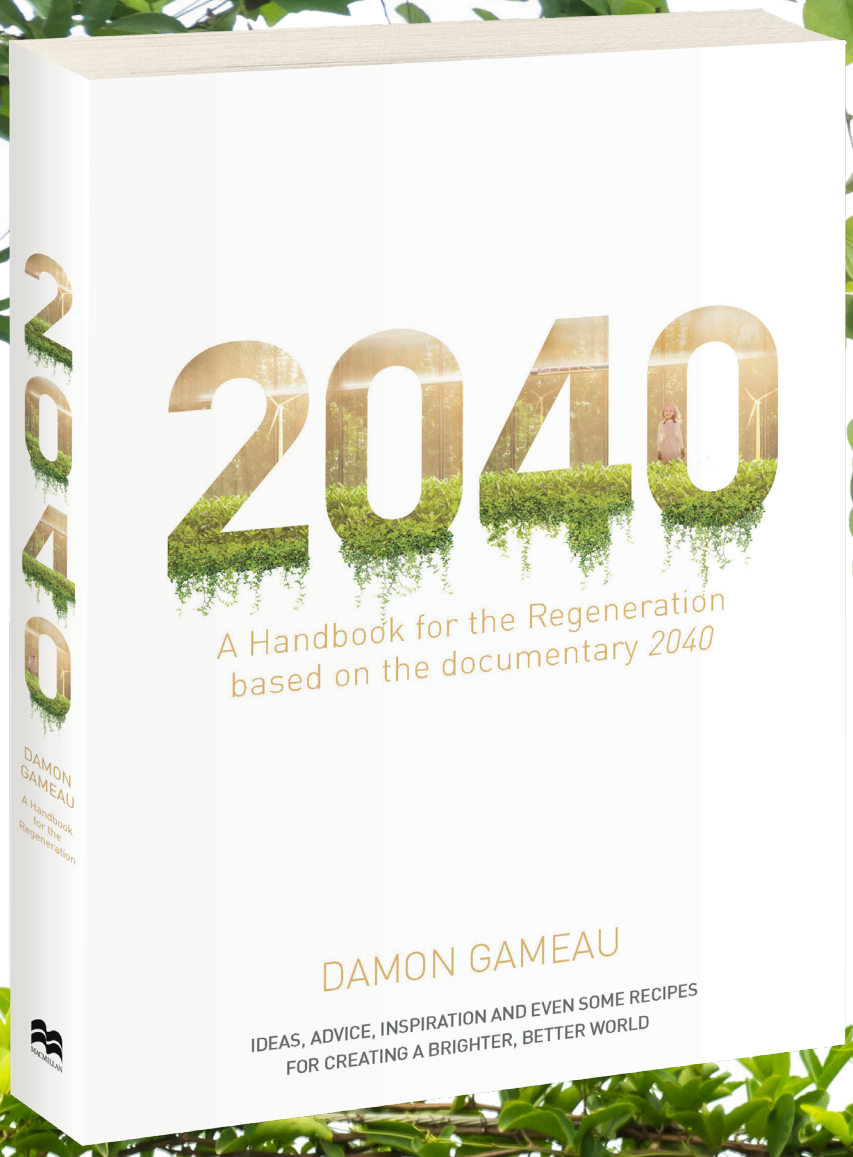



MACMILLAN
Pan Macmillan Australia

'The future can't be predicted but it can be envisioned and brought lovingly into being.'

DONELLA MEADOWS

Like many of us, Damon Gameau has spent most of his adult years overwhelmed into inaction by the problem of climate change and its devastating effects on the planet. But when Damon became a father, he knew he couldn't continue to look away. So he decided to do what he does best, and tell a story. And the story became an imagining of what the world could look like in 2040, if we all decided to start doing things differently, right now.

The result is the era-defining documentary *2040* – a meticulously researched plea for the adoption of community-building, energy-generating, connection-forging, forest-renewing, ocean-replenishing measures that science tells us will reset our planet's health, drive our economies and improve lives across the globe.

*2040: A Household Handbook for the Regeneration* shows us how we can stitch this magnificent vision into everyday life by engaging in activities such as cooking, shopping, gardening, sharing, working and teaching our kids. It shows us that climate change is a practical problem that can be tackled by each of us and that we can make a genuine difference – if we know what to do.

**Brimming with practical wisdom and including 50 recipes, this book will empower you to become the change you want to see in the world.**

# MY *MOTIVATIONS*

**If something doesn't have meaning, or significance, then why would you defend it? Why would you honour it? I think this sums up my own lack of engagement with most environmental issues over the last 30 years. I was always busy giving meaning to other things in life, such as wooing the opposite sex, earning money for life's essentials like rent, food, alcohol and cigarettes (the priority of this order varied widely), trying to forge a successful career, going on holidays or simply getting from A to B as quickly as possible. I did like being outdoors, away from the city, but nature was just 'there' (often a bit dull); it was a place to kick a football, or to stop and take a quick wee on a long drive.**

As for 'climate change', well, that got shoved way down the list. It was far too big for me to contemplate or engage with (what could I do about it anyway?), and I didn't really think it would impact me in my lifetime. Plus, amongst the wide range of web content that a developing male gravitates to, many sites told me that it was either a hoax or some kind of global government conspiracy. Which, to be honest, suited me perfectly, as it justified even less engagement on my part.

I recently spoke to the environmental psychologist Renee Lertzman who gave me another perspective on my lack of willingness to engage. 'Many people are experiencing what I'd call a "latent" form of climate anxiety or dread,' she told me. 'They may not be talking about it much but they are feeling it. It's important to remember that inaction is rarely about a lack of concern or care, but is so much more complex. Namely, that we westerners are living in a society that is still deeply entrenched in the very practices we now know are damaging and destructive. This creates a very specific kind of situation – what psychologists call cognitive dissonance. Unless we know how to work with this dissonance, we will continue to come up against resistance, inaction and reactivity.'

This nailed it for me. My brain couldn't work out how to solve a problem in which I was so fundamentally implicated. I like flying in planes, driving my car is super convenient, drinking water from plastic bottles is often handy, and I do quite like Nikes to run in. Are you telling me these actions may be contributing to ecological collapse? No thanks, I'll be at the bar discussing girls and football.

But all that changed with a trip to the Amazon. (Which I'm sure is a sentence that has been uttered quite a few times throughout history.) It was a two-week stay in the heart of the jungle with my wife, Zoe. We had no technology and minimal western influence. It was just us, a giant tarantula, a billion other intimidating critters and a charismatic tour guide who had never left the jungle in his 21 years. This is where the concept of 'meaning' first struck me. To see such a density of nature, to understand how much life the jungle supports, and to feel an openness and wonder in its presence was a transformative experience (drinking deeply from a bowl of ayahuasca 'fruit punch' may also have been a factor). Most poignantly, I learnt of the jungle's reliance on a web of interconnectivity for survival. The trees 'talk to each other' via a network of fungi that grows between their root systems. Their foliage creates shade that keeps the ground moist. This moisture evaporates to form clouds, which increases rainfall and the cycle continues. Disturb just one of these processes and the system collapses. Every tree is valuable to the whole forest and that's why healthy trees will often send nutrients to sick trees until they recover.

Returning home from that trip, it was impossible not to notice how disconnected from nature I had become. Living in inner-city Melbourne, I did see the odd bin bird or slightly withered street tree, but my most regular views of 'nature' were pictures of tigers and elephants on the Melbourne Zoo billboard at the tram stop, or a glimpse of the Puma logo on my sneakers while tying my shoelaces. And, clearly, I'm not alone. A study from the Lawrence Berkeley National Laboratory found that US residents spend around 86 per cent of their time indoors (home, garage, vehicle, work, shopping centre, bar, restaurant, garage, home, then repeat . . .). What chance does nature have of us standing up for it if it no longer appears regularly in our consciousness? Out of sight, out of mind.

And so began my personal journey of reclamation. After the post-jungle boost to my entire wellbeing, I began to find other ways to immerse myself in nature to recapture that feeling. Ocean dunks helped. Moving closer to a forest helped, and so did switching off my phone for at least one day each weekend just to stare out a window or go for a walk (this was surprisingly tricky early on). As nature returned to my sight, it also returned to my mind and I gravitated to more books, articles and television shows about it.

And this, my friends, is where our story begins . . .

# A *NEW* STORY

**Now imagine it was you in that doctor's office receiving the dire news, but that you were offered no treatment. You would leave the doctor feeling devastated by your diagnosis, but with no idea what you must do to get better.**

This pretty much sums up the current media narrative around environmental issues. Whether it's in social media, the news or climate documentaries, the analyses of our predicament and future projections are almost entirely horrific. This diagnosis has its place, but as a motivational tool for kickstarting the public into action, again I turn to the environmental psychologist Renee Lertzman: 'Neuroscience and the mental health field is now saying that when information has a charge to it that brings up fear, guilt, anxiety or worry, even confusion, we cannot process the information very well. Cognitively we become impaired because the limbic system is activated and we lose access to our prefrontal cortex, which is where we problem-solve, are creative, make connections and can look ahead to the future.'

I am a dad and my four-year-old daughter's future matters to me deeply, so I decided to try and find an alternative to the doom and gloom stories we are currently bombarded with. I wanted to find the 'chicken soup and cold flannel' equivalents for our sick planetary home and show my daughter what her future could look like if we embrace those solutions today. I didn't want this to be an exercise in wishful thinking, where I tell her that everything will be fine. It's important that all of us acknowledge how scary some of the information we are hearing is and that it's okay to feel overwhelmed or upset. I wanted the solutions I found to be based in truth and to be realistic. The solutions had to already exist today in some form and they had to be scalable. As I say in the film, this was an exercise in 'fact-based dreaming'.

My mission took almost three years of research and planning, including travel to 14 countries and hundreds of interviews with scientists and other experts. And in case you immediately think, 'That must have used a truckload of carbon', we did offset our emissions with certified carbon credits, plus we planted a small native forest to sequester a further 90 tonnes of carbon by 2040.



The aim of this book is to provide you with genuine hope (as opposed to the hope that often gets wheeled out at election time). It is a book that will explain some of the things you can do right now to make an enormous difference to the future of the planet. It is a book that also reveals some of the amazing and inspiring things that people are already doing.

Make no mistake, healing our planet will be a complex operation. It will require a multidisciplinary approach from dedicated teams of surgeons at the grassroots level and from inside the halls of power. But this operation presents a never-before-seen opportunity to come together and change the course of history.

We know the diagnosis, so let's start telling a new story. A story about the solutions that can regenerate our planet.

## GROW YOUR OWN FOOD

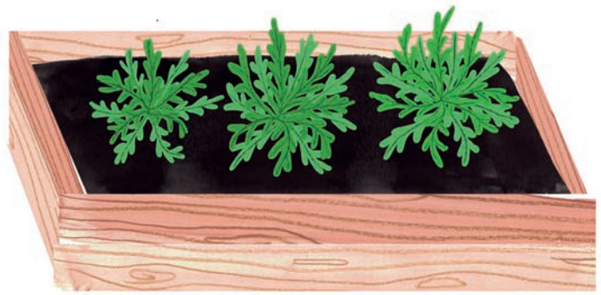
One of the best things you can do for the planet is to grow your own food. You can even turn your backyard into a carbon-sequestering food hub where every kilogram of vegetables you grow reduces emissions by roughly 2 kilograms (if you also compost organic waste). No pressure, but Eric Toensmeier's home garden is a tenth of an acre and it offsets the equivalent amount of emissions that an American adult uses in a year.

**BANANA TREE →** varieties include Lady Finger, Dwarf Ducasse and Pisang Ceylon.

### Carbon-sequestering veggie patch

**These plants can all be grown in a temperate climate. For those in tropical climates, studies show that some home gardens can sequester more carbon than nearby forests. (You can plant bananas, mangoes, avocados and many other fruiting trees . . . )**

**WARRIGAL GREENS →** cook and use like spinach or silverbeet; drought-tolerant (cook well to remove oxalic acid).

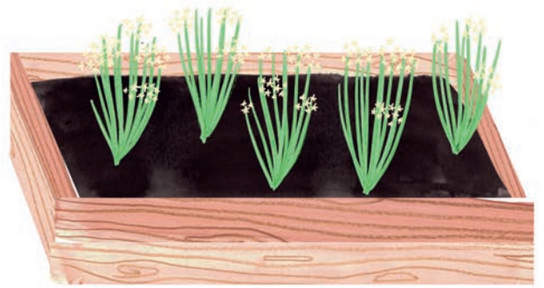


**WILD ROCKET →** slower growing than regular rocket and drought-tolerant; listed as a weed in some areas so grow on edge of garden bed.

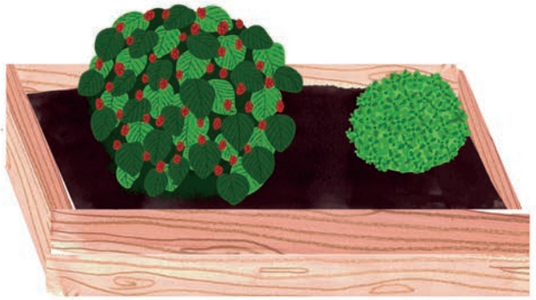
**QUEENSLAND ARROWROOT →** grows to 2 metres; root tastes like spuds.

**MINT →** grow in a shady part of the plot; needs lots of water.

**SCARLET RUNNER BEANS →** best in cooler areas; spray blossoms with water in hot weather.



**GARLIC CHIVES →** drought-tolerant; harvest all year round.



**RASPBERRIES** or **BLUEBERRIES →** cooler climate.

**GREEK BASIL →** tiny leaves, fertilise well, harvest year round.

# Reduce food waste

### Grow your own herbs

Or if you have to buy them fresh, chop and freeze leftovers in olive oil or wine.

### Don't peel root veggies

Just give them a good wash.

### Use the whole vegetable: roots, stems and leaves

- Make 'rice' from broccoli or cauli stalks (or just cook them with the rest of the meal)
- Roast pumpkin skins
- Toss radish tops, beet greens and celery tops in salads.



### Buy only what you need

Take a list and never shop when you're hungry!

### Cook ready-to-go meals in bulk

Store them in the fridge or freezer.

### Store fresh food to maximise its lifespan

Keep spuds and onions in a cool, dark cupboard (plus other root veggies if your house is cool enough).

Store tomatoes, avocados and other fruit on the bench.

Loosely wrap leafy veggies in clean tea-towels and store in the crisper.



Store bread, nuts and seeds in the freezer.

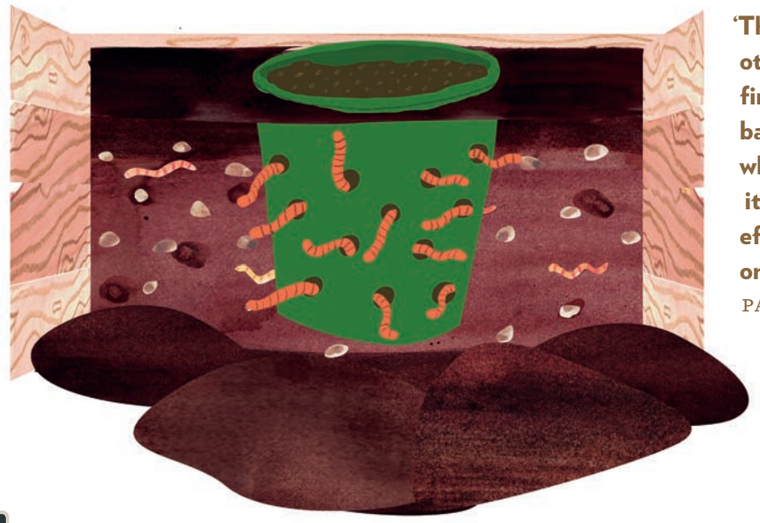
## Encourage your council to collect veggie scraps

**Our council now collects our food waste and turns it into compost. Can you organise a meeting in your area (perhaps after a screening of the film) and then collectively contact the council and suggest they do the same? They can make money from it by converting it to energy or selling it as compost. No-brainer.**

### START COMPOSTING AT HOME

If your council doesn't collect food waste, you can start composting at home. There are many ways to approach your composting but we have just embarked on a journey using **compostcentral.org**. It's a terrific resource. This practice involves placing a food bucket drilled with a few holes into our veggie patch. The bucket contains worms and other goodies. Once your food scraps go in, the worms take around three to five days to break it down, but they take it out of the holes and add it to your soil, greatly enhancing your veggie patch. The Compost Central website has a list of things that the clever worms can also break down including old socks and some bathroom products! Their gizzards are very good at turning all sorts of minerals and chemicals into healthy 'food-growing' soil.

Fun fact: earthworms are born with both male and female organs, and during mating both sets of organs are used by both worms. Talk about arousal. If all goes well, the eggs of both of the mates become fertilised and babies are born roughly every six weeks. This means you can increase the amount of food scraps in your compost every six weeks (more mouths to feed). We know some people who take home other people's food waste after dinner parties just to feed their worm army. 'Feed the worms not the landfill' could be a cool T-shirt by 2040. Or not. May still be incredibly daggy.



**'The best way to use food waste, other than not generate it in the first place, is to actually get it back onto the land. Because that's where it came from. As a compost, it has really incredibly salutary effects on carbon sequestration, on productivity, on water retention.'**
PAUL HAWKEN




### MAKE YOUR OWN BIOGAS

You can now purchase a home biogas kit from some Australian retailers or online (**homebiogas.com**). The kit allows you to convert your food and/or animal manure directly into a bio-methane gas that can be used to cook with (I have seen someone run hot water with it, too). It also provides a liquid fertiliser that will do wonders for your garden. It currently costs around A$800 and would be a great thing for a school or business to own, or for you to co-own with your neighbours (which I have recently done).

### EMBRACE SEAWEED

Our daughter loves avocado rolled up in dried seaweed sheets as a snack (salty/fatty goodness). These two items combined make a great carbon sequesterer. They'll be even better when we source our seaweed from the local marine permaculture plot and grow our own avocadoes.

Professors in Shanghai have created kelp fibre spinning technology that could see kelp clothing enter the market in 2019. (At present, most seaweed-based eco fabrics use a small portion of seaweed fibre.) They say that 1 tonne of dried kelp could produce roughly 2000 square metres of seaweed 'fabric'. There are also many soaps, shampoos and other bathroom products now available that use seaweed as a primary ingredient: **seaweedbathco.com** is a great resource.

Check out **Evoware**'s edible seaweed plastic, too (evoware.id).

# RECIPES

The following recipes are all vegetarian and contain many ingredients that either benefit the soil or sequester large amounts of carbon from the atmosphere. I am not advocating for a vegetarian or vegan diet, but by choosing to eat a few of these meals a week instead of conventionally farmed animal protein, we can reduce our impact on the planet. Please note that some regeneratively farmed animal protein can also sequester large amounts of carbon and improve soil health.

# SUMMER CHIA OATS

**Sometimes you need a break from eggs, and so does the planet. Oats, especially organic ones, are a great choice as their production results in fewer emissions than animal products. Choosing Australian-grown chia seeds over imports will reduce food miles too.**

**SERVES 4**

**PREP: 15 MINUTES, PLUS 15 MINUTES STANDING TIME**

**2 cups whole rolled oats**

**⅓ cup chia seeds**

**2 tablespoons linseeds**

**2 tablespoons sunflower seeds**

**2 teaspoons ground ginger**

**1⅓ cups boiling water**

**½ cup macadamias, toasted and chopped**

**1 cup milk of your choice (try oat, almond, hazelnut or coconut)**

**1 small mango, peeled, seed removed and flesh thinly sliced**

**2 heavy passionfruit, seeds and juice scraped**

**⅛ small pineapple, peeled and sliced**

**2 tablespoons pistachio kernels, lightly toasted and roughly chopped**

**mixed berries, to serve**

**coconut yoghurt (optional), to serve**

Place the oats, chia, linseeds, sunflower seeds, ginger, boiling water and half the macadamias in a large heatproof bowl and stir until well combined. Set aside for 3 minutes or until the water has been absorbed.

Stir in the milk and stand for a further 8–10 minutes or until the milk has been absorbed and the mixture is thick and creamy (similar to a porridge consistency). Add a little more water if needed.

Divide the oat mixture evenly among bowls and top with the mango, passionfruit and pineapple.

Serve sprinkled with the pistachio kernels and remaining macadamias, plus the berries and coconut yoghurt, if you like.

# ITALIAN BEAN SOUP

**Beans are a great substitute for conventionally produced meat, as they have a much lower environmental impact. High in protein and budget-friendly, they are also perfect for batch-cooking and freezing, saving both time and energy.**

**SERVES 4–6**

**PREP: 25 MINUTES**

**COOKING: 30 MINUTES**

**3 tablespoons extra virgin olive oil, plus extra to serve**

**1 large onion, finely chopped**

**2 garlic cloves, crushed**

**3 tablespoons tomato paste**

**2 carrots, scrubbed and finely chopped**

**2 celery stalks, finely chopped**

**1 zucchini, finely chopped**

**1 small bulb fennel, finely chopped**

**4 sprigs basil, leaves picked and stems finely chopped**

**1.5 litres stock of your choice (pages 280–81)**

**400 g can cannellini beans, drained and rinsed**

**400 g can borlotti beans, drained and rinsed**

**sea salt and freshly ground black pepper**

Heat the oil in a large saucepan over medium heat. Add the onion and cook, stirring occasionally, for 5 minutes or until very soft and light golden. Add the garlic and tomato paste and cook, stirring constantly, for 3 minutes or until the tomato paste is rich and thick and starting to separate in the pan.

Add all the remaining ingredients to the pan and cook, stirring, until the mixture comes to a simmer. Partially cover the pan and continue to simmer, stirring occasionally, for 18–20 minutes or until the vegetables are very tender. Season well.

Divide the soup among serving bowls. Finish with a drizzle of olive oil and serve.



# MOROCCAN ROASTED CAULI and APRICOTS with ZUCCHINI COUSCOUS

**In this grain-free zucchini 'couscous' recipe, we use whole herbs rather than just picking the leaves and discarding the stems, which then end up in landfill. Go to pages 262 and 282 to check out more fantastic herb-stem ideas.**

**SERVES 4**

**PREP: 35 MINUTES**

**COOKING: 45 MINUTES**

ROASTED CAULI AND APRICOTS

- 3 tablespoons avocado oil
- 1 teaspoon ground coriander
- 1 teaspoon sweet paprika
- 1 teaspoon ground cumin
- 1 teaspoon freshly grated turmeric or ½ teaspoon ground turmeric
- 2 garlic cloves, crushed
- 1 cup stock of your choice (pages 280–81)
- 1 large (850 g) cauliflower, cut into florets
- 1 red onion, cut into wedges
- 8 apricots, halved and stones removed (or use 6 peaches, quartered, stones removed)
- sea salt and freshly ground black pepper

ZUCCHINI COUSCOUS

- 4 zucchini, chopped
- ½ cup pistachio kernels
- 2 sprigs flat-leaf parsley, leaves and stems finely chopped
- 1 sprig mint, leaves picked, stems finely chopped
- finely grated zest and juice of 1 lemon

Preheat the oven to 200°C (180°C fan-forced).

To make the roasted cauli and apricots, place all the ingredients in a bowl and toss to coat and combine well. Season well. Transfer the mixture to a heavy-based roasting tin. Roast for 40–45 minutes or until the stock has reduced by half and the cauliflower is tender and golden.

Meanwhile, to make the zucchini couscous, place the zucchini in a food processor and process until finely chopped, then transfer to a large bowl. Process the pistachios until finely chopped and add to the same bowl, along with the parsley, mint and lemon zest and juice. Season well, then toss together to combine. Set aside at room temperature, tossing occasionally, until you are ready to serve.

Divide the zucchini couscous evenly among serving bowls and spoon over the roasted cauliflower mixture to serve.