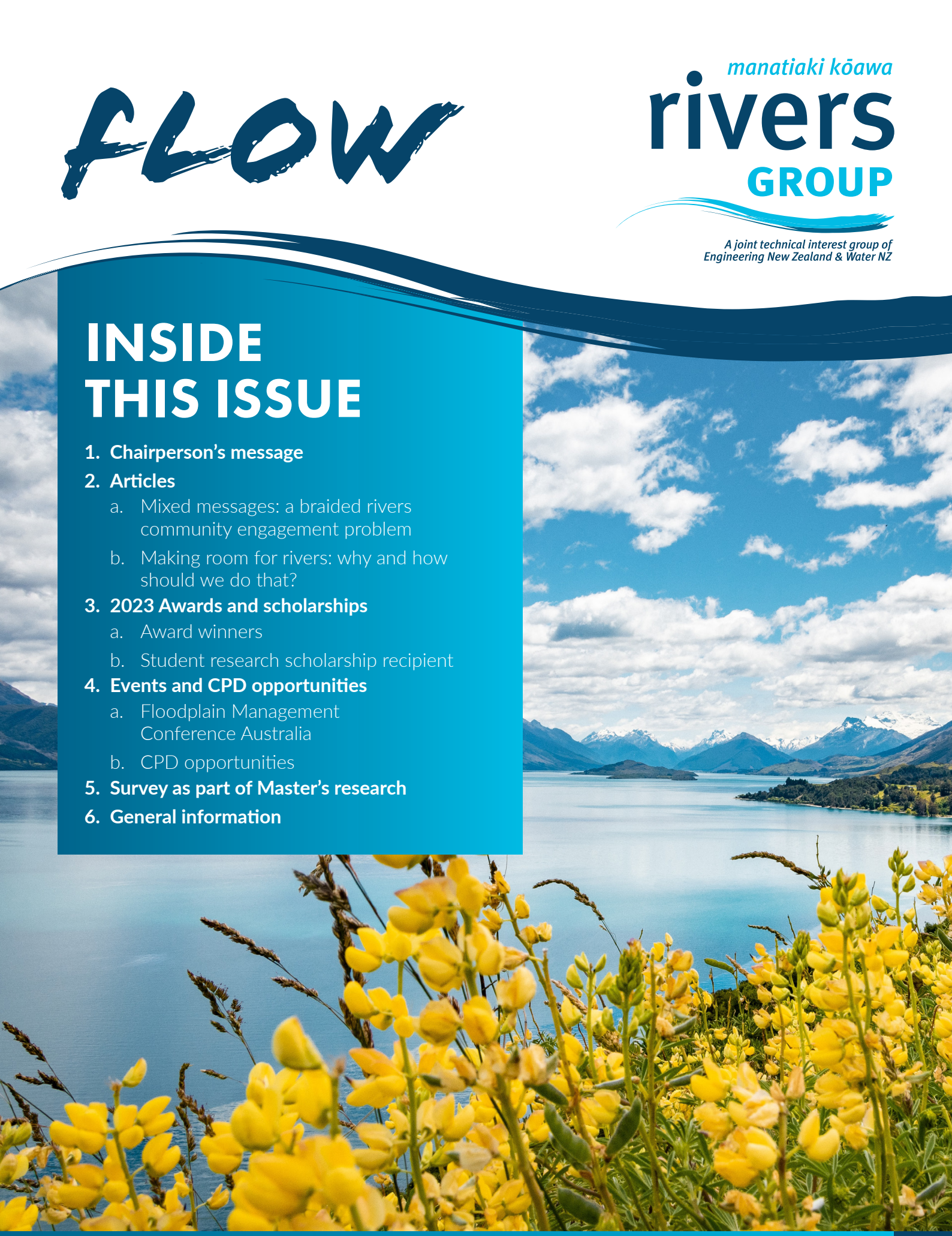
flow

manatiaki kōawa
rivers
GROUP

A joint technical interest group of Engineering New Zealand & Water NZ

INSIDE THIS ISSUE



NEWSLETTER

Issue 41 | December 2023

FROM THE CHAIR

Richard Measures

Kia ora koutou

I hope those of you that were able to attend our conference in Nelson enjoyed it as much as I did. Well done to the organising committee for another great event! We had over 130 attendees from as far afield as Canada. It kicked off with one of the best conference field trips I've ever been on, including lots of interesting case studies whilst also feeling like there was plenty of time for the informal riverbank discussions which are so important.

The conference keynotes were both excellent. On Thursday morning Professor Ian Rutherford presented examples of urban river management from Australia and a reminder of the need to balance the "fear" and the "care" when it comes to living with our urban rivers and streams. On Friday, Dr. Mahina-a-rangi Baker discussed 'Te Mana o Te Wai' in the context of her family's personal experiences of being forced off their land, losing access to their local streams, and seeing the degradation of those streams which followed. Her presentation illustrated a deep connection to waterways that permeated throughout the audience, highlighting how powerful personal relationships with waterways can be for caring for them.
The prioritisation of Te Mana o Te Wai in national policy has the potential to drive a step change in how rivers are managed, and we all need to strive to make sure it is implemented effectively.

The Rivers Group AGM was held at the conference, and it was great to have some new volunteers, either to join the committee or to help with particular initiatives. Throughout the conference and the AGM, it was also great to get feedback on the direction of the group and priorities for the future. It seems like continuing our advocacy efforts, increasing Māori representation within the group and restarting some regional face-to-face events are all areas we should focus on. If anyone has additional feedback or suggestions, please feel free to email the committee at rivers.group@engineeringnz.org

It feels like the workload and pressure on our members is never ending, but we need to remember to take the time to look after each other and to celebrate successes. The Rivers Group's annual awards were presented at the conference dinner, and it was great to get the opportunity to celebrate the winners. I won't say too much on this topic as the newsletter has the full details, but all the winners were very deserving and the surprise on their faces was priceless. I'd encourage everyone to start thinking about who they want to nominate for next year.

I hope everyone gets the chance to take a good break over Christmas, maybe getting the chance to spend some leisure time enjoying some of our amazing rivers.

Ngā mihi

Richard Measures
Chair

MIXED MESSAGES: A BRAIDED RIVERS COMMUNITY ENGAGEMENT PROBLEM

Sonny Whitelaw
Manager, BRaid - Braided River Aid (braid.org.nz)

Across Aotearoa, braided rivers and their complex ecosystems formed during the Quaternary Period that began 2.58 million years ago. During cold glacial epochs that occurred over this period, glaciers bulldozed through Ka Tiritiri-o-te-Moana the Southern Alps, carving out wide alpine valleys, grinding the rock into gravelly moraines. During the warmer interglacials, rivers reworked the moraines, forming temporary shingle islands separated by shallow interweaving channels or 'braids' across wide braidplains that filled the valleys.

The rivers also carried vast quantities of gravel to the foot of Ka Tiritiri-o-te-Moana and deposited it into the shallow ocean. Here, deltas formed, creating new land. It didn't take long, geologically speaking, before these deltas coalesced into mega alluvial fans, building the coastal plains seaward. By the end of the Last Glacial Maximum 20,000 years ago, braided rivers had extended Kā Pākihi Whakatekateka A Waitaha the Canterbury Plains to an area some 60km east of where Ōtautahi Christchurch is now located (Fig. 1). As the great ice caps that once dominated the world retreated over the next 14,000 years, the seas rose, drowning more than half of Kā Pākihi Whakatekateka A Waitaha (Fig. 1).

The reason for this brief excursion into our recent geological history is to point out that without braided rivers, the land on which many of us now live would not exist. This includes most of Ōtautahi Christchurch, which was drowned by these rising seas. Thanks entirely to the Waimakarari awa, new land was formed over the subsequent 6,000 years during a period when sea levels were relatively stable (Fig. 2).[1]

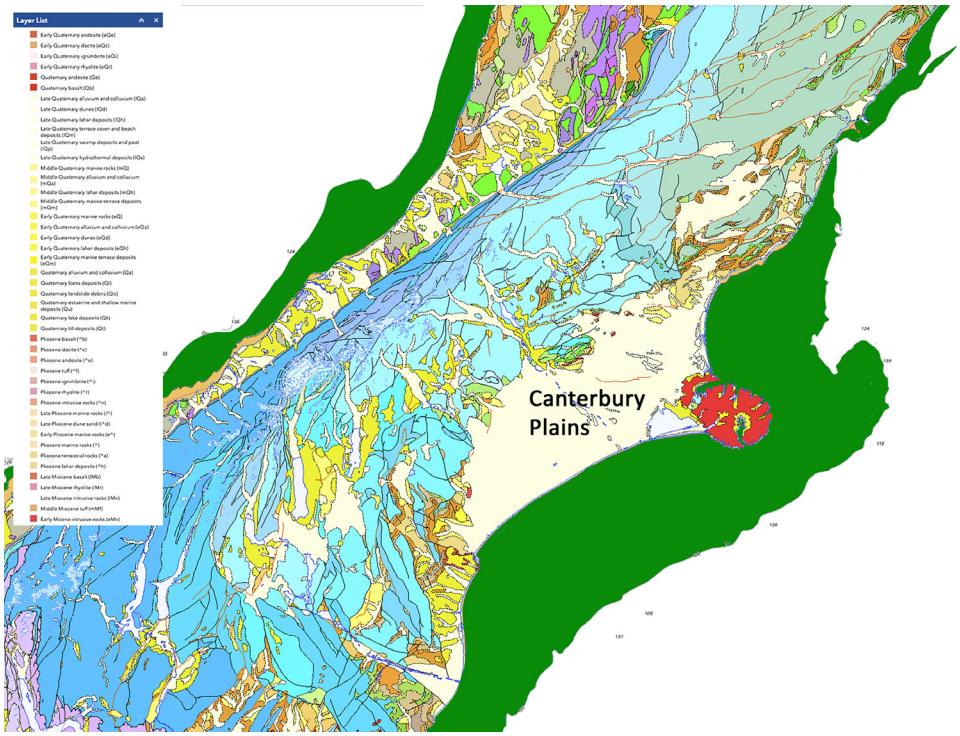


Figure 1: The cream-coloured areas are alluvium and colluvium deposited during the Late Quaternary Period. The dark green area shows the extent of land when sea levels were 100m lower than today (based on current bathymetry). During the Last Glacial Maximum 20,000-25,000 years ago, sea levels were around 125m lower, so the coastline was in fact somewhat further seaward.[2] Images: composite Canterbury Maps geology and navigation charts.

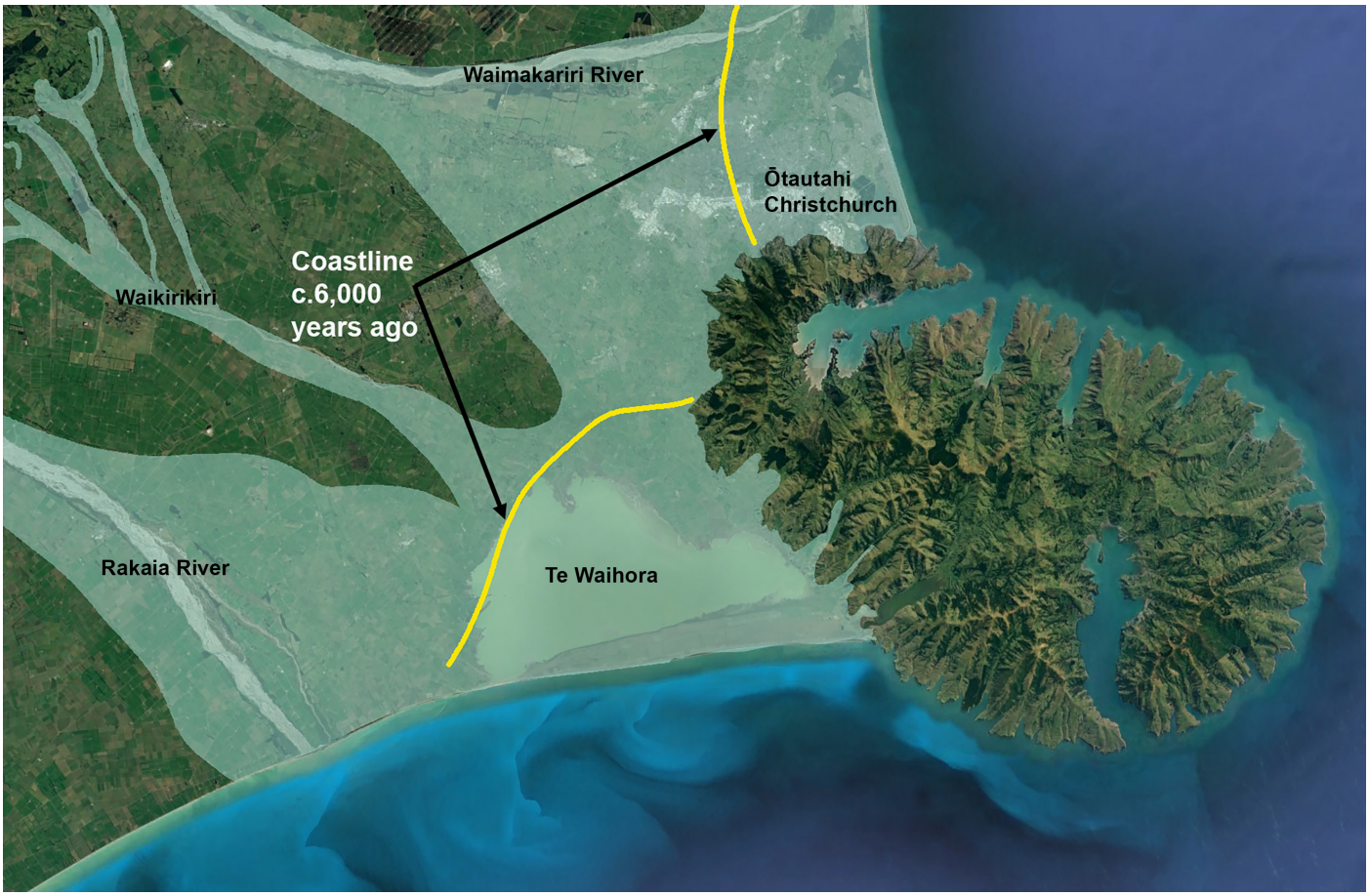


Figure 2: The pale green shading shows the braidplains over which the Waimakariri, Selwyn-Waikiriki, and Rakaia awa wandered during the past 11,700 years of the Holocene Epoch, depositing gravels from the mountains and building the coast. The coastal area of Ōtautahi Christchurch was drowned by rising sea levels but once these stablised ~6,000 years ago, the Waimakarari awa rebuilt the coastline, extending it seaward to its current position. Yellow lines show the approximate location of the coast c. 6,000 years ago based on the maximum extent of marine deposits found in sediment cores.[3] Image: background Google Earth; overlays: Begg et al. (2015).

As the braided rivers built land over millions of years, unique dynamic ecosystems evolved to follow them, readily adapting to an ever-changing environment. When the braidplains filled with water, they were not flooding. They were maintaining what NIWA have described as some of the most biologically productive and rare ecosystems on Earth.

These ecosystems were not just 'nice to have'. They provided services critical to supporting life: clean healthy water, nutrient recycling, oxygen production, and carbon dioxide sequestration. Rich in biodiversity, including many taonga species, they also provided plentiful nutritious and safe mahinga kai, all the way from the mountains to the sea.

When Europeans arrived, a cost benefit analysis was run on these extraordinary life-supporting ecosystems. Their waterways were deemed to be hazards and their complex braidplains regarded as economically underperforming wastelands. And so, their dynamically shifting waterways were confined into ever-narrowing static spaces so they could be mined for freshwater while simultaneously—and perversely—treated as drains to dump agricultural effluent. Their wetlands—nature's sponges that once absorbed energy from high water flows, preventing catastrophic flooding and erosion—were filled and drained, and their ephemeral drylands bulldozed and converted into agriculture and exotic forestry plantations or buried beneath the asphalt and concrete foundations of towns and cities.

Knowing this today, it seems inconceivable that we're still destroying them. Partly because the RMA doesn't recognise braided rivers as ecosystems, much less as critical life-supporting natural infrastructure. Consequently, what little remains is afforded virtually no protection.

But something new is happening, something we brought upon ourselves. The climate is changing, turbo-charging the hydrology cycle, enabling these magnificent awa to reclaim their braidplains—along with farms and towns and critical civilization-supporting built infrastructure.

> *"Hydrologists have recognized for some time that climate change has undermined stationarity in water management—indeed, they have declared that stationarity is dead. But economists have by and large not recognized that this applies to climate effects. They approach climate damages as minor perturbations around an underlying path of economic growth, and take little account of the fundamental destruction that we might be facing because it is so outside humanity's experience… In effect, economists have assigned them a value of zero, when the risks are decidedly not."* – Profs. Naomi Oreskes & Nicholas Stern, 2019[4]

That same year, NIWA calculated that the level of exposure of elements at risk within Canterbury's flood hazard area alone, is $40 billion, and that's based on 2016 costings.[5]

Also in 2019, the Productivity Commission recommended that the Government create a climate-resilience agency.[6] This new entity should:

> *"…also assist regional councils and communities consider the best way to lessen future risk of flooding from rivers. This would include, where appropriate, the potential for using the best-practice model of giving rivers room and developing multiple innovative uses of the wider river corridors."*

Upon reading this, my first reaction was to wonder why we needed to develop multiple innovative uses. Before we destroyed them, these ecosystems and their 'wider river corridors' already had multiple uses. They pacified floods by absorbing their energy while simultaneously providing a host of other life-supporting ecosystem services.

Messaging from councils in support of 'developing multiple innovative uses' soon followed, artfully worded to placate everyone. For example, at a seminar, one stated the intention was 'to transform berms by increasing their value, resilience, and function while prioritising protection for communities while keeping mahinga kai, biodiversity and recreation central to management'.

At first glance this looks like a textbook sustainable development quadruple bottom line accounting declaration, where equal weight is given to people, planet, profit, and purpose. But the term 'value' means entirely different things to different people. What, for example, does it mean by 'prioritising protection for communities'? Does it mean protection of clean drinking water? Or protection of buildings and infrastructure from floods? This type of politically correct messaging implicitly promises that every single one of these values—flood protection, economic, environmental, cultural, and recreational—are all prioritised, and all can be realised, which we know full well is fiscally impractical and physically impossible along all braided rivers.

Still, the most practical way to come closer to achieving a compromise is to 'give rivers room to move'. Or more accurately return lands taken from the rivers so that they can once again become what they need to be: braided rivers.

But try selling that notion at community meetings filled with farmers whose centre-pivot irrigation systems are sprawling across braidplains (Figs. 3 & 4).

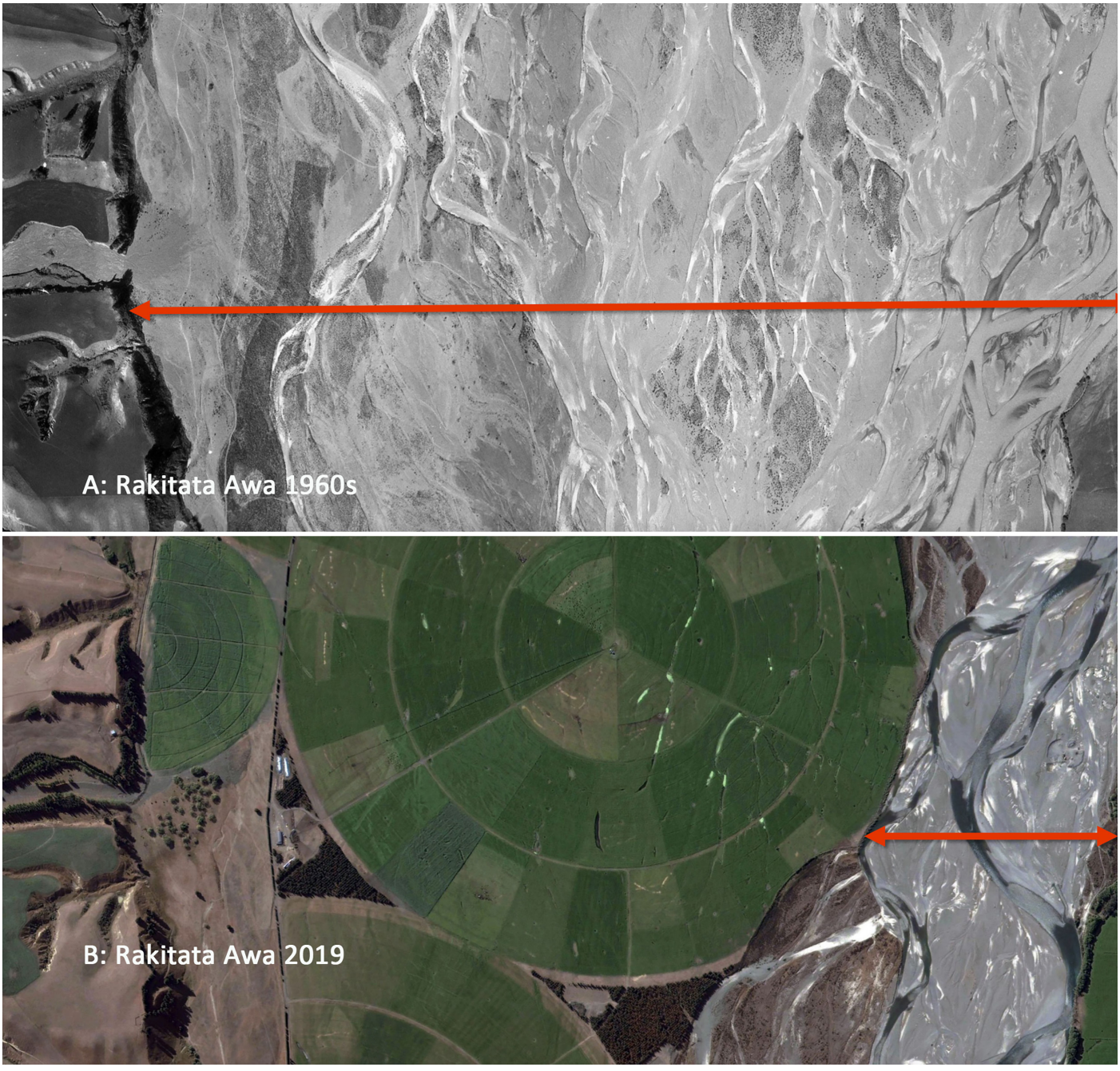


Figure 3: Image (A) Canterbury Maps, (B) Google Earth.

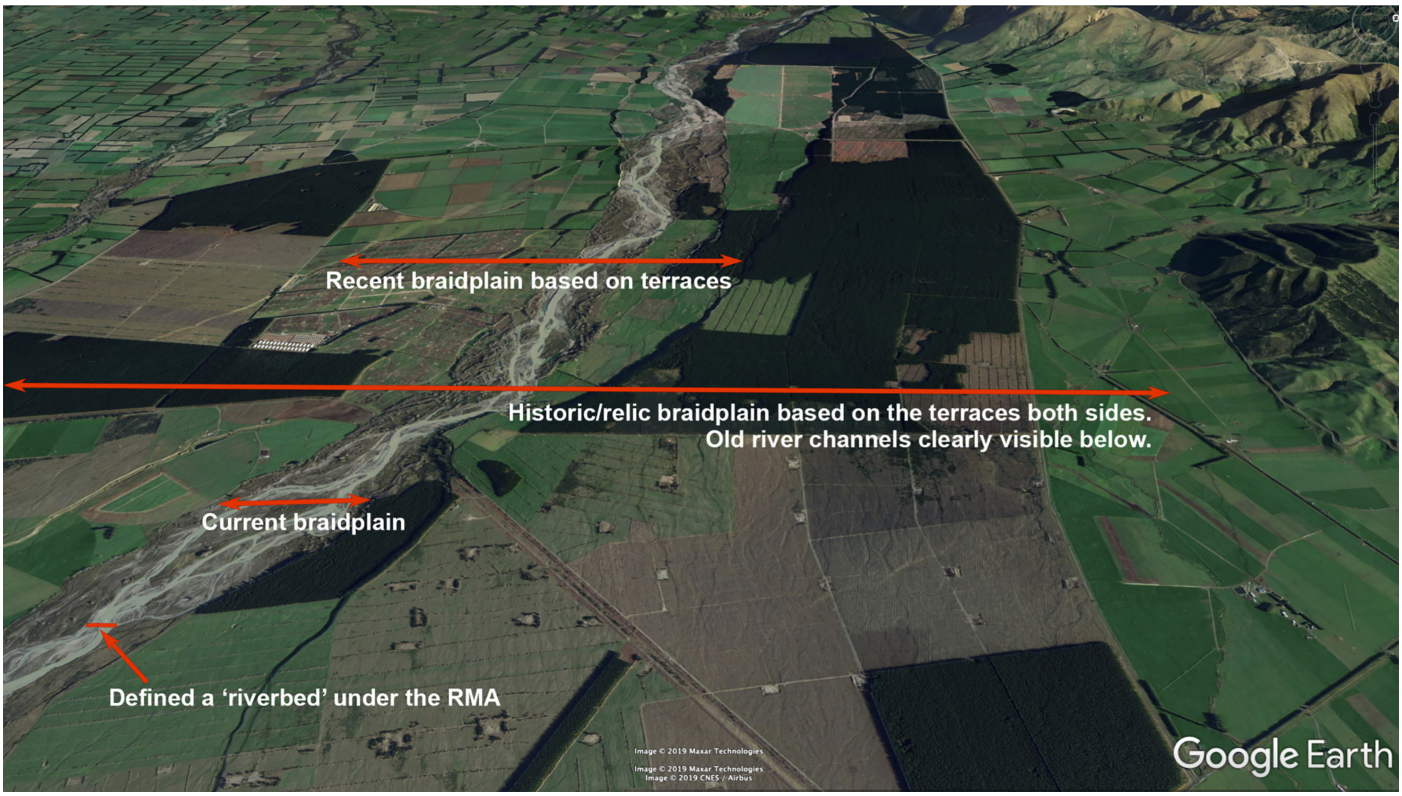


Figure 4: Hurunui River braidplain looking west at the point where it leaves Tiritiri-o-te-Moana. Image: Google Earth and BRaid.

The response is swift and loud, and along the lines of 'bloody council trying to do another land grab'. Cue the Dewhirst decision[7].

There really is nothing new in this. Squabbles over water have been happening for thousands of years. As my Latin-speaking editor once informed me, the word 'river' comes from the Latin noun rivalis; literally, rivals who use the same stream as a source of water. The point here is that everyone has different values and priorities, many (arguably most) of which are in direct conflict with one another. Because people interpret these messages through their unique lenses of perception, their values—what's important to them—communities of all stripes are left feeling that they have been lied to because the 'promises' that they read into the messaging were not kept. Simply put, trying to placate everyone has meant not being honest with anyone. The end result is anger, distrust in the community engagement process, and more broadly distrust of those who facilitate and provide technical advice at these meetings.

River managers of all stripes need to change the narrative. Instead of mixed messages that appear to promise everything, it's time to be brutally honest with communities about the need to make unpalatable choices, preferably before our braided rivers take those choices from us. If you're uncertain about this approach, keep in mind that no high-level policy or multi-million dollar engineered stopbank or levee can confine the atmospheric rivers and cyclones that feed our braided rivers.

References

1 Canterbury Maps: canterburymaps.govt.nz/explore/

2 Begg et al; 2015: *Geology and geomorphology of urban Christchurch and eastern Canterbury*, GNS Science Geology Map 3 and Canterbury Maps Pegasus Bay bathymetry: mapviewer.canterburymaps.govt.nz/?webmap=2454894daaba48ac89dcf4906495f626

3 Op. cit.

4 Oreskes and Stern; 2019: *Climate Change Will Cost Us Even More Than We Think*: www.nytimes.com/2019/10/23/opinion/climate-change-costs.html

5 Paulink et al; 2019: *New Zealand Fluvial and Pluvial Flood Exposure*, NIWA client report no: 2019118WN /National Science Challenges: climateandnature.org.nz/wp-content/uploads/2020/05/NIWA-Flood-Exposure.pdf

6 New Zealand Productivity Commission; 2019: Local government funding and financing: Draft report. productivity.govt.nz/inquiries/local-government-funding-and-financing/

7 For a fuller explanation see Holland Law; 2019: What is the "bed" of a braided river?: Update: Court of Appeal affirms High Court's decision: hobec.co.nz/news-resources/2019/october/dewhirst-update-the-bed-of-a-river-begins-with-its-banks-not-its-fullest-flow or; Decision No. NZEnvC 12, 2021: justice.govt.nz/assets/2021-NZEnvC-125-Dewhirst-v-Canterbury-Regional-Council.pdf

MAKING ROOM FOR RIVERS: WHY AND HOW SHOULD WE DO THAT?

Hervé Piégay
University of Lyon; Research Director at the National Centre for Scientific Research (CNRS), France.

Figure 1: Photo of the conservation reserve along the Allier River in central France.

Making room for rivers (MRR) is an inspiring solution to live with rivers in a sustainable way, a so-called nature-based solution allowing to manage flooding risk and minimise damages to river corridor ecosystems so as to preserve benefits of healthy rivers for humans and nonhumans. It can be difficult to implement in highly populated alluvial valleys and a significant collective effort is needed to make it successful. MRR can be a conservation option to prevent additional human pressures on the river corridor or a restoration option considering we redefine land use along the river towards more naturality. As it is much easier to preserve than to repair, a prevention strategy is key for sustainable development to minimise any more degradation. Moreover, river restoration can repair certain functions and services, but some are definitely lost.

Many locks must be unlocked to implement it. It is a slow process related to our progressive understanding of our place on Earth as humans. In many countries, intrinsic value attributed to rivers (river is valued for itself) is not yet shared between citizens but the instrumental value attributed to rivers, the fact that a healthy river is economically interesting for the society, is sufficient to act. It will prevent additional damages, protect water resources, and protect people from risk of flooding. Stopbank setback is an MRR policy to manage floods within an integrated catchment scale perspective, considering inhabitants living upstream, along the concerned reach – and downstream, considering non-humans, considering the next five years – and for a much longer time scale having in mind a potential trajectory of change. Since the 1990s – 2000s, some laws have been passed to promote such policy in different parts of the world. The European Water Framework Directive requiring to reach a good ecological status for rivers, can be considered as one of them.

MRR may be even easier to implement when a society attributes an intrinsic value to rivers. Citizens must have an environmental consciousness, be convinced we need to take care of our environment to prevent additional damages and survive. In such a social context, human attitudes towards natural processes are evolving. Flooding, bank erosion, in-channel wood in rivers that were seen as problems during previous centuries, are now seen as valuable processes for river health, humans and non-humans, benefiting river services.

Different strategies or tools have been implemented to make room for rivers within a process-based thinking in France, and notably in the western European Alps where the rivers transport a lot of sediment and occupy a significant corridor in the valley bottom due to shifting. At the end of the 1980s we discussed about bank erosion (considered as a risk for landowners) and recommending investing massively in riprap protections. At the same time, we just understood bank erosion is a key process for sediment transport, notably in a context of sediment deficit following two decades of intense in-channel mining and significant channel incision as well as an ecological engine explaining the high ecological diversity of alluvial forests that are continuously rejuvenated. In the Water Master Plan of the Rhône Mediterranean Corsica basin edited in 1997, a 'Space of Freedom' is defined as "the floodplain in which the active channel can naturally move in order to maintain coarse sediment supply and an optimal terrestrial and aquatic ecosystem". A guideline and financial support are designed to help municipalities and river engineers to identify this corridor within which we do not implement new infrastructure that could increase vulnerability to erosion, and even we can remove some, to the benefit from channel shifting without considering it as a risk. This corridor has been designed for example along the Ain River near Lyon in 2000 and since then no bank protections were built and erosion is no more a problem. If farmers can lose their land, this must be clearly evaluated and debated, reallocation or compensation can be proposed. Such strategy along highly shifting rivers is usually much more interesting economically speaking than spreading riprap protections all along the rivers and maintain them through time. Two decrees of law were also published by the French Environmental Ministry, the first of 24th January 2001 indicated mining sites would no longer be permitted in the "space of mobility" of rivers and such a space must be mapped on a channel length of at least 5 km in the vicinity of a projected mining site to be sure it will not impact such space of mobility. The second one of 13th February 2002 modifies the rules authorising bank protection structures greater than 50m (for rivers less than 7.5m wide) or 200m (for rivers wider than 7.5m) in length and states that bank protections must not reduce significantly the "space of mobility" of the channel, the band being defined on the basis of an historical analysis of channel mobility.

In 2016, almost 20 years later, the Rhône basin committee in charge of implementing the European Water Framework Directive in this basin went even further, promoting the definition of a corridor of "good ecological functioning", a corridor within which functions are preserved or restored, considering not only channel shifting but also flooding, morphodynamic processes, ecology, biochemistry and hydrogeology. Such a corridor is definitely an MRR solution proposing to act in an integrative and sustainable perspective, with all the stakes related to the river corridor. And furthermore, to design a master plan discussed within a public participative approach for healthy river corridor preservation and restoration.

MRR is an integrated strategy to manage flooding and bank erosion risks, reconnect people to rivers (leisure activities), prevent pollution, improve biodiversity and protect groundwater resource. To be implemented, it needs voices for the rivers (and for designing our future) to protect or restore them, legal innovation and intersectoral (river scientists and managers working together) and public engagement to overcome the social barriers, consider common goods and change the way we live with Nature to be resilient to changes.

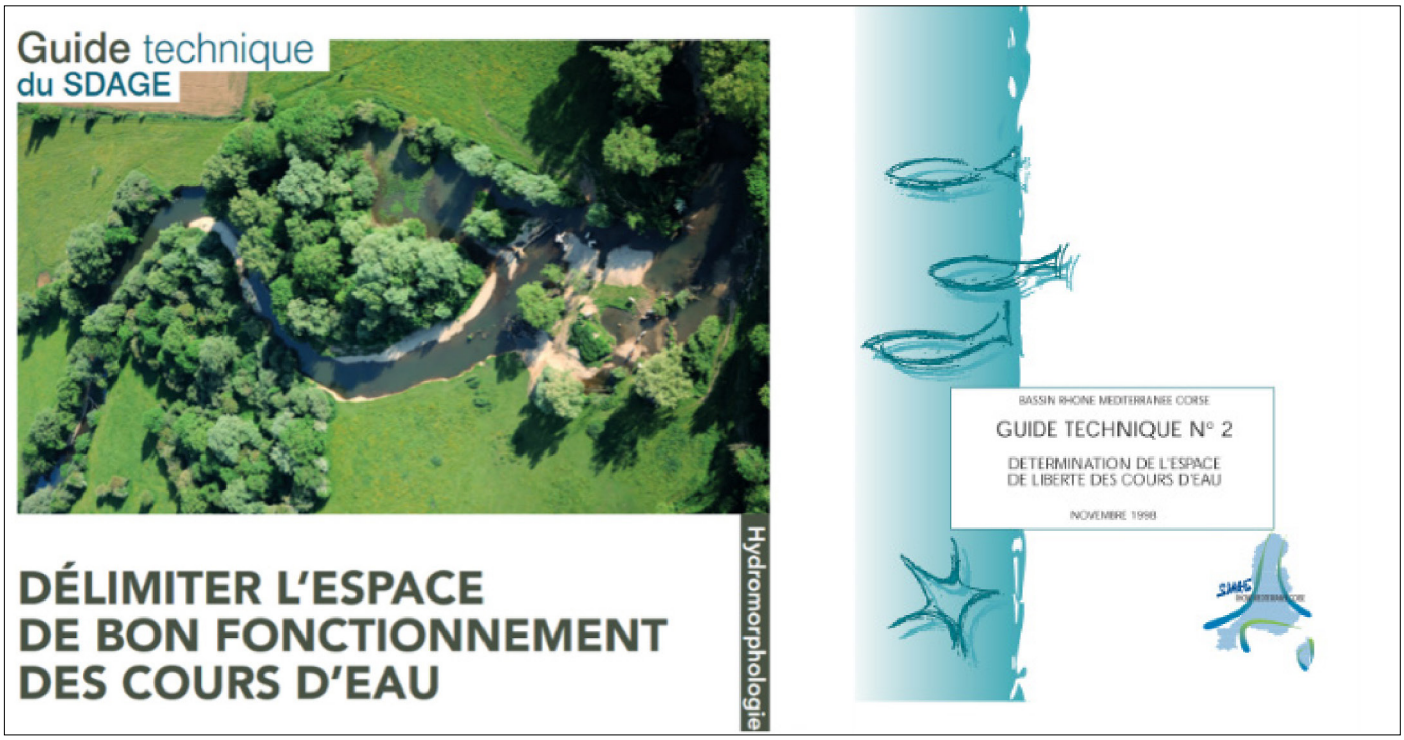


Figure 2: Guidelines for making room for rivers in France.

AWARDS

Awards results

Since it was established in 2009 the Rivers Group has presented the Arch Campbell Award to recognise notable contributions to the advancement of knowledge or practice in fields related to rivers, flood risk management and operational and environmental issues of catchments and river systems. This Award was established in memory of Arch Campbell to recognise his very significant contribution to soil conservation and river control and management in New Zealand and has generally been presented to experienced practitioners who've made a major contribution over an extended portion of their career.

In 2021 two new awards have been added. The early career award is presented for contribution to sustainable management of New Zealand rivers within the first 10 years of someone's career, and the Wahine Toa award celebrates a female role model who is leading the way in a river related field.

The award winners were announced during the 2023 NZ Rivers Group conference in Nelson.

Early Career Award: Rose Beagley

This year's winner of the Early Career Award, Rose Beagley, is working tirelessly to improve the way we live with rivers in one of our most difficult and rugged regions.

Having completed a Bachelor of Science in 2014 and a Master of Science in Fluvial Geomorphology in 2017, which included modelling the Waiho River in Franz Josef to better understand the effects of different stopbank alignments upon the river's behaviour, Rose wasted no time in applying that knowledge to West Coast rivers at West Coast Regional Council (including being thrown into role of acting team leader for Hydrology). Since then Rose has joined Land River Sea consulting, and sat as an instrumental member of the six-person Technical Advisory Group assembled to develop a 10-year management strategy for the Waiho River.

By all accounts Rose's knowledge, passion to do the right thing, and sheer enthusiasm for the field makes her the perfect candidate for this award.

Wahine Toa Award: Selene Conn

This year's winner of the Wahine Toa award, Selene Conn, is absolutely that – a Wahine Toa on a tireless journey to elevate the mana of rivers and the people who work with them.

Not only has she made significant contributions to applied fluvial geomorphology in both Australia and New Zealand, combining that extensive knowledge with expertise in wetland systems and riparian zones; she is also a leader in advocacy and innovation in applied fluvial geomorphology and in the workplaces surrounding it. She has been integral to many discussions about how to encourage and retain women in science, technology, engineering, and maths. She engages in difficult discussions around inequalities for women. And she advocates for equal opportunities for Wāhine and Wāhine Māori in the river industry.

Her innovative, technical, and leadership skills shine through her credentials as the first person to receive the designation of "Geomorphology Specialist" under the Certified Environmental Practitioner (CEnvP) scheme of the Environmental Institute of Australia and New Zealand; as the current Technical Director of Fluvial Geomorphology at Tonkin + Taylor; and as recent Chair (and current committee member) of the Rivers Group.

She makes the New Zealand river science community fun, inclusive, and productive. She is a Wahine Toa.

Arch Campbell Award: Ian Fuller

This year's winner of the Arch Cambell Award, Ian Fuller, has made a substantial contribution to research, academia, education, and practical work in our field. Ian has authored over 100 peer reviewed journal articles, multiple book chapters, and over 200 conference presentations; consulted on flooding, gravel extraction, river change, habitats, and gully erosion; appeared as an expert witness in the Environment Court; and taught and inspired countless students over an academic career spanning some 27 years (for which Ian has received several prestigious teaching awards).

Ian has contributed substantially to the rivers group – including sitting on the committee since 2020 as the academic representative, assisting with conference committees, and recently leading the group's advocacy efforts.

Ian continues to contribute significantly through his positions as Professor in Physical Geography & Associate Dean at Massey University, and as Principal Fluvial Geomorphologist & Technical Director at Tonkin + Taylor.

For these significant contributions to the advancement and application of fluvial geomorphology in Aotearoa spanning many years Ian is well-deserving of the Arch Campell Award.

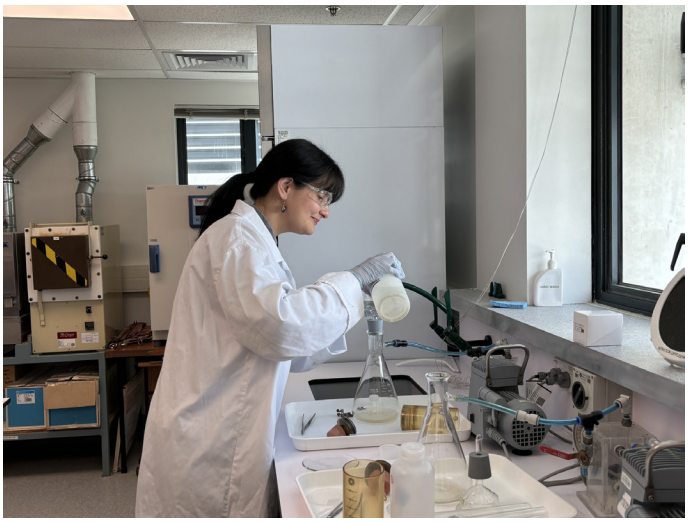
SCHOLARSHIPS

STUDENT RESEARCH SCHOLARSHIP RECIPIENT

This year the Rivers Group is supporting one student research project with a grant of $1000:

Maria Borges (University of Canterbury) is in the first year of her PhD research into optimisation of sediment management and water allocation in reservoirs under climate change and land use uncertainty. The grant will be used to collect field data and to carry out laboratory analyses.

Expect to hear more from the grant winner in future editions of FLOW. If you or someone you know is considering student research relating to rivers and/or catchments in New Zealand, then look out for next year's Rivers Group student grants.



I'm Maria E. Borges, a PhD student in Civil and Natural Resources Engineering at the University of Canterbury. With a background in Civil Engineering and a Master's degree in Water and Land Resources Management from my home country, Venezuela, my journey into the world of water resources has been nothing short of an inspiring adventure.

Growing up in Venezuela, a nation blessed with abundant water resources, I've been captivated by the mysteries of rivers and hydrological processes since my early years. However, my true understanding of the scientific aspects of rivers and lakes began during my undergraduate studies, where I delved into the world of hydrology and sediment transport. Since then, I have been continually immersed in learning about these processes.

My pursuit of knowledge and expertise led me to embark on a Master's program in Water Resources. This educational journey broadened my horizon, equipping me with a comprehensive understanding of hydrology, climate change, sediment transport processes, environmental concerns, and much more. During this time, I had the privilege of sharing my knowledge as a lecturer in Venezuela, and I also gained practical experience by working for a consulting company, where I contributed to the development of hydrological and river hydrodynamic projects in my homeland.

Currently, my PhD research is centred on the optimization of sediment management and water allocation under conditions of land use uncertainty and a changing climate. The research is being conducted using Lake Opuha in Canterbury as a practical case study to simulate sediment loads using the SWAT+ model. The objectives behind this research are to improve the SWAT+ model for routing sediment loads through the river network and to develop an operational tool to manage water releases for optimal water allocation and sediment management in the reservoir.

I am very grateful to my supervisory team, Dr. Thomas Cochrane (UC), Dr. Markus Pahlow (UC) and Dr. Arman Haddadchi (NIWA), for their guidance. I greatly appreciate the financial support from the NZ Rivers Group which in particular allows me to collect additional data and to carry out further laboratory analyses. I am eager to continue working in water resources and sediment management after completing my PhD.

EVENTS CALENDAR

The 2024 Floodplain Management Australia (FMA) National Conference will be held at the Brisbane Convention & Exhibition Centre from Wednesday 22 – Friday 24 May 2024, with optional pre-conference workshops on Tuesday 21 May 2024.

Floods in a Changing Climate

The theme of the Conference is Floods in a Changing Climate, which will focus on keeping flood risk management a high priority when seasonal forecasts are for below average rainfall, and flooding patterns change as the climate warms.

We are looking for a range of high-quality presentations from across Australia, and overseas, dealing with riverine, overland and flash flooding, and coastal inundation. The content can be technical or non-technical to suit our varied audience, so you don't need to be a "flood expert" to provide a presentation. The practical experiences of Councillors, flood committee members and community representatives can be of real value to fellow conference attendees.

Tertiary students studying floodplain management or natural disaster management and Young Floodplain Managers are particularly encouraged to participate and share their experiences.

The subject of the presentation should align with one or more of the following topic areas:

- Modelling and flood data.
- Flood prediction and warning.
- Managing growth and land use planning.
- Infrastructure projects and asset management.
- Flood policy, guidance and best practice.
- Emergency preparedness, response and recovery.
- Flood case studies and stories.
- Environmental aspects, climate change, coastal hazards and adaptation.
- New technology and research.
- Flood damages and insurance.
- Cultural perspectives (Aboriginal, Torres Strait Islander and Māori).
- Social sciences, human behaviour and communication.

CALL FOR ABSTRACTS CLOSE
Monday 11 December 2023
For any enquiries, please contact the Conference Managers:

East Coast Conferences
Amy, Jayne & Jasmine
amy@eastcoastconferences.com.au
floodplainconference.com

PROFESSIONAL DEVELOPMENT OPPORTUNITIES

A great resource to find information about professional development opportunities is the Resilient Rivers Communities professional development programme webpage. Make sure to visit the Resilient Rivers Communities webpage for the most recent updates and detailed information regarding upcoming workshops and webinars. Note that past professional development programme webinar recordings can also be accessed on their webpage. And recall that past NZ Rivers Group webinars can be accessed in the NZ Rivers Group members area.

For those interested in the flood risk area, various online training opportunities in the form of digital badges are available on the Āpōpō website. There are 3 courses in the flood risk learning framework starting with WM 104 – Introduction to Flood Risk Asset Management, then taking a deeper dive into key areas with WM 240 – Inspection and Performance and WM 241 – Risk Management and Planning.

SURVEY AS PART OF MASTER'S RESEARCH AT UNIVERSITY OF CANTERBURY

We are seeking input from the construction industry to take part in research that aims to further develop a new national Best Practice Guideline for Works in Waterways. This is part of a Waterways Centre (University of Canterbury/Lincoln University), Boffa Miskell, and Environment Canterbury project, funded through MBIE's Envirolink programme. As a contribution to this work, we are conducting research that aims to understand how the construction industry interprets and implements best practice management from an ecological or environmental perspective.

We invite you to participate in an anonymous 8–10-minute questionnaire about construction industry activities, particularly those in or near waterways. The questionnaire also includes some questions about best practice management and specific construction materials and practices.

We would appreciate it if you could circulate the link to your colleagues, employees, or sub-contractors in order for us to gather responses from as many people within the construction sector as possible.

To complete the questionnaire, go to canterbury.qualtrics.com/jfe/form/SV_aXaJkae0fBkAxeK

Or scan or photograph the QR code:

Please note that on the start page of the questionnaire there is a link to the Participant Information Sheet, which provides further information about the research and expectations.

For questions, please contact Kathryn Bates, Master's student at the Waterways Centre at University of Canterbury.

CALL FOR CONTRIBUTIONS

We are always looking for contributions from our membership for FLOW. Consider submitting an article, case study, update or notice for the next issue of FLOW. News from the different regions are very much appreciated.

The final submission deadlines for 2024 is:

Issue	#	Deadline for contributions
March 2024 issue	#42	Monday 19 February 2024
June 2024 issue	#43	Monday 20 May 2024
September 2024 issue	#44	Monday 19 August 2024
December 2024 issue	#45	Monday 18 November 2024

Please format your contribution as follows:

- Length of around 500–1,500 words, preferably in Microsoft Word format (articles should include: title, name of the author(s), affiliation(s), and section headings. Note that illustrations and/or tables are strongly encouraged)
- If possible, attach figures/images/artwork, eg. in .jpg format, at high-resolution separately
- Provide credits and captions for your figures/images/artwork

If you have articles which are longer, please email us and we will work out a way forward together with you.

Email rivers.group@engineeringnz.org to submit your FLOW contributions or any news you want to share. We look forward to receiving your contributions.

RIVERS GROUP MANATIAKI KŌAWA MISSION STATEMENT

The New Zealand Rivers Group Manatiaki Kōawa was formed in 2009 to provide a forum for 'Working with Rivers'. It is a place for people with an interest in rivers, flood risk management and the operational and environmental issues of catchments and river systems to come together.

We currently have over 400 members, and promote a multi-disciplinary approach to river management, reflecting cultural and societal diversity in an integrated and holistic manner. Our membership reflects this, with our members coming from a wide range of river management, science and engineering, and planning backgrounds – working as consultants, or in local, regional and central government, research institutes and universities.

New members can sign up online

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