal of Political Ecology, 28*(1), 453–470.

Dressler, W. H., & Smith, W. (2022). Blood, timber and plantations: The violence of enclosing lives and livelihoods in the Philippines. *Journal of Peasant Studies*. https://doi.org/10.1080/03066150.2022.2086799.

Eadie, P. (2019). Typhoon Yolanda and post-disaster resilience: Problems and challenges. *Asia Pacific Viewpoint, 60*(1), 94–107. https://doi.org/10.1111/apv.12215

Espejo, E. (2013 November 12). Duterte in Tears after visiting Tacloban." *RAPPLER* (blog). https://www.rappler.com/nation/43492-duterte-in-tears-after-visiting-ravaged-tacloban/.

Francisco, C. (April 3, 2019). Coal-fired plants taking up slack from Mindanao hydropower during El Niño." BusinessWorld online. https://www.bworldonline.com/coal-fired-plants-taking-up-slack-from-mindanao-hydropower-during-el-nino/. April 3, 2019.

Galvez, D. (2020 November 15). Duterte blames climate change for typhoons, flooding." INQUIRER.Net. https://newsinfo.inquirer.net/1360898/duterte-blames-climate-change-for-typhoons-flooding.

Goldman, M. J., Turner, M. D., & Daly, M. (2018). A critical political ecology of human dimensions of climate change: Epistemology, ontology, and ethics. *Wiley Interdisciplinary Reviews: Climate Change, 9*(4), e526.

Gonzales, Y. V. (2017 March 13). Duterte: Mining firms funding opposition's 'destabilization' plot." INQUIRER. https://newsinfo.inquirer.net/880305/duterte-mining-firms-funding-oppositions-destabilization-plot.

Government of the Philippines. (2009). Opening statement: President Arroyo during the event on 'climate finance: Challenges and opportunities for developing countries' | GOVPH." official gazette of the Republic of the Philippines. https://www.officialgazette.gov.ph/2009/12/17/opening-statement-president-arroyo-during-the-event-on-climate-finance-challenges-and-opportunities-for-developing-countries/.

Grove, K. J. (2014). Adaptation machines and the parasitic politics of life in Jamaican disaster resilience. *Antipode, 46*(3), 611–628. https://doi.org/10.1111/anti.12066

Grove, K., & Pugh, J. (2018). Adaptation machines, or the biopolitics of adaptation. In *The resilience machine* (Vols. 110–24)Routledge.

Haverkamp, J. (2021). Collaborative survival and the politics of livability: Towards adaptation otherwise. *World Development, 137*, Article 105152. https://doi.org/10.1016/j.worlddev.2020.105152

Hennessey, J. J. (1960). The Manila observatory. *Philippine Studies, 8*(1), 99–120.

Holden, W. N. (2019). Endogenous exacerbation of an exogenous problem: Climate change, environmental degradation, and unsustainable development practices in the Philippines. *Asian Geographer, 36*(1), 1–27. https://doi.org/10.1080/10225706.2018.1483831

Huber, R. A. (2020). The role of populist attitudes in explaining climate change skepticism and support for environmental protection. *Environmental Politics, 29*(6), 959–982. https://doi.org/10.1080/09644016.2019.1708186

Kabiling, G. (2019). Duterte commits to promote 'green' development. *Manila Bulletin*. https://mb.com.ph/2019/04/28/duterte-commits-to-promote-green-development/. (Accessed 28 April 2019).

Klein, N. (2020). *On fire: The (burning) case for a green new deal*. New York: Simon & Schuster.

Kojola, E. (2019). Bringing back the mines and a way of life: Populism and the politics of extraction. *Annals of the Association of American Geographers, 109*(2), 371–381. https://doi.org/10.1080/24694452.2018.1506695

Lo, K. (2020). Ecological civilization, authoritarian environmentalism, and the eco-politics of extractive governance in China. *The Extractive Industries and Society, 7*(3), 1029–1035.

McCarthy, J. (2019). Authoritarianism, populism, and the environment: Comparative experiences, insights, and perspectives. *Annals of the Association of American Geographers, 109*(2), 301–313. https://doi.org/10.1080/24694452.2018.1554393

Mercado, N. A. (2019 May 29). Nearly P8 billion worth of agri yields lost to El Niño – DA." INQUIRER.Net. https://business.inquirer.net/271553/nearly-p8-billion-worth-of-agri-yields-lost-to-el-nino-da.

Middeldorp, N., & Le Billon, P. (2019). Deadly environmental governance: Authoritarianism, eco-populism, and the repression of environmental and land defenders. *Annals of the Association of American Geographers, 109*(2), 324–337. https://doi.org/10.1080/24694452.2018.1530586

Mikulewicz, M. (2020). The discursive politics of adaptation to climate change. *Annals of the Association of American Geographers, 110*(6), 1807–1830. https://doi.org/10.1080/24694452.2020.1736981

Nadasdy, P. (2007). The gift in the animal: The ontology of hunting and human–animal sociality. *American Ethnologist, 34*(1), 25–43.

Neil Adger, W., Arnell, N. W., & Tompkins, E. L. (2005). Successful adaptation to climate change across scales. *Adaptation to Climate Change: Perspectives Across Scales, 15*(2), 77–86. https://doi.org/10.1016/j.gloenvcha.2004.12.005

Neimark, Benjamin, Childs, John, Nightingale, Andrea, Cavanagh, Joseph Connor, Sullivan, Sian, Benjaminson, Tor, … Harcourt, Wendy (2019). Speaking Power to "Post-Truth": Critical Political Ecology and the New Authoritarianism. *Annals of the American Association of Geographers, 109*(2), 613–623.

Newell, P., Srivastava, S., Otto Naess, L., Gerardo, A., Contreras, T., & Price, R. (2021). Toward transformative climate justice: An emerging research agenda. *Wiley Interdisciplinary Reviews: Climate Change, 12*(6), e733.

Nightingale, A. J. (2017). Power and politics in climate change adaptation efforts: Struggles over authority and recognition in the context of political instability. *Geoforum, 84*(August), 11–20. https://doi.org/10.1016/j.geoforum.2017.05.011

Nightingale, A. J., Eriksen, S., Taylor, M., Forsyth, T., Pelling, M., Newsham, A., Boyd, E., et al. (2020). Beyond technical fixes: Climate solutions and the great derangement. *Climate & Development, 12*(4), 343–352. https://doi.org/10.1080/17565529.2019.1624495

Ofstehage, A., Wolford, W., Saturnino, M., & Borras. (2022). Contemporary populism and the environment. *Annual Review of Environment and Resources, 47*(1), 1–26.

Ong, J. C. (2015). Witnessing distant and proximal suffering within a zone of danger: Lay moralities of media audiences in the Philippines. *International Communication Gazette, 77*(7), 607–621. https://doi.org/10.1177/1748048515601555

PAGASA. (2022). Tropical cyclone information. https://www.pagasa.dost.gov.ph/climate/tropical-cyclone-information.

Placido, D. (2018). *Climate change a 'day-to-day problem': Duterte*. ABS-CBN News. July 25 https://news.abs-cbn.com/news/07/25/18/climate-change-a-day-to-day-problem-duterte.

Porio, E., Dator-Bercilla, J., Narisma, G., Cruz, F., & Yulo-Loyzaga, A. (2019). Drought and urbanization: The case of the Philippines. In B. Ray, & R. Shaw (Eds.), *Urban drought: Emerging water challenges in Asia* (pp. 183–208). Singapore: Springer Singapore.

Rafael, V. L. (2021). *The sovereign trickster: Death and laughter in the age of Duterte*. Durham: Duke University Press.

Ranada, P. (2017 March 1). Duterte signs Paris climate deal." *RAPPL*ER (blog). https://www.rappler.com/nation/162865-duterte-signs-paris-agreement-climate-change/.

Ranada, P. (2019 May 31). "Duterte slams climate change conferences for accomplishing 'nothing.'" RAPPLER (blog). https://www.rappler.com/nation/231941-duterte-slams-climate-change-conferences-accomplishing-nothing/.

"Duterte to Maynilad, Manila water: Accept new deals or rot in jail." RAPPLER (blog). https://www.rappler.com/nation/249684-duterte-maynilad-manila-water-accept-new-deals-or-rot-jail/, (2020 January 19).

Rarai, A., Parsons, M., Nursey-Bray, M., & Crease, R. (2021). *Situating climate change adaptation within plural worlds: The role of indigenous and local knowledge in Pentecost island, Vanuatu." Environment and Planning E*. Nature and Space. https://doi.org/10.1177/25148486211047739.

Regilme, S. S. F. (2021). Contested spaces of illiberal and authoritarian politics: Human rights and democracy in crisis. *Political Geography, 89*. https://doi.org/10.1016/j.polgeo.2021.102427

Saguin, K. K. (2022). *Urban ecologies on the edge: Making Manila's resource frontier*. Berkeley: University of California Press.

Scoones, I., Edelman, M., Borras, S. M., Hall, R., Wolford, W., & White, B. (2018). Emancipatory rural politics: Confronting authoritarian populism. *Journal of Peasant Studies, 45*(1), 1–20. https://doi.org/10.1080/03066150.2017.1339693

Scoville-Simonds, Morgan, H. J., & Hufty, M. (2020). The hazards of mainstreaming: Climate change adaptation politics in three dimensions. *World Development, 125*. https://doi.org/10.1016/j.worlddev.2019.104683

Smith, W. (2020). *Mountains of blame: Climate and culpability in the philippine uplands*. Seattle: University of Washington Press.

Smith, W., & Dressler, W. (2019). Governing vulnerability: The biopolitics of conservation and climate in upland Southeast Asia. *Political Geography, 72*, 76–86.

Subingsubing, K., & Ramos, M. S. (2021). *Why the ECC process for Kaliwa dam had been faulty, according to an anthropologist*. INQUIRER.Net, 2021 https://newsinfo.inquirer.net/1490073/why-the-ecc-process-for-kaliwa-dam-had-been-faulty-according-to-an-anthropologist.

Theriault, N. (2017). A forest of dreams: Ontological multiplicity and the fantasies of environmental government in the Philippines. *Political Geography, 58*, 114–127.

Theriault, N. (2019). Euphemisms we die by: On eco-anxiety, necropolitics, and green authoritarianism in the Philippines. *Beyond Populism: Angry Politics and the Twilight of Neoliberalism*, 182–209.

Tschakert, P., Schlosberg, D., Celermajer, D., Rickards, L., Winter, C., Thaler, M., Stewart-Harawira, M., & Verlie, B. (2021). Multispecies justice: Climate-just futures with, for and beyond humans. *WIREs Climate Change, 12*(2), e699. https://doi.org/10.1002/wcc.699

Tupaz, V. (2015 November 30). Aquino: 'Fair' climate change deal for poor countries." *rappler* (blog). https://www.rappler.com/nation/114512-aquino-leads-vulnerable-countries-in-calling-for-fair-climate-deal-cop21/.

Villanueva, R. (2019). *Duterte threatens to sack MWSS execs*. The Manila Times. April 18, 2019 https://www.manilatimes.net/2019/04/18/news/headlines/duterte-threatens-to-sack-mwss-execs/541979.

Viray, P. L. (2019). *Government is partly to blame for water crisis, says MWSS*. Philstar.Com, 2019 https://www.philstar.com/headlines/2019/03/14/1901431/government-partly-blame-water-crisis-says-mwss.

Warren. (2013). A tale of two decades: Typhoons and floods, Manila and the provinces, and the Marcos years. *The Asia–Pacific Journal: Japan Focus, 11*(43/3). http://apjjf.org/2013/11/ 43/James-F.-Warren/4018/article.html.

Warren, J. F. (2015). Philippine typhoons, sources and the historian. *Water History, 7*(2), 213–231. https://doi.org/10.1007/s12685-015-0131-0

Whyte, K. (2017). Indigenous climate change studies: Indigenizing futures, decolonizing the anthropocene. *English Language Notes, 55*(1), 153–162.

Wilson, R. (2019). Authoritarian environmental governance: Insights from the past century. *Annals of the Association of American Geographers, 109*(2), 314–323.