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Education and Governance for Justice with Martuwarra, and the Greater Good

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Abstract

Martuwarra the Fitzroy River, is a living entity encompassing law, values, ethics and virtues who has laid the foundation for learning and self-regulation. Martuwarra foster peace, harmony and balance within a water system covering 93,829 square kilometres of the Western Australian Kimberley region. However, climate uncertainty as part of the unfolding metacrisis demonstrates the limitations of decades of colonial invasive development in the Kimberley. In this paper the authors illustrate Traditional Owner water knowledge, science and lived experiences as managers of the catchment from the beginning of time. Traditional Owner knowledge and practices, fine-tuned over thousands of years, carry water governance and management through First Law, the law of the land and not man. The authors advocate for this ancient knowledge to be learned by fellow citizens in the region, governments, industries and other parts of Australia, as it is essential to modernity. They propose a bicultural and bioregional governance model to create a better future for the greater good of all.

Keywords: bioregional governance; climate justice; colonialism; Indigenous Australian; water justice

Introduction

The voice and the authority of Martuwarra, Fitzroy River encompassing law, values, ethics and virtues have laid the foundation for learning, within this living water system. As diverse authors with complementary expertise and research interests, we ground our collective world views and learnings into decolonising the settler state ideology. We highlight that Martuwarra itself is an educator – a living water system that teaches principles of balance, reciprocity and interdependence. In this way, the unfolding metacrisis is framed as an educational transition, where modern societies must unlearn anthropocentric paradigms and learn anew from Country. We share wide ranging narratives to ground climate uncertainty into the unfolding metacrisis. We provide a knowledge to educate the broader public, policy and law makers as these are public interest matters which reveal, the limitations of colonial invasive development over decades in the Kimberley region of Western Australia. We include Traditional Owner water knowledge, science and lived experience managers of the catchment from the beginning of time. Traditional Owner knowledge, and practice fine-tuned over thousands of years water governance, management through First Law, law of the land and not man. We advocate this pathway for our fellow citizens in the region, governments, industries and other parts of Australia, to learn this ancient knowledge

which is relevant for modernity. We propose a bicultural and bioregional governance model to create a better future for the greater good of all.

The paper is grounded in the lived experiences of colonialism and the unjust developments impacting on Indigenous people from the continent hereby referred to as ‘Australia’ and their fellow Australians living within the Martuwarra, Fitzroy River catchment (hereby referred to as Martuwarra or the River) in the Kimberley region of Western Australia (WA). Guided by Martuwarra, RiverOfLife, as first author, we come to this body of work as researchers. Carracher, 6th generation Australian collaborating with Poelina, an Indigenous Australian, insider and senior academic researcher. Both researchers live and work within this globally unique Martuwarra Fitzroy River catchment.

In the anti-dialogical theory of action, cultural invasion serves the ends of manipulation, which in turn serves the ends of conquest, and conquest the ends of domination. (Whereas dialogic action theory promotes) cultural synthesis (which) serves the ends of organization; organization serves the ends of liberation (Freire, 2000, p. 183).

Civilisation is built upon solving the cost of its complexity. In this context, what makes this complexity unique is the sheer scale of the anthropocentric abstraction.

The nature – culture divide has resulted in modernity’s metacrisis. In this paper, we define the metacrisis as an educational condition – not crisis in isolation, but a curriculum of transition that teaches societies to rethink their relationship with nature and each other. We ask: Can lessons from a River and the custodians of Martuwarra provide a pathway through the Metacrisis? Does the metacrisis provide an opportunity for intergenerational justice, and further validate the need to follow First Law and bioregional ethics protocols?

This paper responds to the metacrisis by situating it as an educational transition – a profound moment of collective learning and unlearning in how societies relate to law, governance and the living world. Water governance negotiations are not only political and legal matters, but also pedagogical encounters where vital lessons about relationality, reciprocity and belonging to one living system are taught and learned. By understanding these processes as educational, the metacrisis is reframed as a curriculum of transition.

Martuwarra, RiverOfLife, is a living Ancestor Being whose lessons underpin Kimberley Aboriginal people’s lawful, physical, emotional and spiritual well-being, and thousands of years of customary practices for Traditional Owners who belong to the River. The discipline of environmental humanities looks at how both humans and non-humans can come together to protect the environment for humanity and the world. This multi-species approach transcends the usual boundaries of science, humanities, culture and nature and in doing so illustrate the concept of “nature-cultures” which enables multiple actors, both human and non-human, to effect change at a global level (Latour, 2013). In view of this, Martuwarra is credited as First Author for Country, and the protection of Country, is the central tenet of this paper - without Country, without the River, and its complex, multi-layered and ever-evolving inter-relationships with its custodians, there would not be a paper (Poelina *et al.*, 2023). Our collective approach is to identify a pathway for procedural and distributive justice (A. Poelina, Taylor & Perdrisat 2019) through a bicultural and bioregional catchment wide governance mechanism (Thackway & Cresswell, 1997). Negotiations between Indigenous and settler governance are reframed here as educational encounters, sites where knowledge systems can learn to coexist.

In this exploration we examine Martuwarra, and the West Kimberley’s compounding pressure points in considering water extraction for extractive industries, inclusive of mining, pastoralism and intensive agriculture. We advocate the opportunity for water and climate justice with Martuwarra in the context of contemporary Australia. We reflect on the modernity of from a regional context, whilst illuminating Indigenous governance under First Law and we frame this

with the understanding of the ‘settler state’. We share what Indigenous leaders are doing in the establishment of the Martuwarra Fitzroy River Council (MFRC).

Importantly we conclude with the vision of the future, a path of learning through the metacrisis to sustain the wellbeing, lifeways and livelihoods of all people. Most importantly, to continue to protect Martuwarra, its people, and the River’s right to continue to live and flow.

Context

Australia was colonised by the British with the justification of a legal fiction, *Terra nullius*, “land belonging to no one.” *Terra nullius* was overturned by the High Court of Australia (*Mabo v Queensland (No 2)*, 1992). As with *terra nullius*, legal scholars question the legitimacy of the settler-state to govern Australia’s water resources under another myth, *aqua nullius* (Marshall, 2017; O’Donnell, 2023; Taylor, Moggridge & Poelina 2016).

It is argued that the legitimacy of the colonial power to govern water in Australia is built on the principle that no pre-existing relationship existed between Aboriginal people and water (Hill et al., 2022; Sheehan & Small, 2007). Water and land continues to play a central role in the continued colonisation, invasion of Australia (R. Morgan, 2015; Sheehan & Small, 2007). Nyikina elder Joe Nangan, laments in his story of how the world of Nyikina people changed, ‘when they cut up the land with fences’ (Butcher & Edwards, 1976).

Located in the Kimberley Region of Northern Western Australia (WA), the Martuwarra Fitzroy River is one of the largest unregulated rivers in Australia, and one the largest intact tropical rivers on earth (Carracher, Martuwarra & Poelina 2024). Martuwarra’s major populations reside in the towns of Fitzroy Crossing and Derby, with an additional 57 smaller communities scattered throughout the catchment, making the watershed home to approximately 7,000 people, of which 80% are Indigenous (Indigenous Peoples are also interchangeably referred to as Aboriginal Peoples or Traditional Owners in this paper). Martuwarra’s catchment encompasses 10 Indigenous languages derived from 5 language families (McGregor, 1988).

Martuwarra is WA’s longest registered Aboriginal Cultural Heritage Site and is National Heritage listed due to its cultural significance to Indigenous Nations connected to the River; through First Law, song, ceremony and trade. A relationship, of reciprocity, respect, rights and responsibilities, forged over tens of thousands of years (Poelina et al., 2019).

Across the world, contact between Indigenous peoples and the settler-state consistently resulted in violent conflicts, the loss of life and the dispossession of land. Complex relationships evolved between the dispossessed and the invaders. The Kimberley is no different. Often referred to as “the last frontier of Australia,” what sets the Kimberley apart is how recently these events took place. This inter-generational lived experience is embedded in the recent memory of Kimberley Traditional Owners,

“my ancestors showed the pastoralists where the water was, they shared their Country and worked for nothing. Enough is enough,” (Personal Communication, Senior Elder, speaking to Government representatives proposing water extraction in 2023).

Resistance to colonisation by Aboriginal people saw to the best part of a quarter of the Western Australian police force occupying the Kimberley region between 1890 and 1926. This period of state-sanctioned genocide and slavery is referred to locally as ‘the killing times’ (Carracher et al., 2024; McGregor, 1985; Woorunmurra & Pedersen, 2019).

The genesis for the Western Australian government was intertwined with the pastoral industry; John Forrest, Western Australia’s first premier (1890 – 1901), was the brother of Alexander Forrest, who opened the Kimberley region to pastoralism (Carracher et al., 2024; RiverOfLife, McDuffie et al., 2020). John and Alexander are the great uncles of Andrew ‘Twiggy’ Forrest, who Forbes magazine ranked Australia’s second richest person in 2023 with a net worth of

\$33.29 billion (Bailey, 2023). Andrew Forrest is today a major pastoral leaseholder on the banks of Martuwarra and a significant iron ore industry stakeholder in the neighbouring Pilbara Region, colloquially known as Australia's quarry.

Capitalism requires colonisation (Crook, 2024), and northern Australia has long been promoted by the settler-state as 'the frontier'. A white paper published by the Australian Coalition party in 2013 stated "No longer will Northern Australia be seen as the last frontier; it is in fact, the next frontier," the paper later continues by declaring that it would be 'negligent if we did not strive to capitalise on the opportunities within northern Australia' (Coalition, 2013). Extractive industries are expanding their demands on land and water. Today they cut up the land with 'grid line' and scar the landscape in their pursuit of oil and gas extraction, in addition to the clearing of large-scale vegetation for pastoralism and agricultural developments. From inception, settler states governments have held onto another myth, that "the North's has seemingly boundless economic potential waiting to be capitalised on" (Davidson, 1965) This myth continues to attract further taxpayer investment, however, for decades, it has been severely critiqued by scholars (Davidson, 1965), whilst failed ventures continue to provide fresh case studies (Poelina et al., 2019). Concurrently, Northern Australia is home to the nations most disadvantaged communities, with a disproportionate representation of Indigenous communities (ABS, 2021). Social license for proposed expansion of extractive industries is framed by the promise to deliver socio-economic benefits to regional Indigenous communities (Verran et al., 2022). However, there are few examples of sustainable community economic outcomes nor projects which have delivered the economically potential justified by original proposals (Poelina, Brueckner & McDuffie 2021).

The ongoing, invasive, unjust development process of colonisation is driven by the extractive industries capture of the Western Australian settler-state government (Alexander, 1988; Thomson & Dortch, 2023). This unjust development relationship has caused dramatic changes to Traditional Owners' lives, which continue to the present (Jebb, 2003; O'Donnell, 2023).

First peoples have sustainably managed Martuwarra for at least 50,000 years, we look to lessons from Country and Culture in a time of social and climate upheaval.

Heritage

To inherit a quality, characteristic, or predisposition from one's parents or ancestors. (Australian Oxford Dictionary, 2004)

The cultural and ecological heritage values of Martuwarra are recognised in numerous ways, the West Kimberley National Heritage site description states:

"The Fitzroy River and a number of its tributaries, together with their floodplains and the jila sites of Kurrpurrngu, Mangunampi, Paliyarra and Kurungal, (and Yoongoorrookoo) demonstrating distinct expressions of the Rainbow Serpent tradition associated with Indigenous interpretations of the different ways in which water flows within the catchment and are of outstanding heritage value to the nation for their exceptional ability to convey the diversity of the Rainbow Serpent tradition within a single freshwater hydrological system." (DCCEEW, 2011)

The entire basin, from headwaters to estuary, is interconnected and co-dependent, linked by complex groundwater systems and dynamic surface water regimes that maintain the ecological health of the River system and surrounding landscapes (Beesley et al. 2021; DWER, 2023).

Martuwarra is an ecological stronghold for a swathe of endangered fauna, including the World's most Evolutionarily Distinct and Globally Endangered species, the Freshwater Sawfish (*Pristis Pristis*) (Lear et al., 2019). Martuwarra's flow supports regional industry, communities and customary economies whilst being the focal point for a rich tapestry of ecological and cultural heritage values (Department of Water, 2010, p. 203).

River health is essential for the welfare and wellbeing of Indigenous communities and the intergenerational obligation to care for Country is fundamental to the culture of Martuwarra's Traditional Owner's moral duty of care for everyone and everything around them. The greater good of human and non-human life (Burgess et al., 2005; Griffiths & Kinnane, 2011; Toussaint et al., 2001).

Strong Indigenous leadership and uneconomically viable transport hurdles have, to date, shielded Martuwarra from industrial-scale exploitation as seen in other areas of Australia. Today, Indigenous Peoples of Martuwarra hold an unbroken and resilient living dynamic framework specific to the catchment. This living framework encompasses legal, socio-cultural and ecohydrological governance integrated into supporting epistemological and ontological systems stretching back millennia, with knowledge and customary practices still alive and cooperatively practiced to this day (Laborde & Jackson, 2022; RiverOfLife et al., 2020). Grounded in their collective leadership and governance, bound together through a moral duty of care; to protect and promote all life, Kimberley Traditional Owners are strengthening their leadership and governance through a lawful polycentric, bottom-up ancient wisdom approach (Turnbull et al., 2023).

Bioregional governance

In the context of Aboriginal Australia, knowledge and governance systems have evolved over tens of thousands of years in parallel with bioregional variation (Taylor et al., 2016). This evolution, is a bottom-up approach, polycentric governance with its foundation forged by a biocultural and bioregional framework (RiverOfLife, 2020). Martuwarra's governance and leadership is globally supported by 'rights to promote, develop and maintain their institutional structures, customs, procedures, among other things'. Article 34 of the United Nations Declaration of Rights of Indigenous People (Lim et al., 2017). A value system based on law of the land, First Law.

First Laws and Indigenous science define Martuwarra's water governance structure, which, as described by the late Walmajarri Senior Lawman Joe Brown, includes but is not limited to the types of activities and purposes for water use and the obligations to maintain the health and quality of water (Poelina et al., 2019). First Laws are framed around values and ethics of co-management and co-existence, which continue to facilitate inter-generational relationships between the shared boundaries of all the River nations through ancient songlines, contemporary customs and practices.

First Laws that govern the Martuwarra include Warloongarriy Law and Wunan Law (the Law of Regional Governance). Since Bookarrakarra (the beginning of time) these First Laws have ensured the health of the living system of the Martuwarra and facilitated relationships between Martuwarra nations and peoples. Warloongarriy law sets out the obligations of all who belong to the River – it is a law shared by the nations of the Martuwarra through a shared songline. Under Warloongarriy Law, the Traditional Owners of the Martuwarra regard the River as a living ancestral being (the Rainbow Serpent), from source to sea, with its own "life-force" and spiritual essence. The Traditional Owners believe that the River gives life and itself has the right to life (and right to flow). The Warloongarriy Law teaches that the Rainbow Serpent being is an important creation being which exists in the groundwater linking to surface water which includes flowing surface water, and permanent waterholes (Lim et al., 2017).

Warloongarriy and Wunan (Doring & Nyawarra, 2014)– are ancient laws embedded with Martuwarra for a holistic approach to water stewardship and regional governance that continues to be shared and respected by the Indigenous nations within the catchment (Poelina et al., 2023). Following First Law and prior to colonisation, Martuwarra's catchment was a well-managed 'estate' for tens of thousands of years. The people from the River Country, used ecologically attuned practices, including fires, to heal, shape, protect, maintain and regenerate its living cultural landscapes (Santos et al., 2023).

To understand and respond to the ‘politics of economics and unjust development’ Kimberley Indigenous leadership collaborate to build an extensive body of local knowledge and science to respond to the development pressures being navigated by the Martuwarra Fitzroy River Council (MFRC) (Martuwarra *et al.*, 2021).

Martuwarra Fitzroy River Council (MFRC)

In 2016, with mounting development pressure on Martuwarra, the Kimberley Land Council (KLC) held a meeting with Traditional Owners to discuss catchment management.

Traditional Owners voiced concerns regarding threats to the river catchment’s unique cultural and environmental attributes from cumulative invasive development. The result of the meeting was the Fitzroy River Declaration (KLC, 2016).

The Declaration is the first of its kind in Australia, a rare, unified stance between diverse Indigenous Nations explicitly recognising Martuwarra First Law, such a Warloongarriy, and the inherent rights of nature in a negotiated instrument. In the Declaration, Yi-Martuwarra agreed to collaborate and operate on a joint action plan to protect the globally significant spiritual, cultural, environmental and scientific values of the River. The authority to ‘speak up for the River’ is derived from a deep relationship with Country, a moral responsible for maintaining spiritual wellbeing and generating sustainable livelihoods on Country, with the ancestral serpent beings of Martuwarra (Lim *et al.*, 2017). The Fitzroy River Declaration addresses potential hydrodiplomacy issues, including cumulative impacts and the respect between Indigenous leaders to prevent the weaponisation of water, whilst incubating opportunity for bi-cultural water management: the adaptation of a cultural governance model to the contemporary context (Taylor *et al.*, 2016).

Through further dialogue and workshops, Kimberley Indigenous People came together to establish a cooperative way to work together, to ensure free, prior and informed consent decision-making and a pathway for a broader catchment approach. The advice of Walmajarri Elder, now deceased, Mr Wise, championed the need to stand and be united, through his ‘One Mind and One Voice’ vision of leadership, which gave rise to the MFRC (Poelina *et al.*, 2019).

The MFRC has developed into an alliance of Indigenous Elders, mentoring younger leaders in the River’s catchment: Nyikina, Mangala, Warlungurru, Bunuba, Ngarrinyin, Walmajarri and Gooniyandi. Indigenous leaders and knowledge holders have come together to negotiate a multi-stakeholder partnership for justice and a sustainable future. This future recognises and respects Indigenous People’s connection to Country, particularly the deep knowledge that Indigenous People have regarding highly specialised sub-bioregional sustainable management (Van Dooren *et al.*, 2016).

MFRC members have embraced a moral contract to promote a collective concept of justice and equity for all, inclusive of multi-species justice (Poelina, 2019; Poelina *et al.*, 2021). Poelina, as Chair of the MFRC collaborates to ensure multiple publications are produced and shared to advocate and promote ‘Just Development on Just Terms (Poelina *et al.*, 2023; Poelina, 2022).

Compounding Pressures

The pressures facing Martuwarra cannot be understood in isolation. Each dimension – groundwater extraction, pastoralism, fracking and governance gaps – connects to the others and amplifies systemic stress. For educational clarity, we present these factors not as disconnected issues, but as interlinked lessons. Each dimension demonstrates both the failures of settler governance and the alternative pathways of Indigenous water pedagogy. The following subsections should therefore be read as chapters in a connected story of unjust development, ecological risk and educational opportunity.

Whilst the legitimacy of the settler-state to govern water with the legal fiction ‘*aquila nullius*’ demands addressing, we now examine Western Australian Government resource management competency.

The ephemeral nature of Martuwarra results in a high dependence on groundwater for the persistence of culturally and ecologically significant surface water sources (Liedloff *et al.*, 2013). Groundwater-dependent persistence pools, springs, soaks and wetlands have provided critical ecological refugia through the dramatic climatic fluctuations witnessed by a watershed on the precipice of the tropical and arid regions. Martuwarra has been subjected to numerous proposals to dam the River for irrigation, another to transport water 2500 km to the state capital of Perth (Appleyard, 2006). Each of these failures is a lesson – a pedagogical moment where society could learn not to repeat mistakes, but too often has not. By recognising this as an educational process, we emphasise the importance of First Law as a curriculum for sustainable governance.

As previously mentioned, settler-state sanctioned, unjust development has resulted in well documented, dramatic changes to Traditional Owners’ lives, which continue to the present, the same can be said for Martuwarra.

The Camballin irrigation scheme saw investment commenced by the State government in the 1950’s and construction of flow altering infrastructure in the 1960’s. The scheme was the first large-scale rice venture in Western Australia. The scheme was abandoned in the 1980’s after going from ‘disaster to disaster’. Flood damage, pests and weeds resulted in consistent economic loss (Yuhun, 1985). Dilapidated infrastructure remains on Martuwarra’s main channel and nearby sub-channel which continues to disrupt important ecological processes of critically endangered and culturally significant species (Maloney, 2024; Moodie, 2019; Morgan *et al.*, 2005).

Relentless water extraction proposals

In a region seen as the ‘frontier’ for development, there is an opportunity to be informed by scientific evidence and lived experiences in a bid ‘not to make the same mistakes in the south when developing the north’, particularly around water planning and allocation (Dale, 2014). From the perspective of Western Science, there are major knowledge gaps regarding the connectivity of groundwater and Martuwarra’s surface water points (Vogwill, 2015). Current water extraction proposals are now focused on groundwater due to the high rates of evaporation, low reliability and extensive costs associated with surface water storage and transport (Department of Water, 2010; Petheram *et al.*, 2018). Economic viability and future sustainability of both surface water capture and storage, in addition to groundwater extraction, are questionable. At the time of writing, no proposal has been able to claim there will not be negative impacts on human health and wellbeing or on the cultural or ecological heritage associated with the catchment.

Pastoral industry

Martuwarra is under constant pressure, which would benefit from the implementation of catchment scale water and land management. The pastoral industry has ongoing ecological repercussions to the catchment, which are not limited to soil compaction, erosion, River sedimentation, introduction of weeds and feral animals, altered fire regimes and altered vegetation assembly (Bartolo, 2008; Beesley *et al.*, 2021; Morgan *et al.*, 2005). The pressure felt with Martuwarra as a result of negligent environmental regulation is not in isolation; pastoral lease land conditions across northern Australia are in decline (Puig *et al.*, 2011; Runting *et al.*, 2024).

Fracking

Hydraulic fracking is banned in 98% of Western Australia (Johnson, 2019). In the 2%, you find Martuwarra's Catchment. The Canning basin, which underlies the lower Martuwarra has been identified as one of the most prospective regions in the world for shale and tight sands gas production, with an estimated 438 trillion cubic feet of gas. Fracking the Canning Basin could release an estimated 13 - 21 billion tons of carbon dioxide-equivalent gases (CO₂-e) into the atmosphere (Hare *et al.*, 2018). Australia's emissions budget compatible with the Paris Agreement is 5.5 billion tonnes of CO₂-e. As the world decarbonises, the Australian government continues to incentivise fossil fuel extraction. A 2024 report by the Australian Institute found that; in the 2024 - 2025 budget, the Western Australian government is expected to receive \$522 million in royalties from growing gas industry, which contributes to less than 1.3% of the state's revenue, this is below half of the \$1.319 billion expected from vehicle registration fees (Jasper, 2024; Ogge & Campbell, 2004).

The pressure caused by the legacy and continued negative effects of settler-state resource management are yet to be addressed, in many cases, even by proven remedies that are cost-effective to deploy, however, extractive proposals continue. MFRC is in agreement these developments do impact on the wellbeing of everyone and everything in the catchment. It is timely to learn the lessons of national projects and not repeat these same mistakes (Dale, 2014). The advocacy for a bicultural and regional approach requires everyone to be at the table, to understand the cumulative of impacts of development through informed decision making.

MFRC is championing good faith negotiations with government, industry and key stakeholders to ensure future direction embed procedural and distributive justice (Dale *et al.*, 2014).

The MFRC through the lived experiences of Traditional Owners living with Martuwarra, are showing how these systems are changing. The elders and young leaders are firm in their belief, water justice and climate justice go hand in hand (RiverOfLife *et al.*, 2024).

Climate (in)justice

Globally, Indigenous communities are the first to experience the impacts of climate change as local environments provide both food security and psychological well-being. Climate Change worsens existing challenges such as political and economic marginalisation, land loss, human rights abuses, discrimination and joblessness (Williams, 2012). Ongoing injustice provides opportunity to learn from the lessons of others, particularly Indigenous people with similar lived experiences of settler society and colonialism.

The Basotho are Indigenous people who inhabit Lesotho, South Africa, Botswana and Namibia. Basotho have been monitoring climate change for centuries; recent dramatic shifts in climate have resulted in immediate ritual action in an attempt to remedy the negative effects (Johnson, 2018).

The Basotho response to climate change is not in isolation for Indigenous people worldwide; here we have a low impact, low carbon emitting people, which have implemented climate action without hesitation. The rapid response of the Basotho is in stark contrast to the global North, which has contributed to 92% of excessive carbon emissions since 1970. The USA alone has contributed to 40% of excess carbon emissions (Hickel, 2020). On April 8 2025 U.S. President Donald Trump issued an executive order that aims to block the enforcement of state laws passed to reduce the use of fossil fuels and combat climate change (Reuters, 2025). Like much of the global South and many Indigenous peoples, the Basotho are already being dramatically affected by the negative effects of anthropocentric climate change, paying the price for problems they have not created.

After decades of marginalisation, subrogation and, in many cases, genocide, settler states are beginning to recognise the fundamental contribution to humanity and highly specialised geo-specific, eco-centric data sets held by Indigenous people in the hopes to remedy the negative effects of climate change.

As with other Indigenous peoples worldwide, the MFRC has not delayed in climate action. Bottom-up, community-led initiatives supported by the MFRC are in the process of revegetating areas of the River that have suffered from decades of land degradation, including sheet erosion as a result of climate change and the pastoral industry (RiverOfLife *et al.*, 2020).

The Bureau of Meteorology predicts climate change will hit Australia harder than the rest of the world (CSRIO, 2022). In the context of Martuwarra, regional proposals for water and fossil fuel extraction are increasing in parallel with temperature and the intensity of storm events (DWER, 2022). Climate justice and water justice are threads of the same cloth.

Lessons From Martuwarra

Indigenous Water Governance, as outlined in First Law, is but one example of an antidote to overcome global water injustice and the inherent chronic sustainability/legitimacy issues associated with contemporary capitalist-centric settler state water policy. The opportunity for water justice with Martuwarra is on the table; however, as the philosopher Georg Hegel remarked before his death in 1831, “History teaches us that we do not learn from history” (Lindle Hart, 1972).

Water Justice scholars argue that in the context of Australia, *Aqua Nullius* must first be addressed as the legal fiction “enables state and national governments to ignore the multiple water laws, knowledges and governance models that co-exist in settler colonial states because of enduring, unceded Indigenous sovereignty. Instead, settler colonial governance give preference to water rights and water management institutions that are ‘exclusively framed, enacted and governed by state agents or market participants’ (Jackson, 2018). Lessons from Martuwarra teach us that it is precisely Traditional Owners’ enduring relationship with the River which is based on reciprocity, respect, cultural connection and constant dialogue which has resulted in globally unique heritage values. Conversely, ongoing settler-state water colonialism “not only normalises the dispossession of Indigenous peoples of water’ but also ‘legitimizes exploitation of water” (O’Donnell, 2023).

Critical to the sustainable future of Martuwarra is a bi-cultural approach to the perceived divide between culture and nature which are fundamental to understanding Indigenous Water Governance as vital to human heritage (Poelina & Nordensvard, 2018).

Discussion

Traditional Owners hold to the belief through their ongoing duty of care under First Law they have a responsibility to think of the public interests matters and the wellbeing of everyone and everything, co-existing in this catchment. A duty to care based on having sound decision making principles where everything is valued and connected, land, water, people, the environment to the wellbeing and survival of non-human relations. This understanding is grounded in not seeing water as a ‘resource’ but rather as living water (RiverOfLife *et al.*, 2021). Recognising and developing principles for engagement which acknowledge Martuwarra as ancestral serpent beings who have laid down the First Law principles for engagement. Importantly to ensure our Australian rivers are valued, recognised and indeed guaranteed their right to live and flow. This is what is required for water balance, peace and harmony achieved through just-us (Poelina, 2024). This world view is not isolated to Martuwarra, it is consistent throughout the First people of Australia (O’Donnell, 2023; Taylor *et al.*, 2016).

In respect to Water Governance, we see this same interwoven well-being living framework articulated by the Jinibara people in the Mary River Statement which repeats that Aboriginal peoples ‘do not divide water into separate environmental, economic, cultural, social and spiritual components we see the inherent relationships between these aspects’ (National Water Commission, 2013). Indigenous people connected to Martuwarra express that the River, springs,

soaks and billabongs (Oxbow lakes) represent ancestral serpent beings, which live and have the right to live and to flow. Encompassed within Indigenous concepts of well-being is more than physical health; environmental stewardship, cultural identity and relationships are also deeply intertwined (Jarillo & Crivelli, 2024). It is the law of the land, laws derived from nature and not the laws from man (Black, 2010; Poelina *et al.*, 2023).

This research suggests we collectively need to shift our thinking and dialogue to actions which shift from the ideology of capitalism and colonialism which continue to diminish and impact on the lives of many Indigenous and non-Indigenous people. Yi-Martuwarra are looking at alternative and new economies (ACF, 2021). A system of sustainable capital not based on the growth of Gross Domestic Product in isolation.

These intergenerational values and ethics combine First Law with Indigenous science. As researchers, we advocate that Indigenous science is: traditional and local knowledge as a triangulated knowledge system informed by thousands of years of observation, experimentation and recording, always on scale (Poelina *et al.*, 2023). By listening to Martuwarra we learn and feel what developers see as a ‘resource’ to be a ‘life force’ where availability and abundance dictate sustainable carrying capacity. In the varied climates and nutrient-poor ancient soils found on this Australian continent, these carrying capacities of the Country have been well established and deeply intertwined with Indigenous culture for thousands of years (Lane, 2017). A worldview of balance, peace and harmony, in the care of everyone and everything around them, importantly, multispecies justice (Wooltorton *et al.*, 2022). Indigenous water governance principals can be observed in contemporary English articulations, which demonstrate a multi-generational and ongoing relationship of reciprocity and respect with words such as ‘obligation, responsibility, care and duty’ being repeated (O’Donnell, 2023; RiverOfLife *et al.*, 2020).

We have an opportunity to reflect and learn from settler-state water control vocabulary: repeated words include ‘resource, entitlement, market, right, license and allocation (Commonwealth of Australia, 2024). This linguistic window provides insight into conflicting Indigenous and settler-state water ontology. Contemporary settler-state four-year election cycles focus on short-term wealth creation and demonstrating ‘progress’ (O’Donnell, 2023; Poelina *et al.*, 2021). Whereas First people connected to Martuwarra focus on being a ‘good ancestor’ and fulfilling intergenerational obligations to care for people and Country (Poelina *et al.*, 2019, Poelina *et al.*, 2021). Evidence both nationally and globally demonstrates as good ancestors and stewards there is an ‘awakening of rivers being recognised as living ancestral serpent beings, with the right to live and flow’ (Wooltorton *et al.*, 2022).

The clash in perspective and obligation was summarised in dialogue between a representative from the settler-state and a Traditional owner in 2024 regarding the ‘sustainable take of ground water.

“What if you get it wrong? What if what you say is sustainable, isn’t in 50 years, who will take responsibility for this mistake when my grandkids got no water” (Personal Communication, Senior Elder, speaking to Government representatives proposing water extraction in 2024)

“The Minister for Water will hold accountability” - responded the settler-state representative with decreasing confidence as they spoke, referring to the now previous Minister for Water.

The difficulty of articulating the ontological conflicts in regard to water planning has been highlighted by various scholars (Salmond, 2014; Yates *et al.*, 2017). To deliver bicultural, bioregional water governance in the context of contemporary Australia, our research suggests that, first, the ontological clash paradigm must be addressed. Once the clash is identified and negotiated, in good faith, we have the opportunity to strengthen capacity at the regional level to achieve procedural and distributive justice in caring for our common home, Martuwarra.

By learning from Martuwarra we are provided a pathway through the metacrisis by reminding global citizens to not view the world in isolation, to ground action in place and regional context. Regional governance with its foundation of relationships and reciprocity provide the antidote to perverse outcomes derived in the pursuits of power and control. The Martuwarra Council continues to build a global 'Coalition of Hope' and deliver educational resources such as 'Living Water Heritage' (Carracher *et al.*, 2024) in a bid to bring people along on the journey, as human kind navigate downstream through the metacrisis.

Conclusion – Going beyond the metacrisis: educating for the future world to come

In concluding this paper, we have showcased a pedagogical moment offered by ongoing water governance dialogue, the historical and current status of development stories and the limitation of issuing water licenses without the rigour of Indigenous knowledge, science and collective lived experiences. More importantly, how and where to focus strengthening capacity and investment to go beyond the metacrisis of climate and water justice within the Martuwarra Fitzroy River catchment and learn from the past, present and into the future. To learn to 'see and feel the land and living waters' as Martuwarra Traditional Owners have done for tens of thousands of years. We, RiverOfLife, Carracher and Poelina as Australians, living with Martuwarra Fitzroy River catchment believe building on the Martuwarra Fitzroy River Council's capacity and vision to ensure we as human being and our non-human relations have the right to live in an environment free from harm (Poelina *et al.*, 2022).

Recognising these processes as education reframes the metacrisis. It is not simply collapse or crisis, but a moment of profound collective learning. This research has taught us that the River is a teacher of reciprocity and life-sustaining law; Elders are educators enacting intergenerational pedagogy by demanding care for future generations; governance negotiations as classrooms of the future, where Indigenous and settler systems learn to speak across differences; and education as emerging outside of formal institutions, in moments of change, resistance and transition. The educational lens shows that these are not simply contextual descriptions, but lessons with actionable recommendations. Such pedagogy challenges modern educational norms that alienate humans from nature, offering instead a transformative curriculum of belonging to one living system.

These lessons from the River and its custodians provide not only guidance but a living pathway through the metacrisis – one grounded in law, ethics and relational accountability. The metacrisis, when seen through Martuwarra's teachings, becomes an opportunity to restore balance and enact intergenerational justice. By following these protocols, we do not simply respond to crisis; we transform it into an awakening of shared responsibility and duty of care.

Through Freire's (1970) dialogic action approach of cooperation, unity and organisation and cultural synthesis, through our multiple world views and sciences we can navigate a pathway to just development on just terms. Only then can we collectively as Kimberley people and global citizens have the real opportunity to comprehend and adopt to both water and climate justice. This must be grounded in Free Prior and Informed decision-making in good faith negotiations focused on the goal to ensure intergenerational equity, sustainable lifeways and sustainable livelihoods. In this sense, the metacrisis itself validates the necessity of Indigenous-led governance grounded in First Law and bioregional ethics, showing that true justice must extend across generations, species and ecosystems. Only then can we say we have a pathway to achieving sound water governance, recognising the current status and limitation. We have advocated a pathway of knowledge combining Indigenous ancient knowledge and practice, Indigenous science with multiple disciplinary science to educate us collectively on how we can move beyond the metacrisis of water planning and management to achieve "Martuwarra Governance for Climate Justice & Water Justice and a future for the Greater Good of All" (Tang & Spijkers, 2022, p. 3).

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Author Biographies

Martowarra RiverOfLife Lessons from Martowarra, RiverOfLife, underpin Kimberley Aboriginal people’s lawful, physical, emotional and spiritual well-being, and thousands of years of customary practices for Traditional Owners who belong to the River.

Lachlan Carracher Lachlan continues to build his relationship with Martowarra by hearing, feeling and learning from everyone and everything around him.

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