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"THE BIGGEST STORY EVER"

*Jamie Morton**

11.1 Introduction

New Zealand website *The Spinoff* once called climate change journalism's "biggest and most difficult story, ever".¹

It was quite the summation.

I am among a small stable of science and environment journalists in New Zealand who write about climate change almost every day.

Before joining the *New Zealand Herald* in 2011, I had covered news beats that spanned from crime and court to health and local government, each presenting their own difficulties.

Many veteran journalists might figure that approaching a feared criminal on the steps of a court house or stepping into the aftermath of a tragedy would be the toughest assignments a young reporter might face.

But in writing about climate change, I have found a much larger trial.

It is enormous in almost every way that one can imagine – and it is urgent.

As the pressure for nations to act mounts, so too does the journalist's challenge of reaching the average Kiwi.

Because for people to tackle the impacts of climate change in New Zealand and the Pacific, everyone will need to know more, and care more.

For the media, the defining question of our time might well be how we, as truth brokers, help slow the climate change train before it hurtles off the rails.

I have heard colleagues liken this to learning about a transformative event like the Christchurch earthquake – decades in advance – and trying in desperation to raise the warning sign.

* Science Reporter, *New Zealand Herald*. Some of the quotations in the chapter are from interviews conducted by the author.

1 "Covering climate change: journalism's biggest and most difficult story, ever" (16 August 2017) *The Spinoff* <<https://thespinoff.co.nz>> ["Covering climate change"].

Decades from now, when our world will be inevitably warmer and wilder, will we be able to tell ourselves that we did everything we could, when it counted the most?

That is something that seems to have always been front of mind for journalist and *New Zealand Geographic* founder Kennedy Warne:²

I think anyone who cares about life on Earth – or who has grandchildren, and I tick both of those boxes – must have an interest in persuading fellow members of the species to act with the planet's future in mind.

He recounts something *Grist* magazine climate writer David Roberts told an audience during a TEDx talk in 2012.

"Your job," Roberts said, "anyone who hears this, for the rest of your life, your job is to make the impossible possible."³

Indeed, the way we cover it will affect how well societies deal with the problem.

As climate change takes hold, people will demand information about what is happening and what they and their governments can do about it.

Wise and responsive editors are learning that climate change presents an opportunity to grow and better serve our audiences.

Three of the media's traditional roles – informing audiences, acting as watchdogs and campaigning on social issues – are especially relevant here.

For journalists like myself, coverage of climate change means several things.

At a local level, our work can save lives, forge plans, change policy and empower people to make informed choices.

Through informed reporting, we can shine a light on the wealth of activities that people are already undertaking to prepare for climate change.

And at the international level, we can bring stories from this corner of the world to global audiences and help encourage the rich and powerful countries to act.

But it is also worth noting that climate change is not just a story: it is the context in which so many other stories will unfold.

As such, it is not a subject solely for science or environment reporters like me to cover.

That is why I feel it is essential for all journalists to understand at least the basics of climate change, and realise that there is more to it than apocalyptic headlines.

2 Ibid.

3 "Climate change is simple: David Roberts at TEDxTheEvergreenStateCollege" (13 June 2012) <<https://www.youtube.com/watch?v=A7ktYbVwr90>>.

Contrary to popular belief, this is an issue full of stories that can sell newspapers and attract new audiences online, in print and on the airwaves.

Yet, my colleagues have also pointed out the paradox that climate change journalism now faces.

At a time our industry is battling for its existence, and in which journalists are under more pressure than ever, our jobs have never been more relevant, nor important.

11.2 Moving past denial

Although it might seem that the news media have only woken to the crisis now, journalists in New Zealand and the Pacific have been reporting on global warming for decades.

Research suggests coverage, for the most part, has been in line with the scientific consensus.

The first scholar to examine the New Zealand mainstream media's treatment of climate change was likely Alan Bell.

After exploring newspaper coverage over a six-month period in 1988, he found that "reporting of basic scientific facts was overwhelmingly accurate".⁴

Fast-forward to more recent times, and we find that a study of television news over three months in 2012 showed "no attempt made to give climate change naysayers equal time in a misguided attempt to appear balanced".⁵

New Zealand media's responsible editorial line contrasted with the historical coverage of climate change in the United States of America, where a "balanced" reporting approach effectively undermined the strength of scientific consensus (Boykoff and Boykoff, 2004).

All the while, climate change sceptics have been there on the fringes, pressuring newsrooms to peddle their misinformation.

For instance, in 2007, the New Zealand Climate Science Coalition received funding from the United States-based Heartland Institute and, in 2008, lobbied to get stories questioning the reality of climate change in the business pages of national media.

These attempts to create uncertainty in the minds of the general public were promptly exposed in the magazine *New Zealand Listener* (Hansford, 2008).

"Obviously, there was a giant speed bump in media coverage when oil-company funding of climate change scepticism and outright denial kicked in," Warne says.⁶

4 Allan Bell "Media (mis)communication on the science of climate change" (1994) 3 *Public Understanding of Science* 259 at 259.

5 Michael Bourk, Jennifer Rock and Lloyd S Davis "Mediating the Science: Symbolic and Structural Influences on Communicating Climate Change Through New Zealand's Television News" (2017) 11(6) *Environmental Communication* 821 at 834.

6 "Covering climate change", above n 1.

When denialist groups successfully turned climate into controversy, this had two effects.

It took media attention away from the reality of the threat to the vacuous details of the "pro/anti debate".

Worse, it scared large numbers of the public away from engaging with what the previous Parliamentary Commissioner of the Environment rightly described as "the ultimate intergenerational issue."⁷

How have climate sceptics sometimes succeeded in getting coverage?

Perhaps it is because of the truth that climate science actually does not have all of the answers.

After all, scientists did not have temperature gauges in the 15th century, let alone 150,000 years ago.

Instead, to recreate ancient climates that countless studies are based on, scientists use proxy data, such as ice cores from Antarctica, or tree rings in ancient forests.

And these are not always exact, which is one argument the climate sceptics have jumped on to suggest that global warming is just the normal ebb and flow of the earth's temperature.

However, climate scientists have compiled many different proxy data sets from many different regions, and they all point to one direction – up.

It is now incontrovertible that temperatures are rising,⁸ and that we are causing it, so journalists need not be distracted by sceptics who try to sway our coverage from these fundamental facts.

We need to accept that the debate has gone beyond scepticism – and that we should be concentrating our stories on the voices that are more vulnerable to the effects of climate change, such as those many Pacific communities.

Warne feels it has taken years for media to get over the false assumption that balanced reporting required covering the views of sceptics.⁹

He suspects a legacy of this misinformation campaign is that reporters and editors have been apprehensive about alienating a portion of their readership – much as they probably remain apprehensive about reporting on 1080-related issues today.

Prominent Kiwi science writer Veronika Meduna recalled standing up at a Radio New Zealand editorial meeting back in 2001 – around the time of the Intergovernmental Panel on Climate Change

7 Parliamentary Commissioner for the Environment "Time to take a historic step for climate change, says Environment Commissioner" (media release, 27 July 2017) <<https://www.pce.parliament.nz>>.

8 See Chapters 2 and 4 in this book.

9 "Covering climate change", above n 1.

(IPCC)'s Third Assessment Report (IPCC, 2001) – to suggest that coverage should start focusing on whether policy development reflects the scientific evidence.

With hindsight, she admitted, that seemed laughably naive.

It was some years after that when Radio New Zealand's *Insight* dedicated an entire programme solely to talking to climate sceptics.

"I made an official internal complaint, which resulted in a very useful document about coverage of asymmetrical debates," Meduna says.

"It helped to shift things but I still felt that I was seen as a trouble-maker rather than as someone who was trying to lead on an issue.

"It's been changing over the last 15 years or so, but even during the coverage of [the IPCC's Fifth Assessment Report] in 2014 I was still told that there's too much gloom in climate change coverage and that it has to be 'balanced'."

A common problem has been credible news outlets allowing regular columnists to indulge their denial of climate change.

Editors have sometimes attempted to defend or excuse these columns as offering a counter-view or "balance", as Meduna notes, or simply a case of freedom of speech.

One such columnist, former ACT Party leader Rodney Hide, used his *National Business Review* column to attack me and colleagues for reporting on climate change according to the evidence. He wrote:¹⁰

Newspapers are not picking a middle path providing analysis and facts and opposing argument. They are instead shunting readers to their predetermined conclusion and are eager to provide copy that "pressures authorities into being more proactive".

Outside the mainstream media, right-wing blogger Cameron Slater has long presented a strong, anti-IPCC view on climate change on his website *Whale Oil*, which claimed to have two million visits each month in 2014 – the same year it controversially won "best blog" at the 2014 Canon Media Awards.

Another sceptical blog, *climateconversation.org.nz*, did not have such a high readership, but focused entirely on climate change.

Reflecting on her time with the *New Zealand Herald* in the late 2000s, *Stuff* climate change editor Eloise Gibson recalled tit-for-tat pieces published in the newspaper's opinion pages.

10 Rodney Hide "The media take on climate change" *National Business Review* (online ed, February 2018) <www.nbr.co.nz>.

"I think we've moved on to writing about more interesting areas where the science really is uncertain and towards covering some of the other thorny, difficult questions that researchers really are grappling with," Gibson says.

"There's still plenty of room to find tension and uncertainty to write about, but it's not about whether climate change is happening."

On this point, Warne agrees.

"If I were to use RNZ as a case study, I would say that coverage has improved markedly over recent years," he says.

"At least climate change is treated as a fact, not a hypothesis, any more. The jury is finally 'in' on that point."

Meduna's former Radio New Zealand colleague and *Our Changing World* co-host, Alison Ballance, has also observed a sea-change over the past decade:

From giving the tiny number of climate change deniers the right of reply to all comments from climate change experts, we have seen the media slowly embrace the idea that climate change is a real and urgent problem, and that we should be giving climate change scientists and other experts a much clearer voice.

If there has been a discernible turning point, some journalists have pointed to the climate change campaign launched by *Stuff.co.nz* in late 2018, dubbed "Quick! Save The Planet" (Crewdson, 2018).

The campaign, spurred by the United Nations' recent report into the IPCC's 1.5 degrees Celsius aspiration (IPCC, 2018), has come with a series of high-quality feature articles putting climate change in a New Zealand context.

More recently, *Stuff* has hired two full-time journalists dedicated to reporting climate change issues, while running daily atmospheric CO₂ counts, through a partnership with NIWA.

These were admirable steps by the media in taking the issue seriously, while also stamping out the sceptical view – *Stuff* now no longer gives coverage to denialism.

11.3 How do journalists cover climate change?

I have watched my industry shrink dramatically over the past decade, on the back of declining advertising revenue and pressure from new market players like Google and Facebook.

That pressure is not easing.

In 2018, for instance, New Zealand's print market shrank considerably after *Stuff* closed more than 35 per cent of its newspapers and announced further cuts (Edmunds and Pullar-Strecker, 2018).

"Overall, I think there are still too few journalists with an interest or background in science and environment reporting," says Meduna, "and equally too few people who are given the time to delve a little deeper, beyond news-driven day to day coverage".

The daily news cycle might be likened to a crowded, noisy party.

What stories you commit to have to be important enough to cut through that noise.

Before pitching a climate change story to a chief reporter, you have to ask yourself those same questions that any journalist does about any piece – "How will this be relevant or interesting to my readers, why is it important, and, crucially, what's new? What are you telling them that they don't already know?"

The stories that journalists choose, and the effort they put into them, can range from spending weeks on a feature article exploring the nuances of agricultural methane emissions, to 20 minutes re-writing a university's press release on a new scientific paper.

As comes with the broad scope of climate change, you might find yourself explaining new figures around potential mitigation costs that coastal communities or what farmers are doing to prepare for future droughts.

It might be the announcement of a new government policy or what climate change has to do with snow-starved ski field operators being forced to delay the opening of their season.

Climate change is one of the very few topics that can take a reporter from a threatened village on a Pacific atoll, to a flood-prone suburb or a dairy farm in New Zealand, to a core drilling expedition in Antarctica.

My experience has been that any story will resonate with readers if the subject-matter affects them somehow – as climate change of course will – and if it is presented well, or just sharply told.

We have to remind ourselves that we are writing for a general audience, not *Nature Climate Change*, and have to keep things simple, while retaining that fact and accuracy.

The most shared story I have ever written was about new evidence showing the East Antarctic Ice Sheet was much more sensitive to climate change than we first believed (Morton, 2015).

This was all based off one interview with an Australia-based scientist.

Another well-read piece was a listicle of 10 New Zealand species, that we might rely on as sentinels or "climate change canaries" to signal the first effects of climate change.¹¹

That got plenty of play online and the news editors did a great job of laying it out across a centre-spread in the following day's *Herald*.

Journalists working in different mediums find they have different strengths – and different challenges.

TV news relies on pictures and generally on shorter simpler items, and "good talent".

Climate change stories often provide none of these.

11 Jamie Morton "10 climate change canaries" *New Zealand Herald* (online ed, 12 October 2015) <www.nzherald.co.nz>.

"There are no new pictures to go with a story about revised modelling, so we rely on the same old images we've been trotting out for 20 years," broadcaster and Aotearoa Science Foundation founder Damian Christie says.

"It's much easier to focus on specific stories, like flooding in a particular place, or the death of a species, but often these are difficult to link directly to climate change."

And then there are the pressures that come with simply producing a story.

A journalist's daily grind can be gruelling: it means finding a story, carrying out interviews, turning those into a package, and filing the piece all before deadline.

In today's fast-paced, web-driven environment, this often needs to be done inside an hour, or hard against deadline, or with accompanying videos and visual elements.

Meduna adds that resourcing is always a constant challenge, too.

"And I say this from the perspective of somebody who produced a weekly programme, so actually had the luxury of time – just no money."

Even then, she adds, it is sometimes difficult just to get your head around the science, let alone to understand the implications of it.

"Finding fresh talent and angles has been another significant barrier – but it shouldn't be going forward, given that climate change impacts are so pervasive."

Another major issue continues to be the perspective that the media covers climate change from.

Warne says there is a problematic tendency for the issue to be treated as an environmental one.

Rather, climate change is an economic issue, a social issue, a political issue, an agricultural issue – a civilisational issue, if you will.

Climate disruption will be severe and systemic across all humanity.

The critical next step for climate coverage, Warne says, is linked-up reporting that looks at how climate perturbations will affect markets, environments and human well-being at the same time, in ways we have barely begun to consider.

One New Zealand journalist who has notably taken this broad view is *Stuff* national correspondent Charlie Mitchell.

He feels coverage has improved, at least in terms of volume and seriousness.

"I've only covered it for a couple of years, but I feel like it's changed even in that time," he says.

"There's more urgency coming across, and at least anecdotally, I've noticed more news stories that frame climate change as something that is currently happening, not some vague ominous thing that will suddenly happen at some indistinct point in the future."

But he echoes Warne's point that the topic itself tends to be vague to the media.

He put this down to a lack of reporters specifically covering it as an issue.

"Climate change gets reported as true, and as a problem, but it tends to be presented as one all-encompassing, monolithic thing – climate change – rather than as a specific series of events, each with their own consequences, like sea level rise, ocean acidification, biodiversity loss, and so on," he says.

"I guess I'd say the reporting could do with more of that nuance, including my own.

"It becomes easier to dismiss the problem when it's not presented as distinct, measurable phenomena that happen to have a shared cause."

Gibson similarly sees a noticeable gap in journalists connecting the scientific and environmental aspects of climate change with what governments are doing – or are not – to tackle the problem.

Coverage of debates about carbon laws, energy, transport and agricultural policies still tend to be dominated by discussions about who is doing the cleverest or most on-brand political manoeuvring, with not quite enough discussion of the basic scientific reality.

Her widely-respected work in her previous role as science and environment editor at current affairs website *Newsroom.co.nz* has explored many of the facets that are not easily understood as rising seas threatening peoples' holiday baches (Gibson, 2018).

A shining example was an in-depth article on the current disagreement between members of the scientific community on how methane should be treated under policy.¹²

"The technical parts of the science can be a challenge – but another area where New Zealand is lucky is that our climate scientists engage pretty well with the media and do their best to stop us making a hash of it."

11.4 Explaining the science

As my colleagues point out, covering climate science can indeed be challenging.

But journalists who can report accurately on the science in ways their audiences can relate to and understand will find they have more opportunities to tell stories, and even make a difference.

Rather than just reporting what scientists have found, the key challenges for us is to understand the real-life implications of new research for media audiences – and to help them appreciate how the new information is relevant to them.

Often, the first step is to know when scientists have published new climate-related studies.

12 Eloise Gibson "What's the beef with methane?" (28 November 2018) *Newsroom.co.nz* <<https://www.newsroom.co.nz>>. She further stated: "It might seem like an argument only climate scientists would care about. But the outcome may help shape the government's planned Zero Carbon Bill and the rolling targets that will be set by a climate commission".

Luckily, there are many ways to stay up-to-date without having to dig through technical and research papers.

Science information sources such as the *New Zealand Science Media Centre*, *Science Alert* and *Science Daily* provide regular updates of the latest scientific research from around the world.

The Conversation website provides short, professionally-edited stories and opinions from experts around the globe and has a daily email newsletter.

Meduna, now serving as *The Conversation's* New Zealand editor, feels it has taken some time for the gap between science and the media to be bridged.

"I was studying genetics during a time when geneticists were discussing the ethics of genetic modification and had panel debates about moratoria, and when I became a journalist nearly a decade later, I was shocked to see how little of that had filtered through to newsrooms, let alone public debate," she says.

"That gap between what scientists are currently talking about and what people outside of science and academia hear about has since narrowed significantly, but it's still there – and I don't think it's helping decision-making."

So should we try to become communicators of the science ourselves?

It is neither critical, nor probably not possible, for journalists to become a climate science expert.

But we should certainly cultivate a good network of experts who can explain things clearly, and who will respond quickly to our requests for interviews or information.

They are critical for providing important context for climate stories, and telling us how studies compare to one another, and whether new results draw previous findings into question.

Of course, reporting the findings of a study is just one component of a journalist's job; providing a balanced assessment is just as important.

Just because a study is peer-reviewed does not mean it is above critical evaluation.

We have to remember to be as nuanced as possible and remember that even when scientists – or their press officers – say their research is "revolutionary", very rarely does a study completely contradict a large body of scientific research.

To most effectively cast a critical eye on academic studies, we have to examine the purpose of the study, the researchers' methodology and the report's funding.

And then there is the common hurdle of risk and uncertainty.

As the Union of Concerned Scientists puts it: "To most of us, uncertainty means not knowing. To scientists, however, uncertainty is how well something is known."¹³

While scientists know that research points towards a greater understanding of a phenomenon or event even if there is uncertainty, that uncertainty can be enough for the public and policy-makers to conclude that something is not real.

In the case of climate change, that is a dangerous difference.

One challenge is that while scientists use numbers that describe how statistically probable something is, non-scientists use words to explain how certain they are.

The IPCC uses a simple chart to convert the numbers into words, so a probability above 99 per cent means "virtually certain", a value above 66 per cent means "likely", and so on.¹⁴

Yet, one person's understanding of "likely" is the same as another person's understanding of "virtually certain".

We can also report on the factors that scientists say account for their uncertainty.

Scientists can have various levels of certainty about a given subject.

They can be sure that seas are rising because they can measure that directly, and they are nearly certain about what is causing sea levels to rise.

But they are much less certain about how much sea levels will rise in different parts of the world, and when.

Such scientific uncertainty makes it important for us to avoid comparing unlike scenarios and aggregating statistics from different studies or regions.

Risk is the other major scientific concept for journalists to understand and explain.

Though deceptively simple, risk is one of the hardest things to communicate accurately, partially because it can be very hard to actually determine what a real risk is, and partially because public perceptions of risk can be very different from those of scientists and other experts.

We should be aware that our readers tend to perceive risks that have been imposed upon them as more dangerous than those they have chosen – or that risks that have natural origins are often seen as less threatening than human-made.

13 Union of Concerned Scientists "Certainty vs. Uncertainty: Understanding Scientific Terms About Climate Change" (19 March 2010) <<https://www.ucsusa.org>>.

14 Intergovernmental Panel on Climate Change (Core Writing Team, RK Pachauri and LA Meyer (eds)) *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC, Geneva, 2014) at 2 footnote 1.

If we fail to become familiar with this, we can create disproportionate fears or unrealistic hopes, lose the trust of our audiences, and can discourage scientists from talking to us.

11.5 Hype, doom, hope

In a similar vein, alarmism is a term that climate sceptics often use to discredit climate change journalism – and climate science itself.

But nearly every journalist who regularly writes about climate change has probably been guilty of alarmism at least one time in their career.

One of my own biggest regrets was a headline written by a sub-editor that implied the world could expect Biblical levels of sea level rise this century.

My article that carried this headline actually described various sea level rise scenarios occurring over millennia – and the misrepresentation embarrassed the scientist concerned at a time he happened to be attending an international conference (Morton, 2013).

Warne says the alarmist storytelling mode is tempting for media, because sensation has become the default expectation of both editors and audience.

He feels editors are conditioned by strong, persistent media narratives as much as their readers.

"These messages are self-reinforcing. Once 10 or 20 or 50 stories have been written with variations of the sinking islands narrative, it becomes pretty difficult to believe that's not real," he says.

"How hard is it to avoid? Once you realise that it is ineffective and incorrect, not so hard in your own reporting, but still difficult when negotiating with an editorial ecosystem that is still under the influence of that narrative."

He sees another issue that is just as much of a problem: generalisation.

People rely on heuristics – shortcuts, rules of thumb, generalisations – to negotiate a complex world.

"We seem stuck in a discourse characterised by simplification and generalisation – on all environmental issues, and climate change in particular," he says.

"If journalists believe that the public's attention span is six seconds – or whatever the latest finding is – then of course they're going to be tempted to simplify and generalise.

"But I think the onus is on media to break the generalising, sensationalising cycle. Can you sound an alarm without being alarmist? It's difficult, but I think it can be done."

Another risk of sensationalism is a well-studied backlash effect that entrenches apathy.

Because the potentially devastating consequences of global warming can threaten our fundamental tendency to see the world as safe, stable and fair, people often respond by discounting the evidence, or simply looking at the problem as too big.

Indeed, one 2018 poll found few Kiwis believed that humanity would do what is needed to escape the worst impacts.¹⁵

Research suggests that if the media – and scientists – avoid doomsday narratives and focus on positive messages, people will not only be more receptive of the evidence, but will be more willing to reduce their carbon footprint (Hall, 2017).

This is something I try to keep in mind when writing about potential scenarios New Zealand and the Pacific could be facing in decades to come.

Warne agrees powerful psychological drivers such as loss aversion make it inherently difficult for people to engage.

"And on the flipside, coverage of what can be done to reverse the trajectory of runaway emissions – the aspirational story – needs to be ramped up," he says.

"I think public interest in low-carbon solutions is growing and growing fast.

"Decarbonization – both at industrial and domestic scales – is a fount of potential stories. People want to know: how do we fix this? That's a great question for journalists to be exploring."

11.6 The human story – and the bigger story

For reporters covering it, climate change can seem a completely impersonal story.

I recalled thinking this when receiving daily progress reports from New Zealand's negotiating team at the landmark United Nations Climate Summit at Paris.

Why would the ordinary Kiwi worry about carbon trading mechanisms being provided for in the final agreement?

If you had stopped someone on the streets of Dannevirke or Dargaville, would they know what an Intended Nationally Determined Contribution (INDC) is, or would they even care?

The same thought occurred to me when I spent two nights camping in Antarctica's Taylor Valley, discussing with scientists such concepts as post-glacial rebound and morphological zonation.

What do unseen and slowly-unfolding processes on the coldest, driest, windiest, least inhabited continent on the planet have to do with everyday life back in New Zealand?

It is just those kinds of reasons that lead *New Zealand Geographic* editor Rebekah White to think climate change stories are the hardest she produces.

As she points out, they have everything going against them: they are distant, hypothetical, terrifying, and, as I noted earlier, they make people feel helpless.

15 Jamie Morton "Poll: Few Kiwis think world will overcome climate challenge" *New Zealand Herald* (online ed, 15 July 2018) <www.nzherald.co.nz>.

"Uncertainty is a hard sell. It's very difficult to establish relevance to people's lives, or to present projections in a way that doesn't sound apocalyptic, even if the projections are apocalyptic, because cataclysms are hard to take seriously," White says.

"I do think it's pretty hard for someone to care about melting ice when there's no obvious impact on their daily life, and no meaningful personal action they can take about it.

"What's more, it's hard to construct a compelling narrative around a story that isn't physically taking place, when there's very little fieldwork to report on – just people sitting in front of computers constructing models."

In the end, it all does come back to the human story.

When I am writing any piece concerning climate change, I think of Russell Horrell.

The agricultural consultant nearly drowned when the van he was in was caught in a swollen Kaiwaka River, near Waitangi (New Zealand), in July 2014.

Scientists later calculated that human-driven climate change had approximately doubled the chances of that storm happening.

"We talk about global warming, but we are going to see more and more of these sorts of events," Horrell told me.

His experience proved an ideal opening to a *Weekend Herald* feature¹⁶ that tied together all of the many facets of climate change: the politics, the policy, the science and, most of all, the human cost.

Mitchell is also mindful of the need to marry the human story with the bigger picture.

"For me, the issue is finding a way to report climate change in a way that's engaging, so people will bother to read about it," he says.

"We can write a news story every time some major report warns that climate change will be catastrophic, but I don't think that moves things forward much at this point. It gets a bit abstract.

"I'm fortunate that *Stuff* has gone all in when it comes to seriously covering climate change, so I never have issues on the management front – the difficulty is in coming up with ways to treat the issue with appropriate seriousness without turning people off, which is probably an issue journalists have generally."

Journalism has now found many stories like Russell Horrell's, that put a human face on climate change.

16 Jamie Morton "Last Chance to Save the Planet" *Weekend Herald* (online ed, 28 November 2015).

Mitchell's 2018 lengthy feature article "Beach RD" told the tale of Tracey Reeves, a local of a Thames suburb that is among the most vulnerable spots to sea level rise in New Zealand.¹⁷

In other cases, a simple image can prove powerful enough.

Anyone doubting this can look at a photograph taken by David White for the *New Zealand Listener*, which showed farmer Kent Sambells preparing to shoot dead a pregnant cow amid the drought that parched northern Waikato in the summer of 2013.¹⁸

But, turning back to Warne's point, White argued journalism was not personalising the positive story.

"Many aspects of people's daily lives are going to shift, but I feel we don't have many visions of the future, or solutions proposed, that are realistic," she says.

"Generally the media is quite bad at providing a sense of scale to climate change solutions – that emphasis on changing lightbulbs, for instance, as opposed to consuming fewer animal products.

"Some of the best stories recently have been the ones about insurance withdrawal and foolishly-located housing developments, because of their immediacy."

Rebecca Macfie, one of New Zealand's most respected investigative journalists, says personalising climate change journalism is important.

"Not because it will save the world, but because when people are psychologically engaged enough to, say, cut down on meat consumption, they are more likely to be aware of the political and corporate response and therefore more able to properly judge the adequacy of what government and companies are doing."

But she does not see this as the only angle that journalists should be pursuing.

"Getting serious climate action happening will rely on holding governments and powerful economic players to account – not by reducing the challenge down to some kind of kitchen table response."

And there is more than enough survey data to show that Kiwis want action from their leaders.

Three quarters of respondents to a 2018 poll thought the government had a responsibility to step up – yet less than half figured the country's response had been on the right track and just a third deemed it "good" (IAG, 2018).

17 Charlie Mitchell "Beach Rd: The rising sea and the reshaping of New Zealand" (27 November 2018) Stuff <<https://interactives.stuff.co.nz/2018/11/beach-road/>>.

18 "Drought takes deadly toll on farms" *New Zealand Herald* (online ed, 13 March 2013) <www.nzherald.co.nz>, reproducing a photograph originally appearing in "A scorched earth: Scenes from the drought" *New Zealand Listener* (online ed, 13 March 2013).

If journalists needed a reason for urgency in their reporting, most of those people in the same survey believed New Zealand needed to start right now: 64 per cent believed we need to meet or exceed our international commitments; and 78 per cent were of the view that we should act even if other states do not (IAG, 2018).

Three quarters thought climate change was an important issue to solve and 60 per cent had become more concerned over recent years – something that myself and others in the media have noticed while covering the issue.

11.7 Social media: a blessing or a curse?

It is difficult to tell whether social media platforms like Facebook and Twitter have had a positive or negative effect on climate change issues.

The answer is likely both.

One 2017 study found that, on the plus side, social media has been encouraging greater knowledge, is helping mobilise activists and is giving people a space to discuss the issue with others (Larson, 2017).

On the negative side, however, social media has provided a platform for sceptics who have been craving public reach since being largely shut out of the mainstream media (Nuccitelli, 2018).

Companies like Facebook have done little to curtail these misguided views being spread across their networks, despite the vast amount of users who might be exposed to them and influenced (Wickenden, 2019).

You might perhaps argue that the world's most dangerous climate change sceptic, United States of America's President Donald Trump, might not be sitting in the White House were it not for the unchecked powers of social media.

"Social media continues to offer the potential to progress the issue and at the same time to misrepresent it and thwart progress," technology commentator and science journalist Peter Griffin says.

"Social media activism on climate change can be incredibly powerful and engaging, particularly when it comes to the power users – millennials – who will be left to deal with the implications of climate change in future."

Social media has, after all, been a big part of the development strategy of new digital media organisations, including some that specialise in climate change, like *Carbon Brief*, and which has likely helped mainstream media by pre-digesting specialist reports.

At the same time, it has allowed some climate scientists and climate journalists to build a strong profile – and in turn be used more by mainstream media.

But Griffin is quick to point out its facilitation of inaccurate and misleading information going viral – and it was not just sceptics that posed a risk here.

"When an environmental activist group photoshops an image to show dire consequences of climate change, it threatens to set back discourse on the whole issue."

It is worth noting that the problem with social media is not specific to climate change or environmental issues.

Across the board, society is struggling to get the best out of social media while limiting the negative consequences.

The Facebook scandal over fake news and Twitter's efforts to tackle to clean up its network were all part of this.

But it is also about people taking personal responsibility for the tone of their discourse and their activity on social media – and that is a big issue to tackle.

In the meantime, people and organisations with an interest in climate change have powerful tools to make the most out of an incredibly effective and engaging medium.

11.8 Climate change and the arts

That description can also apply to another medium that has been around much longer: the arts.

It is proving a critical bridge between climate advocates and the public, but, just as with journalism, it has not always been that way.

As climate activist Bill McKibben notably wrote in 2005: "Where are the books? The poems? The plays? The goddamn operas?"¹⁹

In more recent times, Kiwi curators and galleries have been showing exhibitions focused on climate change, with many more planned.

This might be because of the case for urgency: the more pressing the cause and the greater our knowledge, the more confident artists are to reflect it through their work.

And that work is not just confined to paintings: it is sculptures, installations, performance and media.

Art is a cultural interpreter, an expression of our identity, a reflection of our society.

A dance, song, film or painting is experienced viscerally, activating different senses, recruiting different parts of our brain and nervous system to generate a response.

Some artworks intentionally use the approach of embodiment to physically engage the audience – and in that way, they can make a deeper connection and build empathy that stirs people to act.

19 Bill McKibben "What the warming world needs now is art, sweet art" *Grist* (online ed, 22 April 2005) <<https://grist.org/article/mckibben-imagine>>.

"The arts can be an entry point for people to engage on climate change, to become more receptive, be open to information and potentially engage more deeply," says Sarah Meads, the founder of Track Zero, a charity that works across the arts and science to advocate climate action and awareness.

"For people to feel engaged they need to have 'conversations'. The arts can create spaces for this two-way dialogue to happen interactively, compared with a newspaper article."

"The arts also have greater audience reach and can go to where communities live and work."

Gabby O'Connor, an installation artist and doctoral student based at NIWA, said arts appealed to people's feelings – a unique difference that made the medium a Trojan horse for communicating climate science.

"We all emotively react to art. The way I am currently thinking about this is that we need all forms of communication about climate change," O'Connor says.

"The arts are but one form of communication and possibly, it can provide an in-road to a topic that is otherwise complex."

The arts often provide a physical experience, something more visceral to an audience, and this will often be remembered more than a written piece.

The experience of the art might then make the audience member more open to further information about the issues, O'Connor explains.

"One form of communication is not better than another, but due to the complexity of climate change, we need all forms, from aural, visual, written, experiential so that the messages about climate change are communicated across all learning styles."

O'Connor is an interdisciplinary artist – that being one which works alongside scientists, architects and designers.

Having already collaborated with researchers in Antarctica, she is now working on an art-science community project, dubbed "The Unseen", and which helps children explore the way marine ecosystems are managed in the face of climate change.

There are now plenty of other such examples in New Zealand. Auckland artist and academic Janine Randerson has created installations inspired by meteorology, while research scholar and choreographer Carol Brown's project "LungSong" angrily confronts "climate chaos".

At least here in the Pacific region, that cultural uprising that McKibben called for now appears to be in full effect.

Many Māori and Pasifika artists draw on ancestral symbols and knowledge, simply because their spiritual relationship with nature is intrinsic and inseparable from their art.

Some like Taranaki's Wharehoka Smith and Waikato's Zena Elliott choose to work exclusively with Māori symbols and the process of creating the work, while others, like Michel Tuffery and the Mata Aho Collective, use their work to talk about the issue of climate change.

Some other notable examples include: Māori musicians like Tiki Taane, Pereri King and Rob Ruha pushing for action through their work; spaces like Auckland's TEMP, showing interactive art focused on climate change; and environmental themes running strongly through projects by influential Kiwi artists such as Sam Mahon, Sam Trubridge, Nigel Brown, Dan Mace and Jenna Packer.

A performance by top Royal New Zealand Ballet dancer Corey Baker, filmed in Antarctica, offers yet another stunning illustration of art's power in storytelling (Baker, 2018).

O'Connor says that while art is beginning to be recognised for such potential, there are still challenges with finding support for this kind of work.

"Often working with climate change, means that you are conducting interdisciplinary work – and this can make it harder for funders – be it art or science – to support as the outputs are not clear cut," she says.

"The art can be perceived as too sciencey, or the science represented being too arty, or of less value – this stems from historic values ascribed to different subjects."

Meads thought that, for all successes, the arts remain surprisingly understated as a force for positive change.

"Sometimes arts and artists endure the false flattery of being seen as the 'object' – like a painting on a wall or end point, the destination, rather than the road to get there," she says.

"In New Zealand, the arts can also be perceived as a luxury, something to be enjoyed at leisure, for our entertainment and lifestyle, such as going to a concert.

"If you're not from a traditional culture, where art form is used to hand down knowledge and express identity, then that part of society is unaccustomed to seeing the arts as having a role in shaping our future.

"I believe the arts can play a broader role, including in business and technology."

O'Connor, at least, is determined to break that ground.

"I believe that climate change is a social problem and as a citizen of the earth, I feel like it is my social duty to use my skills and connections to connect the public with the issue, either overtly, or more subtly," she says.

"We are freaking out, and this is one way that we can at least do something productive."

11.9 A mission for good

One of the most inspiring speeches I have heard was Rebecca Macfie's address to the 2016 Canon Media Awards at Te Papa in Wellington.

In it, she described climate change as the defining issue of our times – and called on all of those leading journalists and editors in the room to act.

Before she later exited the *New Zealand Listener* to write the late Helen Kelly's biography, it was that strong sense of personal duty that brought hesitation about leaving journalism.

"I'm incredibly conscious of the views and feelings of young people, and the way they must be receiving the information about the climate crisis and what it does to their mental health and their feelings about their future life."

Because of New Zealand's three-year government term, we in the media have a huge role to play in advocating for and holding the government to account on long-term plans around climate change.

We need to pursue more stories exploring the ramifications of policy decisions from a climate change point of view, and point out which actions would provide the best climate change solution, giving people something to advocate for to their MPs.

As journalists, we really need to take a similar role regarding climate change as we have regarding the #metoo – forcing people to confront something they do not really want to acknowledge or deal with.

And, as Macfie notes, we should feel a personal responsibility to the young people who are now doing a huge amount of work in the media industry.

Mitchell, a millennial himself, ironically had little interest in environmental issues when he took on the beat at *The Press* a few years ago.

He has since found it an incredibly rich and important subject to report on.

Climate change became part of that, naturally, being the biggest environment story in the world.

"My interest in climate change is largely the same as everything else I report on: I think journalists have a duty to report truth, or what is as close to the truth as we can possibly get, as a defence against those who would distort the truth for their advantage," he says.

"Which is a classically self-righteous journalist answer, but it's true. Like most people, I would rather the world and the natural systems on it didn't collapse because we couldn't resolve a problem we knew all about and were perfectly able to avoid.

"Why I care about reporting on climate change, though, is the same as why I care about journalism as a profession, which is that I think its function in society is invaluable."

The science of influence tells us that the cumulative reinforcing of messages again and again from varied sources is that leads people to change their behaviour.

Covering climate change can seem like a thankless task at times, but all of those contributions each reinforcing the need for change is what makes the difference in the long run.

The tide is turning – but we have an obligation to continue shining our light.

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