Preface

This book is a powerful collection of diverse research findings presenting the detrimental impacts of excessive meat consumption on human and environmental wellbeing. Despite increasing academic and scientific evidence, inherited beliefs together with wide-ranging motives, including powerful vested economic and political interests, ensure these mitigatable threats are typically neither transparent nor readily available to decision-makers or the general public.

Today, particularly in western countries, meat is easily accessible and is often cheaper than fruit and vegetables. It is also seen as nutritionally necessary, culturally inviolable and as a status symbol. Yet rapidly rising global meat production and consumption is one of the greatest threats and dangers to the short and longer-term sustainability of humankind and the planet.

There is increasing scientific evidence about meat’s negative environmental and public health impacts. Dietary guidelines around the world recommend that the maximum safe intake of red meat is 500g per week per person (with a public health goal of 300g per week per person). However people in countries, such as Australia, US and UK, consume amounts much higher than these recommended limits. Developing countries are increasingly adopting western-style meat-rich diets, accelerating global meat production and consumption with worrying projections and trends. Meat’s contribution to global greenhouse gas emissions is estimated to be between 13.5% and 51% with the latter more comprehensive assessment being from the World Bank (Robert Goodland, the World Bank’s long-time environmental advisor has a post-humous chapter in this book). Increasingly there are calls internationally from scientists, researchers, academics and authors who are voicing concerns about the lack of awareness and understanding of the connections between meat, health and environmental sustainability.

Climate change continues to loom as the biggest threat of our times and the livestock industry is the largest contributor. This sector, together with related industries such as pharmaceuticals, is negatively impacting on the wellbeing of the planet and on human health. If left unchecked meat consumption is likely to continue to significantly exacerbate our current ecological and social problems. There is an urgent need to share the research outcomes in order to empower the broader community to participate in improving health and environmental sustainability through reduction in meat consumption.

Meat, despite the danger it represents, is excluded from most public policy debates, including international meetings aimed at climate change mitigation. The main objective of this book is to raise broad-based awareness of the risks and choices involved in high meat consumption. It positions meat firmly in the discourse about health and environmental sustainability. Reduction in meat consumption and production must clearly be part of any discussions and initiatives to arrest climate change. In the era of the anthropocene, failure to recognise this and appropriately respond will make life challenging for all species.
The international contributors to this book address the difficulties, challenges and opportunities in reducing excessive meat consumption to mitigate human and environmental damage. They discuss and present different aspects and considerations related to meat, including current trends, power and influence exerted by vested political and economic interests, public health impacts and dietary recommendations, impacts on climate change, biodiversity, water and land use as well as ethical issues and the increasing westernization of diets. Additionally, the book explores policy responses and strategies to assist dietary changes for urgent environmental and health benefits.

This book is deliberately addressed to a wide and diverse audience. Policy makers, academics, philosophers, researchers, advanced-level students, technology developers, public servants, politicians and government officials will find this text useful in furthering their research exposure to pertinent topics in sustainability and population health. Moreover, the book provides insights to support individuals and communities in understanding the destructive impacts of meat production and consumption. It empowers them to take responsibility for pursuing more sustainable personal choices and actions.

As global human population moves beyond 7 billion, more than 70 billion animals are raised and slaughtered each year for consumption. This causes unimpeded climate change, water pollution, land use and degradation, increasing antibiotic resistance, exploitation, western domination, speciesism, mismarketing and misinformation. All these result in global health and environmental crises in which no country will be left untouched. Rather than feeling overwhelmed or succumbing to negative outlooks related to socio-ecological destruction, we all have choices about how to look after ourselves and the planet. We hope this book reaches the individual – whatever your vocation, occupation, perspective, conviction or diet.

At the heart of the problem is that, despite calls from health and environmental authorities, meat consumption is on a steady increase (see Figures 1 and 2). For example, the World Cancer Research Fund and other national and international health organizations recommend curbing individual meat consumption to 26 kg per year as an individual goal. The Chair of the UN Intergovernmental Panel on Climate Change (IPCC) Rajendra Pachauri and other influential scientists have made calls for global meat reduction to combat greenhouse gas emissions and environmental deterioration. Yet, between 1961 – the year from which we have reliable data from the United Nations Food and Agriculture Organization – and 2011, the average annual per capita meat supply has increased globally from 26 to 46 kg per person (see Figure 1). In some countries it is even higher than 105 kg per person per year, including in New Zealand – 127 kg, Australia – 121 kg, United States – 118 kg and Austria – 106 kg. We cannot blame population numbers alone for humanity’s mounting predilection for meat, nor can we attribute this solely to lifestyle improvements. Whilst indeed global population has been increasing, meat supply has been growing at a disproportionately faster rate (see Figure 2) triggered by economic opportunities and unsustainable dietary changes. As the chapters in this book show, this increasing meat consumption has an escalating health and ecological price tag.

The book contains the latest material which can motivate even experienced professionals in this field. Whilst livestock producers and related industries may be challenged by the content of this collection we invite them to read it and reassess their options. Decision-making, policy development and direction must be based on credible evidence and information, particularly in cases of intractable problems such as the question of meat consumption. One of the hoped-for outcomes of this academic collection is thus to contribute to informed policy processes, based on more readily available information, concerning the greater public good.
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In a world of sometimes overwhelming messages about the bleakness of the future, this compilation highlights the value of individual and collective empowerment, choice and action as a way of countering environmental and health challenges. There is an urgent need for solutions that offer accessible opportunities for regaining, repairing and renewing human and biophysical wellbeing. Each one of us, independently and together, holds a key to a more sustainable world. It is as simple as what we chose to eat.

Our call for contributions was met by an overwhelming response and we received submissions from scientists, academics, poets, politicians, community members, professionals, essayists, industry and the informal sector from all continents. Such diverse and multifaceted interest, passion and participation shaped the direction of this collection. It is a book of hope and faith in the power and capacity of humanity to address and solve the environmental, social and animal welfare crisis now facing the world.

Internationally renowned Australian poet, novelist, critic, essayist, editor, Cambridge scholar and publisher of over 30 books John Kinsella begins this collection with Sweeney the vegan, a poem about becoming and being vegan. He shares a personal journey, parts of which may resonate with many readers. This establishes the book’s direction illustrating that we all have choices.

The first section of the book Climate Change and Water begins with the chapter by the Australian interdisciplinary team of academics Celia Green, Andrew Joyce, Jonathan Hallett, Toni Hannelly and Gemma Carey which examines greenhouse gas (GHG) emissions associated with dietary choices. A systems science approach is used to explore possible interventions aimed at reducing the consumption of
animal products. In *A fresh look at livestock greenhouse gas emissions and mitigation* two assessments of livestock’s impacts on climate change – one by livestock specialists employed by the United Nations’ Food and Agriculture Organisation and the other by World Bank Group environmental specialists, Robert Goodland and Jeff Anhang – are compared. Quantifying and describing the unprecedented environmental risks involved in meat production this chapter that replacing a substantial amount of today’s livestock products with better, plant-based alternatives is the only pragmatic opportunity to reverse climate change before it is too late. Statistician, philosopher and author of CSIRO Perfidy, Geoff Russell in Chapter 3 reveals the poor public understanding of the factors driving climate instability. He points out the current profound mismatch in the way climate scientists and the public understand the causes of climate change.
It becomes abundantly clear that we urgently need accurate and accessible images that identify meat as a key focal issue. This contributes to achieving broader based understanding, and thus mitigation, of the factors driving climate change. The University of Zimbabwe lecturer Never Mujere brings the focus to developing countries, describing, in selected areas of Southern Africa, the detrimental impacts of untreated slaughterhouse waste on water quality and water bodies. The role of print journalism in shaping public awareness of animal agriculture’s link to climate change is explored by Xavier Mayes who investigates the representation of the issue in Australia’s daily newspaper The Sydney Morning Herald. His chapter will hopefully help those developing strategies to increase media coverage and encourage a more engaged discourse on demand-side mitigation. The first section of the book concludes with a chapter by the academic and activist Nick Pendergrast analysing recent trends in veganism in the western world as an important response to the growing global environmental crisis. This chapter conveys the hope that we are capable of, and on track for, addressing and mitigating the impending challenges.

The section on Diet and Wellbeing starts with the internationally recognized Australian nutritional expert Rosemary Stanton who describes how meat fits into recommended dietary guidelines. She highlights the opportunity to increase plant-based choices to reduce the risk of health problems associated with a high consumption of red meat. To further emphasise the value of increasing plant-based choices over animal-based protein options, Kate Marsh and the expert dietary team present and review the evidence that regular consumption of red meat negatively impacts health and disease risk, including the risk of most common chronic diseases. They also present research on the health benefits of diets low in red meat, including vegetarian, vegan, Mediterranean and other plant-based diets. The chapter on The Future of Antibiotics and Meat by Talia Raphaely and mother-daughter team Dora and Mira Marinova, draws attention to the controversial human health implications of antibiotic use in animal husbandry. Reduced meat consumption is an under-considered but essential part in any suite of solutions aimed at preserving the use of antibiotics for human treatment. Previous Chief Executive and current ambassador of Compassion in World Farming Joyce D’Silva considers the evidence behind the impact of animal foods on human, non-human and environmental health and wellbeing. China’s unprecedented appetite for animal proteins is stimulating the Australian livestock and related sectors potentially enabling vast growth and profitability within these industries. Whilst there may be economic advantages, the unaccounted health and environmental costs need to be recognised as discussed in the chapter by Xiumei Guo and colleagues, concluding this section of the book.

The last section of this collection covers broader societal and policy issues. From Wageningen University in the Netherlands, Hans Dagevos discusses the adoption of flexitarianism as a way to reduce meat consumption in meat-based food cultures. This includes minor adjustments to regular meat consumption patterns as well as fundamental departures from habitual meat eating practices. Executive member of the Humane Society of the United States Paul Shapiro, in his frank and hard-hitting chapter Feasting from the federal trough: how the meat, egg and dairy industries gorge on taxpayer dollars while fighting modest rules, highlights the animal agribusiness’ reliance on federal handouts. He calls into question their proclamation of libertarianism and free market principles. Dietary colonisation is brought to light in by the Bangladeshi academic Amzad Hossain. In Mission impossible because of the West, he explains that sustainable meat consumption is becoming increasingly unattainable in traditional places such as Bangladesh and the Indian subcontinent because of the globalisation of western culture and consumerism. Drawing on spiritual messages from the Baul philosophers, this chapter makes the case that preserving traditional flexitarianism, defined here as meat in the absence of any other food options or rare ceremonial meat consumption, is essential for the health of the planet and its inhabitants.
Marketing and media experts Ian Phau and Diana Bogueva illustrate how creation and perpetuation of myths reinforce demand for meat amongst mainstream consumers. They explore popularly used advertising misinformation including meat’s cultural context, its nutritional value, its association with affluence, masculinity and the benefits of small-scale meat production. The opportunity for marketing to play a role in decreasing rather than perpetuating meat-consumption as a means for climate change mitigation is highlighted. The South American academics, Luciano Félix Florit and Cristiane Sbardelati correlate the ethical, social and territorial implications of the meat industry in the regions of Brazil where animal husbandry is the main economic activity. The philosophical questions and sociological implications include the high rates of health problems affecting workers in slaughterhouses; the symbolic and economic domination over territories and people by the agroindustry and the drastic moral inconsideration of sentient beings. This article is based on the case study of Concórdia, a micro region located in the state of Santa Catarina, in the south of Brazil and highlights the correlation between domination of animals and suffering of human beings. From the same major meat producing country, Paula Brügger and her co-authors explore and propose an ethical educational approach towards meat production and consumption. They argue that the animal abolitionist perspective is the unique foundation for education to build a new paradigm governing the relationship between humans and other animal species.

Jonathan Balcombe, author of numerous best-sellers, concludes this book with a future scenario. In Beyond meat, humankind abruptly stops eating animal proteins and this results in beneficial consequences for animals, the environment, human health, the economy, food and society. Ending on such a positive note, we hope this collection inspires and empowers you to participate in a sustainability transformation to make this scenario a reality by increasingly taking a personal lifestyle stand against current damaging dietary trends.

What you now hold in your hands is a representative starting point – a sample collection of the manifold, compounding impacts, perspectives and dimensions – of meat consumption’s impact on human and environmental health. Each chapter has its own unique character and message and we deeply appreciate the cooperation and contribution of all authors. All chapters are equally important and valuable in the context of meeting this book’s outreach objectives. Each of the contributions included in this selection has been double blind peer-reviewed (meaning the author was not known to the reviewer and vice versa).

Clearly the question of whether we are eating too much meat is not one where anyone is ambivalent. People are either strongly against or in favour of reduced meat consumption. Some readers may say that it seem we are prosecuting a reduced meat agenda. Indeed, they are right. In light of the many failed summits, meetings and conferences and the burgeoning planetary and human crisis, the time is urgent. Now, and ever more so, even small actions can have large consequences. Release latent forms of consciousness and political association, ushering in a united force that opens a door to world repair and renewal. Dietary intervention, particularly in countries which show excessive or growing quantities of individual meat consumption, hold enormous potential to mitigate environmental destruction.

We hope this book, through its diverse contributions, will help position the critical discussion about growing and excessive meat consumption where it belongs, at the forefront of the sustainability discourse and policy environment. Policy direction needs to address the role of meat consumption and its dangerous social and environmental consequences. More sustainable dietary choices, facilitated through personal awareness and appropriate public policy will have a beneficial outcome for health and environmental sustainability.
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Irrespective of personal opinion, the consideration shouldn’t be about whether curbing meat consumption will solve all human and ecological problems. Rather, it should be whether the existing evidence, as highlighted in the chapters of this book, suggests that reducing personal meat intake is an appropriate and reasonable part of the solution to safeguard human and planetary wellbeing. The health and environmental consequences of vast-scale and industrialised meat production and consumption unquestionably represent the greatest challenges humanity has ever faced. Instead of stopping this march of social and natural devastation, most governments, their agencies and instruments together with their corporate allies, continue to promote meat and ignore the numerous existential threats such increasing consumption is causing.

Together, the authors in this book are making an urgent call, based on the existing and growing scientific evidence, for global reductions in meat consumption both through policy direction and individual choices and actions. In the words of one of the contributors: “When the writing is on the wall, it only increases the pain and suffering to ignore it” (Russell, 2009, p. vi).

We are optimistic that this compilation of writings and research will firmly place reduction of meat consumption on the sustainability agenda. We also hope you find something that personally resonates for you.

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REFERENCES


Sweeney the Vegan

They say I am mad,
out of my tree, as I
eat fruits and nibble leaves,
harvest nuts and make tempeh.

As a teenager I played war games
and dreamed of being a general.
I collected guns and ammunition,
hunted foxes and parrots.

I grew sleepless and made night
my daylight, colouring the sky
with hallucinogens and narcotics,
wandering with agitation.

I watched bullets
fly unspent from the breech,
my brother unloading
as fast as I could load.

And watching over the farm,
I struck a ram in the ute,
and cradling its heavy, horned head,
its broken neck, decided to shoot it dead.

Something shifted, something disconnected,
and I went up to the wheatbins
with a damaged sense of self,
distressed as fellow workers shot cats.

And then backpacking from Bali
to Nepal, other possibilities
mocked and harried my predicament:
the hunger to score, the cliché of searching.

Part of me broke free
in the highest mountains
and settled in a temple tree,
though I didn’t know it.

A bus accident and a litany
of death — a chopper in to take
away the wounded, corpses
left broken at the bottom of ravines.
To return without having really left,
to drink and drug to oblivion —
without art, without creativity —
just damage and loss and death.

To move into the squat
in Fremantle, where vegetables
were the only food when there was food,
to sign away from meat in self-disgust.

To retreat south with my brother
and girlfriend, to climb the flooded gum
on the roadside beside the dairy,
where tired cows dragged tonnes of hoodwink.

To wake one morning in asbestos walls,
the spring cold leaching in from irrigated fields,
swollen jerseys calling into the fog
to be relieved of their burdens.

To talk it out over breakfast,
dollops of cream the body and blood.
Haycarting we’d been told
the ‘old girls’ would make blood and bone.

To take wing and flit north
then south again, into the settler’s chestnut tree,
looking down at the haters
poisoning water, driving us out.

Living in a field of cattle
earmarked for slaughter — young
‘Molly B12’ nuzzling our hands,
the screaming fox at night.

I was vegan and returned
to my girlfriend alone in the shack.
My brother had found his own way
and I sang my song of living flesh.

A decade of flying, staying
above ground while every fibre
yearned for obliteration, held together
by an ethics of Pythagoras.

In rehab, living in the Globe Hotel
or the Supreme Court Gardens,
hearing of friend after friend
dying of overdose, the song
kept me alive. Shivering
by the sea, colder inland
on a star-blown night I listened
to animal-sounds secure.

And when I joined forces
with the woman who knew
the same — one who had abandoned
habits of flesh-eating years before,

I vanished into the Indian Ocean,
went crazy on a coral speck eating
coconuts and rice, shreds of green and chilli
from the islands’ greenhouses.

To break the cycle. Break free.
Rejoin the animal world, the kingdom
without hierarchy. But still sleepless,
some call me crazy, edgy.

I renounce all organised religion
and feel liberated spiritually,
no animals are slaughtered
to pave my way to plenty.

Plenty is sharing space,
Plenty is hearing another’s breath,
Plenty is every atom of the biosphere,
Plenty is the weapon that cannot hurt me.

Returning home the other day,
we discovered a spatterwork of blood
by the front door, and only today
after noticing a lone doe with joey do I see.

The mob broken up in our absence
by gunfire, the doe sheltering by the house,
our shelter — this is more than Heidegger
could make of dwelling to Celan in the forest.

Refuge is the key. Refuge is where
no creature will be killed by us for flesh
but will make its own way — fences down
and passage no rite de passage condescended by us.

Almost three decades have passed.
I have learnt not to proselytise, and this
song is not a commandment.
My song is still a lament, and I perch high
in the old York gum that lost a limb
in the last storm — I hear the owl
homing in on its prey, and have nothing
to say against its way, knowing it’s not my way.

High temperatures are shredding this environment
self-designed over millennia to take the heat —
failsafes have failed and a backup isn’t in place.
Fire ran close to us just last night.

My fingers are not claws,
my teeth are not for tearing,
my legs are not for running down,
my feet not for trampling.

The music I hear is not all sweetness —
the abattoir fills my ears with blood,
the paddock with sheep conversations
firebreaks itself with burning flesh.

There’s no denying the truth —
the ‘sacrifice’ of animals to human
addiction and thanatos. This omnicultural
worshipping of death to affirm life.

I breathe past the smoke, breathe
in clear blue sky. Though no watercress
to hand, I eat pulses and leafy greens —
the water deep below quivers under our weight.

They say I am mad,
out of my tree, as I eat
fruits and nibble leaves,
harvest nuts and make tempeh.

I listen to the peace
like static around a world at war,
I know the real clichés are
in the consuming of the living and the dead.

-- John Kinsella