SECTION THREE:

Living with loss

THE SADNESS OF LIVING THROUGH CLIMATE CHANGE

To take a metaphor from medicine, climate change is both an acute and a chronic disease. We have discussed earlier how to prepare your mind and home for acute events such as fires, floods, and heatwaves. In other chapters we have looked at how to prepare for the chronic disaster: should you move? Should you grow your own food? But the long-term threat of climate change also weighs heavily on our minds. Is there anything we can do to cope better with this distress?

Climate change's psychological impacts cover a wide range[220], including:

- The trauma of natural disasters.
- The distress of increasing environmental degradation.
- Anxiety, worry, grief, guilt, despair, denial and apathy from seeing people and the environment suffer.
- Increasing violence due to more extreme heat.
- Conflict between groups of people, perhaps due to water shortages.
- Displacement and dislocation, either if you move, or the people important to you move away, leaving you among strangers.
- The widening gap between those who have and those who have not.

It is a confusing mix of thoughts and feelings, but there are some overarching themes that come through in research and writing about climate change distress. Below, we look at some of those, and in the following chapter we'll look at ways that you can try to cope.

Grief

Grief happens when you lose something or someone. In a study called *Beyond Bushfires*[221], University of Melbourne researchers looked at the effects of 2009's Black Saturday. They found that losing a friend was a factor in all forms of lasting psychological distress: depression, post-traumatic stress disorder and mental illness. In other words, experiencing grief predicted lasting psychological damage.

In unrelated studies on people who'd lost a partner, nearly two-thirds of people experienced what could be called normal grief. They grieved and recovered, experienced low levels of ongoing distress and resilience, or depression and then recovery. But around 20% experienced chronic grief or depression. These are the people who, according to the Australian Psychological Society[222], might benefit from professional help. But, they add, most people do recover with time.

Ric Hingee, who lost his home in the 2003 Canberra bushfires, describes the effects of loss and recovery:

"Recovering from a disaster is a bit like a marathon race. Some people get out in front and finish first; others come in the middle of the pack and others are trailing at the end. It's the same with the victims of disasters. They don't finish at the same time. Everyone has their own pace at which they come to terms with what they've

been through. And some people don't finish the race at all. If you've lost a lot of stuff – or everything in some cases, the dog was the only thing I saved – you are always reminded of it. My wife finds when she's cooking she'll look for a certain pot and then realise that it doesn't exist anymore. Whenever you smell smoke it comes back. Whenever you hear a helicopter go overhead it brings it all back. It only takes little things to remind you. If you go to the shops, or a market, or a fete or something and you see something that you used to have, you tend to buy it, just to replace the memories that are associated with the old one. People need to know that this is going to happen and to understand that it's normal and to ignore the people who say get over it and start your life again. It just doesn't happen."

Grief is not caused exclusively by the death of a loved one or loss of sentimental property. It may also be a result of a perceived loss of way of life due to massive environmental or economic change. Climate change will potentially cause both. Celeste Young, a research fellow at Victoria University, writes that climate change "means accepting that the world we have grown up in is changing, and will not be the same in the future."[223]

Young has adapted Elizabeth Kübler-Ross's five stages of grief, first published in *On Death and Dying* in 1969, to address the grief caused by climate change.

1. Denial is the first step, on display in the varieties of climate change denial in Australia, from outright denial of the science, to denial of impact, to denial of responsibility. Denial is a form of coping, but a bad one, and has been linked to future distress[224].
2. Anger follows, and Young argues this can be seen in the angry public response to maps of climate change flood risk. 'Why

me?' they ask, when it is no longer possible to deny the facts.
3. People then bargain, perhaps delaying a move from an increasingly flood prone region.
4. Beginning to accept the changes opens the way for depression, seen in farming communities as droughts make more and more farms unviable.
5. Finally comes acceptance, and Young suggests the decision of people in Queensland to relocate after the 2011 floods represents the closure of the grief cycle.

Grief though is a messy process. When faced with the losses of climate change, present and future, real and imagined, Young writes that people will cycle back and forth through the grief steps.

Some of the climate survival tips we've offered in this book will impose radical changes on lifestyles: relocating, or learning to live without electricity. These changes too can cause a sense of loss and grief as the future we imagined for ourselves disappears out of reach.

The homesickness you have at home

It can be difficult to imagine how different a climate-changed world might be, and we can underestimate how much loss and grief we might feel. One way to imagine how your home might alter is through the climate analogues described in the book, *Four Degrees*[225] and now online through CSIRO and BOM's website Climate Change in Australia. Analogues look at how the place you live will change by comparing it to an existing place it will be like in the future. For example, Melbourne under the hottest and driest climate in 2090 under a worst-case emissions scenario could become more like Leeton in inland New South Wales. Sydney

would become like Gladstone on the Queensland coast. Dubbo's climate, currently in inland New South Wales, shifts more than 1,500 kilometres inland to the deserts of the Northern Territory. And Alice Springs, heating up by 5°C on average, leaves Australia altogether under the hottest and driest scenario. The closest match is in Sudan.

For Anna North, writing in the *New York Times*[226], this sort of change is the same as physical displacement. "The places we live are not what they once were," she writes. Currently in New York, her climate analogue for 2100 is Miami, Florida. Los Angeles too will end up like Florida. "Climate change is turning all the places I ever loved into Florida," she writes. While we've argued in this book you may want to consider relocating, these sort of models show you might not have a choice. Either you move, or your home does; it becomes another place entirely, losing many of the things you hold dear. Think, for example, of Melbourne when winter becomes too warm for daytime football games; of a Canberra July morning without sparkling frost. What if June in Hobart was too warm for a pint of stout in front of an open fire? Or if autumn came and Bright and Orange's trees stayed resolutely green?

Glenn Albrecht, a now-retired academic, has developed a term for this: solastalgia[227]. While working at the University of Newcastle, he regularly encountered people distressed by the environmental changes they were experiencing due to coal mining in the Upper Hunter Valley. 'Nostalgia', the feeling of wanting to return to a time or place, wasn't the right word, as the people still lived at home. That home, though, was no longer the place they were used to and loved. Solastalgia then is "the homesickness you have when you are still at home".

What we stand to lose

For people living in cities the change will be experienced in temperature, rainfall and extreme weather events. Beaches may be lost to sea level rise and beach erosion; trees could die off in parks; suburbs on the edge of cities may experience catastrophic fires. But the environment and ecosystems around our cities will see even more noticeable changes. Although simplistic, the same sort of models that describe analogue climates for current Australian locations can do the same for the environment. Lesley Hughes, an ecologist at Macquarie University and a councillor at the Climate Council, says that the area around Cairns, currently a rich tropical rainforest and one of the "most biodiverse areas in the continent" could become more like an open tropical forest dominated by gumtrees, or like the grassy woodlands of Kakadu in the Northern Territory[228]. These changes are already happening all around us. For example, migratory birds are arriving two weeks earlier and leaving three weeks later, and magnolias flowering a month earlier than they should[229].

The changes will be accompanied by loss; not just feelings of loss, but actual, physical loss. On January 4 2014 record-breaking heat hit south east Queensland, with temperatures reaching up to 44°C. The heatwave had tragic consequences for flying foxes, large raucous bats that form colonies in Australia's eastern cities. Media reported bats falling from the sky. Local councils filled wheelie bins with their bodies. In all, at least 45,500 flying foxes died that day; it's thought to be one of the largest animal die-offs ever. Bats appear to die when the temperature goes over 42°C[230]: this is their thermal limit.

The mass deaths of bats are a metaphor for the more gradual changes Australia's ecosystems will see. All animals and plants have a preferred range of temperatures. Half of Australia's gum

trees have a range of less than 3°C, and a quarter less than 1°C[231]. As temperatures might go up more than 4°C, this means gum trees will have to move or die. A gradual shift southward, or uphill, may have been possible before European settlement, but people have now chopped and diced Australia's ecosystems and introduced new species and many natives have nowhere left to go.

Australia already has a terrible track record of extinctions, with the highest rate of mammal extinctions of any continent. Unchecked climate change will make things worse. For the groups of wildlife we have specific studies on, one-quarter of south west Western Australia's banksias could be extinct by 2080 and one-third of Australia's butterflies will be 'committed to extinction'[232]. Globally, more than a thousand bird species could be gone by the end of the century. To put that in context, fewer than 200 have gone extinct since about 1500. Global extinction forecasts are an imprecise science, but the numerous studies keep coming back to one figure: one-third of all species could be at high risk of, or committed to extinction if there is a 4°C rise. All of this represents an exponential increase in the rate of extinction. Extinction is already happening about 1,000 times faster than the 'background rate'. Climate change is likely to increase the rate 100 times more. Whole ecosystems will vanish. Lesley Hughes writes of Australia's mountain habitats in Victoria, New South Wales, and Tasmania that "the brutal reality is that the alpine zone as we know it today is unlikely to exist at all."

Is humanity doomed?

Lesley Hughes, in her writing on changes to Australia's animals and plants, notes in passing that a 4°C increase in Earth's temperature

will give us conditions like those 10-15 million years ago, when there were no humans or even pre-humans around[233].

Scientists began to talk seriously about 4°C at a conference in Oxford in 2009. Much of that thinking has driven this book; we have been particularly inspired by the Australian Four Degrees spinoff led by University of Melbourne researcher, Peter Christoff. Scientists talk about 4°C because, in the words of Professor Mark Maslin at University College London, "that is where we are heading. I do not know of any scientists who do not believe that[234]." In the spread of possible temperatures forecast by the Intergovernmental Panel on Climate Change (0.3-4.8°C above 1986-2005 average temperatures by 2081-2100[235]), 4°C is becoming increasingly certain. Recent research[236] led by Steven Sherwood at the University of New South Wales found the way clouds behave is likely to lead to 4°C warming by 2100, a finding he has called 'catastrophic' for people living in the tropics[237]. In January 2015 the Bulletin of Atomic Scientists moved forward the big hand of the Doomsday Clock by two minutes due the ongoing threat of nuclear war and climate change[238]. It now stands at three minutes to midnight, where midnight equals global catastrophe.

John Schellnhuber of the Potsdam Institute for Climate Impact Research has said[239] "the difference between two and four degrees is human civilisation." Civilisation, yes, but whether climate change could mean the difference between humans and *not* humans is another matter entirely.

The possibility of human extinction is serious enough for two university research groups to investigate. The Future of Humanity Institute at the University Oxford found that the possibility of people going extinct this century is around 20%, although they

urge people to take the figure with a grain of salt[240]. The institute has found that climate change is unlikely to deal the fatal blow because "it is unlikely to make the entire planet uninhabitable[241]." Nuclear war remains a far greater threat to human existence, particularly due to a possible 'nuclear winter'. In fact several other potential causes of human extinction including meteorite impacts and volcanoes, act through major climate disruptions. The institute is even quite dismissive of catastrophic climate change as a thing worth worrying about, at least under forecasts developed by current models.

However there may be surprises not accounted for in the climate models. These are known as 'feedbacks', things that cause climate change to get worse. One is the disruption of thermohaline circulation (THC), which sounds dull but is the basis for disaster movie, *The Day After Tomorrow*, in which humanity is destroyed by a new ice age. Another possibility is the release of methane from melting permafrost or clathrates, sometimes described as 'frozen methane cages', found under sea floors and ice. In 2014 methane exploded onto mainstream news following the discovery of mysterious, suddenly-appearing craters in Siberian permafrost. Although scientists still don't know what caused the holes, some attributed them to a thaw followed by sudden methane escape[242]. Other scientists, finding plumes of methane bubbling up from the Arctic sea floor, noted that the world is 'f**ked' if even a small portion of this stored methane escapes into the atmosphere[243].

As a greenhouse gas, the gases that cause the Earth to warm, methane is 20 times more powerful than carbon dioxide. Methane releases have been implicated in past mass extinctions, including the Permian-Triassic extinction event of 250 million

years ago, which likely saw 95% of life on Earth disappear[244]. In a 2013 comment in *Nature*[245], researchers forecast that a methane release could cost the world $60 trillion, or more than the global economy in 2012. However the science behind methane releases is by no means settled, with many prominent climate scientists expressing scepticism[246].

Scientists are similarly uncertain about other feedbacks. They consider them unlikely, but they don't know how unlikely. The Centre for the Study of Existential Risk at Cambridge University (http://cser.org) is now looking at what it calls 'extreme-tail' climate change: high impact, but low probability climate change greater than 6°C. Climate change as currently forecasted, they write, poses no catastrophic risk now or in the immediate future. However the centre defines near future as over the next several decades – beyond is much more concerning[247].

WAYS TO COPE

Psychologists call what our brains do when faced with stress 'coping'. There are good ways and bad ways to cope with stress. Clive Hamilton, author and Professor of Ethics at Charles Sturt University, outlines three ways people may cope with the threat of climate change. Much like the grief process, the first of these coping strategies is denial: to avoid feeling distress, you simply do not acknowledge the facts.

The second strategy is called 'maladaptive coping': you allow some facts, and some feelings, but in a way that can make the problem worse. These include: playing down the threat, changing behaviour slightly to make yourself feel better, pleasure seeking, shifting the blame, indifference, and unrealistic optimism.

The final strategy is called 'adaptive coping': acknowledging the facts and the feelings that come with them. In this chapter we will look at ways you can encourage this sort of behaviour.

Take action

Tanya Maxted, who runs a climate change blog called 50 Degrees[248], illustrates the process of coping with the threat of climate change. While working for a water research body in Perth, she came across reports of Perth's drying climate and increasing

reliance on desalination. Climate change, she realised, was already here. Delving further into the research, she developed a profound sense of anxiety about the future which came largely from her perspective as a mother of young children.

"You're very protective of your kids," she says, "and when you realise what the forecasts are pointing too, that our kids might not live to be our age if we can't mitigate ... With what some scientists are saying about tipping points and society unable to function once you start to shut down critical systems because they simply can't cope with heat … So I put two and two together and realised that wasn't a good outcome for my kids, especially my seven year old whose life is just beginning. I look around and see people with young kids or babies and think: this is it, we're in the fight of our lives, this is survival. Coming to grips with that I found quite intense, I still do."

Perth has already seen a dramatic shift in climate over the past 40 years – a decline in rainfall by over one-fifth since 1970[249]. At the same time, temperatures have gone up 0.15°C each decade. Scientists are starting to understand the reasons behind the shift[250]: the jet stream above Western Australia is slowing down as temperatures rise, which means there are fewer of the autumn and winter storms which bring rainfall to Perth. Rainfall is dropping, and this has been combined with increasing water use; consequently, parts of Perth's groundwater aquifers have dropped by 11 metres[251].

Then in the summer of 2010-2011 there was a nine-day heatwave with temperatures over 35°C. It followed Perth's second-driest year ever. Trees went brown. It started in the Jarrah and Marri forests of south west Western Australia, famous for their extraordinary number of plants. The trees were 'abscising' or self-

amputating branches to conserve water. Over the summer, 16,000 hectares of the forest suffered this dieback. Although much of it later recovered, researchers noted that "these forest ecosystems… may be reaching critical tipping points[252]."

Perth is shifting from a Mediterranean climate to desert, and this has a psychological impact. "Everywhere I go I'm seeing dead trees," Tanyia Maxted says. In December 2013 she resigned from her job and became an advocate for low-carbon, sustainable lifestyles, particularly electric vehicles. She tries to live normally, gets up in the morning and avoids the news and Facebook. Psychologists also recommend limiting exposure to TV and radio as a way of minimising distress about climate change, although this may ultimately be a way of avoiding rather than dealing with distress. Feeling like she's doing something, Tanyia says, has helped with the psychological distress she was suffering, though she admits the anxiety still comes and goes, particularly when faced with people who don't understand her perspective.

Clive Hamilton calls it problem solving, and it is a form of adaptive coping[253]. He writes:

"Problem-solving can itself be an effective strategy for reducing stress. For example, the adoption of problem-solving as a coping strategy might impel people to work with others so as to prepare for a changed climate, through political activism or joining local groups or councils that might develop mitigation and adaptation measures."

Hamilton cites a sort of problem solving, known as behavioural activation, which has been used to treat people with depression. A survey of more than 3,000 Australians (the same survey we mentioned earlier which found one-third had experienced natural disasters) showed that people who take action of some sort

were buffered against the distress caused by thought of climate change[254]. Other research[255] shows that a perceived lack of control is a strong predictor of anxiety and distress.

Joseph Reser, psychology researcher at Griffith University and the lead author of the previously mentioned survey, says the reason taking action is effective is because it self-regulates your emotions. Doing something allows people to feel that they are being responsible, and that they *can* take effective action. While individual efforts to mitigate climate change may be seen as ineffective, because you won't stop climate change by changing your light bulbs, Reser points out that individual actions can become magnified until they really do make a difference.

Is feeling in control a big part of why taking action can make us feel better? "Absolutely," says Reser. Particularly *perceiving* that you are in control at whatever tiny, individual level can help with guilt, helplessness and pessimism.

This is a book about how to respond to climate change to minimise the impacts on you, your home and your family. But we have almost ignored the other response to climate change: preventing it getting worse, by reducing the amount of greenhouse gases we add to the atmosphere. These two responses are known as 'adaptation' and 'mitigation' respectively, and they are increasingly seen as interlinked[256]. Mitigating climate change and not making things worse is in effect a way of adapting, and adaptation can help mitigate climate change. Some psychologists have argued that from a psychological perspective, adaptation and mitigation are closely interlinked[257]. For instance, if you see climate change as a threat, it may motivate you to adapt in the ways we've suggested in this book, but also to take action to mitigate climate change.

In this book we've come across things that may reduce the threat of climate change, such as improving insulation to cope with heatwaves, reducing your dependence on food grown elsewhere by growing your own, and using an electric vehicle to avoid the impacts of oil shortages. It's possible none of these things will actually save you when it comes to the crunch. But if you are the type of person to whom control is important, planning and executing strategies to increase your climate change readiness will at least make you feel better. And as a bonus, all those things also help, in their own small way, to mitigate climate change.

CASE STUDY: FLEXIBLE FARMERS ADJUSTING TO CHANGE

Livelihoods will also be affected by climate change, and where jobs are lost, communities, services and lives often follow. We can learn a lot about what climate change might do to rural and regional communities by looking at the Millennium Drought, which struck in the first decade of the 21st Century and lasted in some areas for 14 years. The drought left a lasting impression on people. In the Climate Institute report, 'A Climate of Suffering'[258], rural GP, Dr. Rob Grenfell, describes the impact of drought on his community:

"Many businesses have gone broke and so many people have left the community. Financial stress also brings on psychological distress and, sadly, in some cases, suicide. Also, there are episodes of domestic violence, and alcohol and drug problems—with all of the resultant disharmony."

The report finds that drought can trigger a sense of failure, powerlessness and loss, as well as anxiety, stress and depression.

One New South Wales study has found that a reduction in rainfall by 300mm would lead to an increase in suicide by 8%[259]. While drought is undoubtedly, and infamously, a part of life in Australia, the danger posed by climate change is more frequent in severe dry periods. This may reduce the recovery time for rural communities.

Fortunately, Australia's agricultural sector is always changing, and so has some capacity to deal with climate change[260]. We spoke to several climate-aware farmers who are dealing with the threat of climate change, what many of them call 'increasing climate variability'.

Royce Taylor is a crop and sheep farmer from Lake Grace in the wheatbelt of Western Australia. Born and bred in the region, he's noticed a definite decline in rainfall. Too much rainfall used to be a problem and they'd have to reseed if it got too wet. But that never happens any more. He's also seen an increase in heatwaves and, surprisingly, frosts. In fact, right across the Australian grainbelt, frosts have been getting more frequent and later since 1960[261], in what is possibly linked to massive climate-driven changes to atmospheric circulation. Whatever the causes, late frosts can be devastating for grains, with some producers losing more than half their crop.

Royce Taylor is managing these changes by becoming more flexible. While he plans for the growing year in advance, he makes adjustments throughout the year depending on rainfall. In really dry years he might cut back his crops by thousands of hectares, which ultimately saves losses. The natural variability of his region has made him confident that he can continue to manage future changes.

Gillian Taylor, on the opposite side of the continent, is also flexible. In a dry year she might destock her beef cattle so she

doesn't have to buy feed later. But her priority isn't production at all costs, it's more about looking after the land. Gillian started off in the Riverina region of New South Wales, where they'd get 450 millimetres of very unreliable rain. She moved to a run-down property further east in search of greater rain reliability, but instead found increasing temperatures, erratic seasons, and declining soil moisture. So she had to apply the same techniques she'd learned in the Riverina. Gillian emphasises the importance of looking after the plants that keep water in the soil, and not letting overstocking lead to erosion. She and her husband planted 60,000 trees when they arrived on the property. She's now a Climate Champion, one of a network of farmers who are trying to understand what climate change means for their farms, and spreading the word to other farmers. She says, "If I'm sitting on a bus I'll just say to someone – what are you doing, how are you adapting to climate variability?"

Drought isn't the only threat climate change poses to farmers' livelihoods. On the coast of New South Wales, cane farmers are threatened by rising seas. Robert Quirk's family has been in the Tweed River region for over a hundred years. His grandfather first bought the property for dairy farming in 1905, although as it passed first through his father's hands, and then to Robert's, it was converted to sugar cane. Cane prefers dry conditions because the plants like plenty of oxygen in the soil. Robert says, "we grow our best crops in the dust," although in 2014 they had their driest year ever and it proved too dry. That's the first time this has happened.

Usually though the problem is wet and acidic soils. Robert's property is about 30 centimetres above sea level, and he uses a system of pumps and barrages to stop his property becoming waterlogged. He also uses a nifty system of planting cane in

mounds, which not only helps with the water and acid problem, but reduces greenhouse gases. For the moment, the system is holding back the tide, but Robert says a 30 centimetre rise in sea level would make the job impossible. He estimates he's got 30 years or fewer left.

Stick together

Ric Hingee, who we've met several times, recalls how people relocated following the 2003 Canberra fires, and says this may have done more harm than good:

"A lot of people left the suburbs. Many went interstate. I then started to get messages from these people saying this was the worst thing they'd ever done. Where they ended up, people haven't gone through what they've gone through and didn't understand them and didn't relate to them at all. A lot of them are trying to buy back in the streets where they lived previously. It's important to be among people who've experienced the same things that you have … The social capital of a supportive neighbourhood and everyone helping each other – we used to have it in this area I lived in – that disappeared, we don't have that anymore. That social capital is very valuable."

Strathewen is a town of about 150 in Central Victoria. In the Black Saturday fires it was all but destroyed: 23 people were killed and 80 houses burnt down[262]. When the community came together to deal with the disaster, it at first reacted with anger towards authority. They decided they needed to take control of their response. Groups of women built mosaic letterboxes, to

replace those burnt down, decorated with pets and animals lost in the fire. They knitted chooks for children who had lost family members, and then for a whole school. "We needed to sit still, but we couldn't," they said. There were community dinners, and eventually a memorial constructed. In all people valued things that connected them with others who'd shared the experience and losses, people to whom they didn't need to explain their feelings.

That feeling of community isn't just helpful after a disaster; it can also strengthen us when contemplating future disaster. Often one of the most difficult psychological struggles associated with climate change is feeling as though you're the only one who cares. Some days you feel like Sarah Connor in *Terminator 2*, trying to warn people the end of the world is coming and being treated as though you're nuts. Taking action with a group of like-minded people, as Clive Hamilton points out in his paper *Psychological adaptation to the threats and stresses of a four degree world*, can really help. He says, "the sense of shared purpose associated with working more collaboratively with others to protect the common interest can also reduce the 'burden of knowing'[263]."

Social ties are so often the key to coping with loss and natural disasters. During 2000 and 2001 the most remote community in Australia, Kiwirrkurra[264], which sits almost in the middle of the Gibson Desert[265], was hit repeatedly by flooding rain. During the final downpour, 200mm of rain fell in a day onto ground already soaked from previous flooding. The whole community, all 170 of them, were evacuated; first to another remote community, then 850 kilometres east to an army base in Alice Springs, then finally to an Indigenous station near Kalgoorlie. Different people ended up in different towns.

The flooding had been traumatic, but the experience of being evacuated was devastating for the community. The residents of Kiwirrkurra had lived in a permanent Homeland/Outstation close to their country since 1983. Members of the community had been among the last Indigenous Australians to come into contact with white people. As a report on the flood says, "there were significant cultural issues bound up with the cause of the extensive rainfall and the resulting flood, most of which were not able to be discussed with outsiders to the community." This was a small, remote community with strong ties to its ancestral culture and little influence from or interaction with outsiders.

They'd left their dogs behind in Kiwirrkurra, like evacuees everywhere they were desperately homesick, and once outside their usually dry community, access to alcohol snapped their already frayed social ties. It would have been easy to give up and disappear into the towns they'd been landed in, but instead they began a remarkable journey, an 18-month trip back to the safety of Kiwirrkurra. When they returned they found their community had been rebuilt without them. Their belongings were gone, and there were strange whitegoods installed. Many of their dogs had died. Their world had changed around them, but their ties with one another remained strong and the community rebuilt itself. It also forged stronger links with emergency services workers, to guarantee that next time a flood came, evacuation could be done in a way that worked better for the Kiwirrkurra people. Had they not started with such a strong community, the results for the Kiwirrkurra people would have been very different.

Accept your fate

Roy Scranton,[266] who served in the U.S. Army, writes that "we need to learn to die not as individuals, but as a civilisation." Returning from Iraq, he noted similarities between the chaos of Baghdad and New Orleans after Hurricane Katrina in 2005, and then Hurricane Sandy in 2012. In Baghdad, Scranton found himself nearly paralysed by fear of death, and coached himself through an historical Samurai manual by imagining every possible way he could die every morning before he went to work. That way he was 'already dead' and could get on with his job. He argues people need to do a similar exercise to deal with climate change.

Other people have embraced the possibility of collapse as an opportunity. Environmentalist and author, Paul Kingsnorth, founded the UK-based Dark Mountain Project[267] as a way to deal with his own personal crisis about climate change and the possibility of the end of civilisation. He decided to embrace it through a concept he called 'uncivilisation'. Uncivilisation is about acknowledging the grief and loss that could be caused by climate change, and then accepting it – and not doing much more. His ideas have been roundly criticised[268] by environment writer George Monbiot as essentially giving up and condemning millions, if not billions of people to suffering. Kingsnorth has moved to Ireland, and is intending to grow his own food, homeschool his children and distance himself from technological society.

Clive Hamilton has argued[269] that openly discussing and confronting this particularly grim side of climate change is the key to steering people away from denial and anger: the two things that won't help you cope with climate change at all. Accepting the pain and distress that come with recognising

the effects of climate change and with realising how much you may stand to lose will hurt. But is an important step in coming to terms with the kinds of changes we need to make. Anger, depression and despair are normal reactions to something so terrible. Mindfulness, discussed in the chapter 'Preparing your mind', can be an effective way of feeling these emotions but not destroying yourself in the process.

Accepting and reflecting on death can also lead us to focus more on the things that matter to us, to change our behaviour so our actions better reflect our values. This can bring a calm sense of wholeness. It can also help us change the way we live so it is more socially and environmentally beneficial. As Clive Hamilton says:

"Some studies indicate that more sustained and considered reflection on death tends to stimulate goals and behaviours that have greater intrinsic value, goals that are less materialistic and more pro-social … The expected effects of a changing climate over this century naturally stimulate thoughts of mortality—of ourselves, our descendants, vulnerable people in poor countries and non-human animals—and reflection on the possible end of civilisation and progress. While it is natural to resist such thoughts and push them out of awareness, the research evidence suggests that an open public engagement with notions of impermanence and death could contribute to a shift in value orientation that is more protective of the environment."

Indeed, researchers Tom Crompton and Tim Kasser have suggested[270] that campaigners would do a great deal more to help the environment in the long-term if they encouraged people to "explore and express the unpleasant feelings they have about environmental challenges," rather than encouraging them to

change their light bulbs or leave the car at home. Whether Australia is likely to become a place where "open public engagement with notions of impermanence and death" becomes commonplace is, of course, up for debate.

Summary

Contemplating climate change can be very distressing. The following methods may help you cope:

- Don't go it alone – you will help others, they will help you. Particularly look out for people less advantaged than yourself.
- Don't shy away from your feelings – experience and express them, and find others who share them.
- Take action – either mitigation or adaptation, but preferably both.

Seventeen skills to help you look after yourself (and others)

A workmate once asked Jane what she thought she could offer a post-apocalyptic community of survivors. "I guess I could be food," she said. Like most people in modern urban society, Jane is feeble and helpless and can barely look after herself, let alone anyone else.

A certain degree of self-sufficiency is important, even if disaster never strikes. It feels good to know you're competent and skilled, that you can take a little control of your life, and you can help others who are in a fix.

Here are 17 skills that will make you more useful to your community and yourself:

1. Grow food: find out what grows well where you live and

when to plant it, what local pests to expect and how to get rid of them, how to compost and how to feed nutrients to your garden, how to save seeds, and how to keep your garden water efficient. Keep chickens, or set up a beehive. Learning to recognise local weeds that are good to eat will supplement your garden. See the 'Food' chapter for more.

2. Preserve food: try pickling, canning, bottling and drying fruit and vegetables and more ambitiously smoking, drying or canning meat. Got a goat? You could also learn to make cheese.
3. Cook a few simple meals without a recipe: learn what things taste good together, how to tell if meat is done, how to make things taste better with herbs and spices, how yeast works and the principles of baking.
4. Kill an animal: this might be a chicken or sheep you've raised for meat, or it might be a wild animal you've hunted or fish you've caught. Learn how to be quick and humane, how to skin/pluck and butcher or scale and clean, and how to recognise when something isn't safe to eat. If you're using a gun, you need to know how to safely load, unload and fire it.
5. Purify water: it's pretty simple to do, see the 'Water' chapter, but it's also essential.
6. Tie knots for a variety of situations.
7. Perform first aid: learn how to staunch a wound, bandage a sprain, set a limb, treat shock, heat stroke and hypothermia, and perform CPR. Learn how to avoid pregnancy if contraception isn't easily available, and how to deliver a baby.
8. Handle any vehicle: get competent with a manual drive, motorbike, pushbike and tractor and maybe even a horse. If

you can fix it, even better. At least know how to change a tyre or the oil, fix a puncture, push start a car, use jumper leads, and put a chain back on a bike.

9. Chop wood and build, light and maintain a fire; next step, learn how to do it without a match.
10. Sew, knit and darn: you may never be able to make something gorgeous from scratch, but at least know how to mend or repurpose the things you have.
11. Fell a tree: if you have to do this, you want to be able to do it right.
12. Build or fix a fence.
13. Use tools, either powered or manual: if you know basic carpentry you'll be able to build and fix all kinds of things around your house. Know how to repair your roof and hang a door. Learning how to use an angle grinder and a chainsaw is also handy.
14. Cope with plumbing and electricity: be able to unblock a toilet or sink and change a washer. Understand how to change a fuse and whether something is properly grounded.
15. Make beer and wine: not strictly necessary, but if you have to live in a dystopia it's nice to have something to drink.
16. Entertain yourself (and maybe others) when the power is out: expand your repertoire of hobbies to include some things that don't need electricity.
17. Meditate and stay fit: keeping your mind and body healthy will make everything else that much more feasible.

To learn new skills, look up local community groups who offer classes, watch some YouTube instructional videos, or ask someone resourceful if they'd mind teaching you a thing or two.

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