I am the River, the River is me: Deep Time Reflections on Water and Planetary Health

Judy E. Macklin and Professor Mark G. Macklin

INTRODUCTION

One of the most enduring and culturally vibrant potamic societies in the world are the Māori peoples of Aotearoa/New Zealand. The creation of the prints featured in this article have emerged from a long-term and ongoing trans-disciplinary art-science project - Te Awa Rio/the River's voice - that has for the first time brought together river scientists, visual artists and the Te Atihaunuia-Paparangi people or iwi (kin groups) of the Whanganui River of the North Island. Offered, with much humility, these works show how indigenous knowledge, an understanding of deep time humanenvironment entanglements, and a reconnection with the watery realm, can offer society a way to rethink how best to navigate through and beyond our current planetary crisis.

Planetary wellbeing, in the past as well as in the present era of anthropogenic climate weirding, pandemics and environmental breakdown, has often been measured by the health of our rivers and by the partnerships, formal or informal, that communities make with them and the watery realm more generally (Macklin and Lewin, 2020). Water is the lifeblood of humankind, and without water to support vital biological and social functions, people cannot flourish. The early 'hydraulic' civilisations of Mesopotamia, the Huang He (Yellow River), Indus and Nile Valleys understood this very well (Macklin and Lewin, 2015) and the fate of these societies was intimately entwined with their stewardship of water resources and their resilience from the impacts of exceptional floods and droughts.

TE AWA RIO/ THE RIVER'S VOICE

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scientists, visual artists and the Te Atihaunuia-Paparangi people or iwi (kin groups) of the Whanganui River of the North Island (Te Awa Rio, 2020). Since the time of Aotearoa/New Zealand's European colonisation in the early 19th century, the Whanganui iwi have fought to secure their interests in the river, which include deep spiritual, cultural, practical, historical and social connections (Charpleix, 2018). In a landmark ruling on March 15th 2017, the Parliament of New Zealand voted to recognise the Whanganui River as a living entity and was given legal personhood; probably a world



Figure 1



Figure 2

Figure 1. Judy and Mark Macklin canoeing down the Whanganui River, January 2015 Figure 2. Whanganui River photo by Judy Macklin

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first. By recognising the river, Te Awa Tupua (river with ancestral power) as a legal person with its own rights, the Whanganui was placed in a new relation with human beings (Salmond, 2014). The Whanganui River is described as the source of ora (life, health, and well-being), a living whole that runs from the mountains to the sea, made up of many tributaries and inextricably tied to its people (Salmond, 2014), expressed in a saying often used by Whanganui people, "Ko au te Awa, ko te Awa ko au" ("I am the River, the River is me").

The starting points for the Whanganui River journey and Te Awa Rio project were two serendipitous encounters and events. First, a threeday journey down the Whanganui River by canoe in January 2015 (Figures 1 and 2) lead by a senior elder – Wai Southern – from the Whanganui iwi and accompanied by printmaker Judy Macklin and her partner Mark Macklin, a river scientist and an expert on flooding and climate change. What began as a series of polite exchanges between Māori and Western world-views of river ecosystems and management was transformed when discussion moved on to memories of great floods in the Whanganui preserved in the rich oral histories of the Whanganui iwi. What followed was first a collision of Māori and Pākehā ways of seeing the river, and then a convergence as it became apparent when oral histories and ancient flood deposits preserved along the river were read together a new and rich narrative of flooding over deep time emerged. The significance of this encounter was not fully appreciated until June 2015 when the largest recorded flood since gauging records began in 1957 devastated Whanganui City. This provided an environmental wake-up-call and a harbinger of the climate crisis that worldwide is resulting in more extreme weather and flooding.

These two threads became more tightly intertwined when the people of Whanganui asked how frequently a flood of this size could be expected to occur. The answer to this question lay in understanding that a river writes its own story, if we can read its landform and sedimentary archives sculpted and laid down layer-by-layer by floods over millennia. The focus of our artistic and scientific work has been at the former village of Ātene located 35 km upstream of Whanganui, where as the result of a cataclysmic flood more than 1800 years ago, the Whanganui cut a new course leaving the Ātene loop separated from the main river. During exceptionally large floods the River re-occupies its former channel and as floodwaters recede they deposit sand and mud. Interbedded within these flood sediments are peat and woodrich layers that can be dated using radiometric techniques enabling a history of flooding in the Whanganui catchment, written in the River's own language, to be reconstructed over the last 2,000 years (Fuller et al., 2019).

WATER AND WOOD

The artistic response to hearing the many voices of the River has been to capture the unique river forms of the Whanganui created by floods, earthquakes, volcanic eruptions and human activities over millennia in



Figure 3

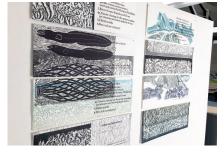


Figure 4

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Figure 3. Judy Macklin cutting the second (sister) block to KO AU TE AWA KO TE AWA KO AU - I AM THE RIVER AND THE RIVER IS ME in Pakohe Print Workshop Figure 4. Re-purposing pages from Judy Macklin's artist's book "The Watery Realm: rapprochement of art & science" (2014)

the form of a portfolio of woodcut prints. The creation of these images was facilitated by annual 10 week-long residencies (funded by Wales Arts International) at Pakohe Papers (https://www.pakohewhanganui.co.nz/; Figures 3 and 4) and Homeprint (www.homeprint.co.nz), together with fieldwork on the Whanganui River as part of a Massey University funded project on flood risk (co-led by Mark Macklin), that began in 2014 and continued until 2020.

Inspired by the self-similar patterns of rivers and their fractal-like structures, the first of these woodcuts (Figure 5) was made from a single plywood block (Figure 6) printed twice; once onto a sturdy smooth paper and again onto a translucent, absorbent, delicate harakeke (flax) paper (handmade at Pakohe Papers), so that the ink could ooze through to the backside. The sandwiching together of the right-reading with the wrong-reading image throws up a shadowy representation of the same form. By creating a mirror image of the river channel network viewed from above, in 'Ko au te Awa, ko te Awa ko au – I am the River and the River is me' (Figure 5), a reflection emerges that simultaneously reveals the topographic signature of the river as well as its presence as an evolving living entity, honouring the Whanganui's recent and much belated recognition of legal personhood.



Figure 5



Figure 6

PLANETARY HEALTH

This notion of the Whanganui River as an adaptive and unique biophysical system, materializing from the transformation, reflection and mirroring of landscape images to create symmetrical forms akin to Rorschach's well known inkblot test (Macklin and Macklin, 2019), was further explored at the river cutoff at Ātene that has a very special spiritual importance to the Māori kin groups of the Whanganui River. The drypoint field sketch (Figure 7) and the resultant woodcuts (Figures 8 and 9) are a deliberate attempt to go beyond a sense of place and to visualize the mind, flesh and bones not just of a simplistic organic machine or river deity, but of a life-form much older and wiser than humankind, which will certainly outlive us if we continue to cross the biophysical planetary boundaries that sustain an inhabitable Earth.

The loss of sustainable lifeways within riparian societies worldwide, most particularly associated with the destruction of freshwater fisheries, is a strong metric of river and planetary health. This has a particular resonance in the Whanganui, and in Aotearoa more widely, where river tuna (eel) underpinned Māori communities for centuries until the destruction of the eel weirs (pā tuna) at the turn of the 20th century for navigation, followed by dam construction in the early 1970s, and more recently by pollution from intense agriculture and forestry. For Māori, river tuna are taonga – an important cultural treasure – and their imagery feature prominently in whakataukī (Māori proverbs), legends, waiata (Māori songs) and artwork. The woodcut print 'River Tuna and Hīnaki' (Figure 10) celebrates the iconic status of this fish in Māoridom, showing both the now endangered long and shortfin eel juxtaposed with the eel pots (hīnaki) used to trap them. Ironically the traditional hīnaki weaving has been culturally appropriated into a

70s, and

Figure 5. KO AU TE AWA KO TE AWA KO AU - I AM THE RIVER AND THE RIVER IS ME (2020) by Judy Macklin. Woodcut, 700 x 500 mm

Figure 6. Plywood block and topographic map of the Whanganui River

designer lampshade!

REFLECTION

Did we choose the Whanganui or did the river choose us? Or are we (re-) telling stories of the Whanganiu or are we part the river's story? Our lives are very much like that of a river as it flows from the mountains to the sea; it never follows a straight path and has eddies and counter-currents before it inevitably reaches and becomes part of the boundless ocean. Since the early 1980s, as an artist and printmaker, and as scientist and fluvial geomorphologist (the scientific study of river processes and landforms), we have tried to tell the story of world's rivers and the way they have been shaped by nature and humankind (Macklin and Macklin, 2019). Ten years ago as a direct response to our own early awakening to the climate and planetary crises, we decided to develop a portfolio of work centered on the theme of the watery realm, where most of humanity will directly experience the effects of dangerous climate change. We have purposefully explored this topic from an interdisciplinary art-science perspective, working with archaeologists investigating the first farmers in the lower Danube Valley, Romania (Macklin and Macklin, 2011); historians documenting the environmental and cultural impacts of the gold rush in Australia (Rivers of Gold, 2020); and with ecologists studying the destruction of river habitats in Australia and Wales by deforestation (Of Foresters, Farmers and Fish - Tales from the Wildwoods of the Old and New World, 2020).

The Whanganui forms part of this wider narrative but it has also a deeply personal connection because we now consider the River City to be our second home. It's where our worldview has been transformed through our friendships with Marilyn and Marty Vreede and Litza and Dominic Devine, who have helped us to listen and better understand the Māori and Pākehā voices of the river. The 'Ko au te Awa, ko te Awa ko au – I am the River and the River is me' print (selected and hung at the Royal Academy of Arts Summer Exhibition 2020), one of those featured in this article, is offered with much humility to show how indigenous knowledge, an understanding of deep time humanenvironment entanglements, and a reconnection with the watery realm, can offer society a way to rethink how best to navigate through and beyond our current planetary crisis.

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Figure 7



Figure 8

Figure 7. Puketapu (2018) by Judy Macklin. Drypoint sketch, 480 x 600 mm Figure 8. ATENE (2018) by Judy Macklin. Woodcut, 500 x 700 mm

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Judy Macklin is a practising artist and award-winning educator. She is co-director of Aberystwyth Printmakers and her art practice



Figure 9



Figure 10a

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Figure 9. Taupo Terraforming (2018) by Judy Macklin. Woodcut, 700 x 500 mm Figure 10. River Tuna and Hīnaki by Judy Macklin. Woodcut, 700 x 500 mm

encompasses a wide variety of natural and human-related subjects, including New and Old World landscapes, with a focus on art-science collaboration and community engagement based on watery themes. Judy has exhibited worldwide in Australia, Bulgaria, China, France, Germany, Hong Kong, The Netherlands, Korea, New Zealand, Romania, UK and USA.

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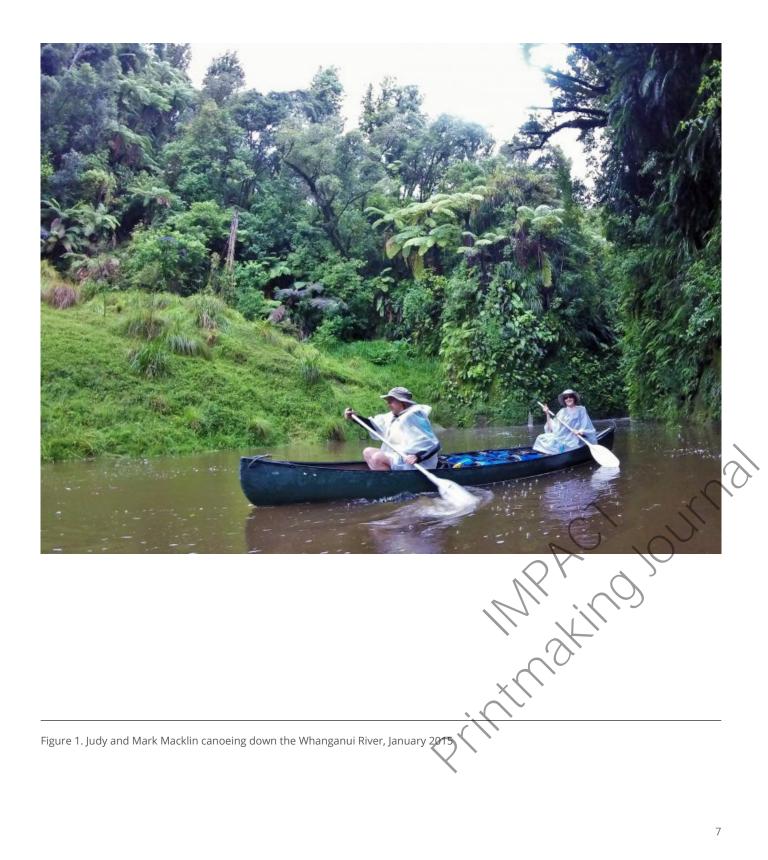
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Professor Mark G. Macklin is an authority on river systems and global environmental change, and a multi-award-winning geographer, including the 2018 Murchison award from the Royal Geographical Society. He was the founding Head of the School of Geography at the University of Lincoln, UK, and founding Director of the Lincoln Centre for Water and Planetary Health (LCWPH). The LCWPH focuses on solving the most pressing environmental and societal problems emerging from the world's largest rivers. These include the impact of climate change on extreme floods and droughts, flood-related contamination from metal mining and processing, and water-borne and vector-borne diseases affecting humans and animals. He conducts his research worldwide with ongoing projects in Australia, Kazakhstan, New Zealand, Romania, Sudan, Tanzania, Zambia and the UK.

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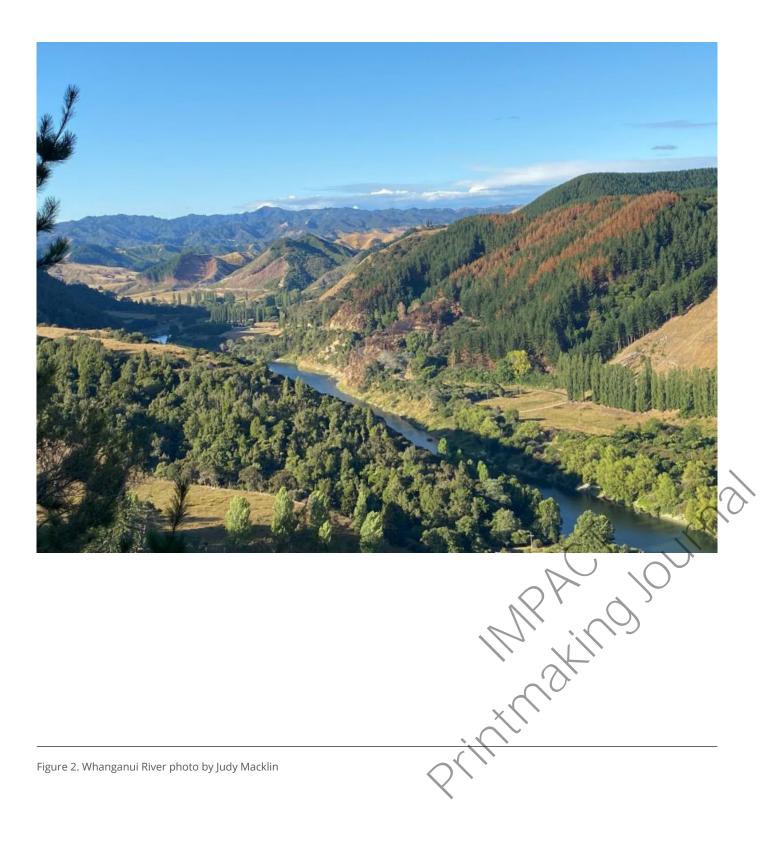


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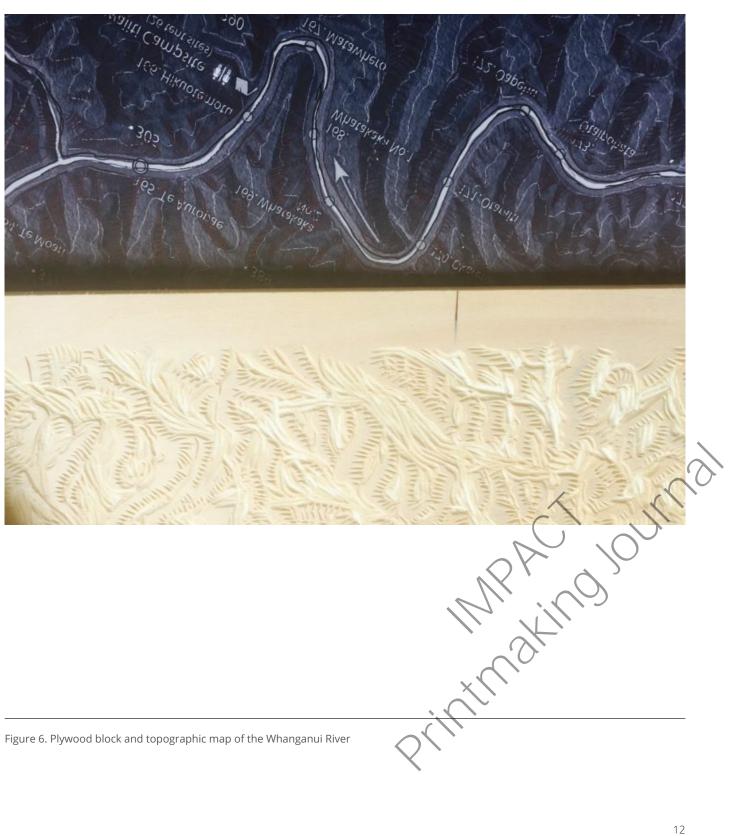


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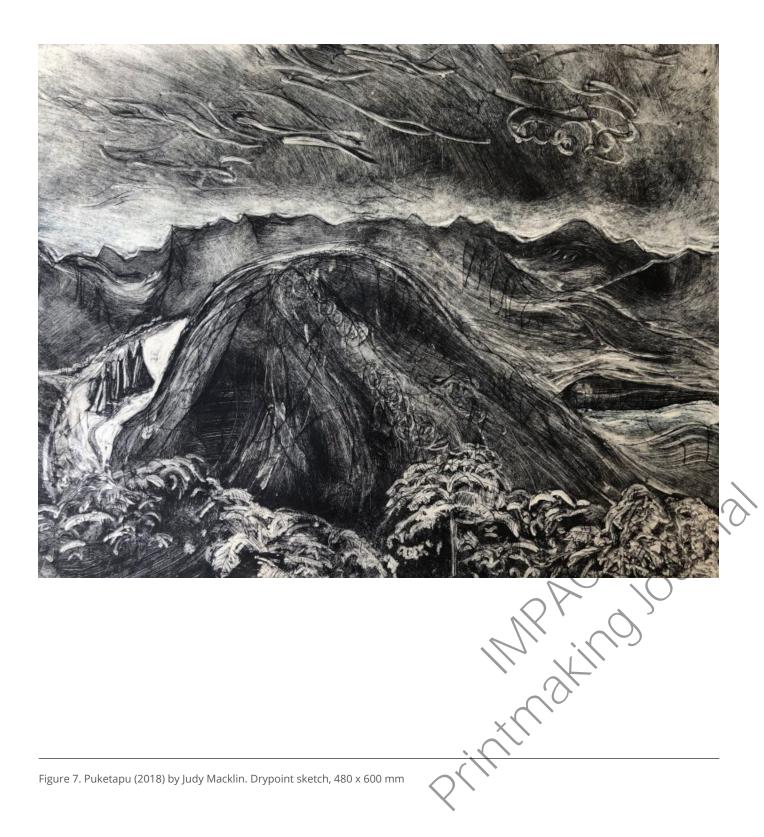


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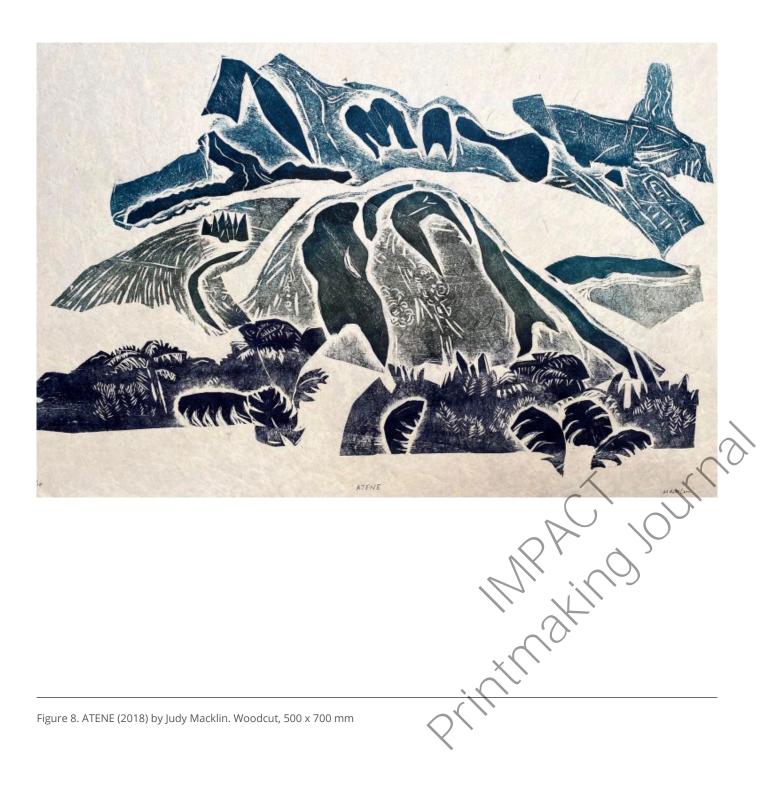


Figure 8. ATENE (2018) by Judy Macklin. Woodcut, $500 \times 700 \text{ mm}$



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