

---

**MOBILISING  
WHOLE  
COMMUNITIES  
to  
RESTORE  
a  
SAFE  
CLIMATE**

Submitted in total fulfilment of the requirements for the degree of  
Professional Doctorate in Therapeutic Arts Practice

Giselle A Wilkinson

MIECAT Institute  
March 2020

# Abstract

---

This thesis is borne out of my almost life-long experience as a change maker and activist, my commitment for building engagement in the fundamental changes needed to restore the earth's liveability, my struggles and connections with the world of action on climate. For this reason, the experiential account of my participation in this activism is the real driver of the methodological approach to this thesis, such that the research partly intermingles and illuminates the personal, communal, national and global impediments to effective climate action through an unusual combination of personal stories, relevant art works, scientific research, and interviews with activists.

I am primarily an activist-practitioner and this professional doctorate speaks of my biography, ideas, struggles, relationships, involvements, questions, searches and is written with practice/action in mind and with learning for making that practice more successful. It sets about achieving this through a process of evaluation and synthesis, to deepen, broaden and collate understandings of the obstacles that came to light and to learn how to more successfully promote and affect their removal addressing the critical need for pace and scale.

In addition to furthering the practical application - by both activist citizens and professionals - of this widening set of

knowledges, the research process and the resulting thesis that documents it aim to facilitate necessary reprioritizations of intentions at all intersecting levels and so clear a possible and hopeful path to the reversing of global warming. The thesis thus frames the case for rapid transformative change in the context of an ever-tightening timeline and makes it obvious that the necessity of effective action applies across the board from the individual and family unit through our communities, institutions and organisations to the global levels of decision making, notably including the political-economy.

The research underpinning this dissertation started from the premise that global warming has increasingly become critical, necessitating personal, social, political and economic changes commensurate with the scale and time limitations of the existential risk to human civilisation.

To begin to meaningfully address – let alone solve – the problem, a deep understanding of the climate emergency and a thorough review and re-prioritisation of human activities and intentions - an *'Emergency Response Mode'* - is essential. In spite of years of work and efforts by scientists, innovators, movements and others seeking to urge decision-makers and mobilisers, social and political action critical for climate

---

repair was resolutely withheld. Many available, scale-able solutions and promising theories tailored to the complexities of the challenge have been presented and even experimented with, but far from reversing causes and consequences of global warming, Earth's temperature continues to rise. Humankind's collective failure to adequately act to restore climate conditions safe for life's abundance and diversity intensifies the need to 'know' properly and appropriately.

Channeling attitudes of tactical pessimism, alarm and curiosity into an approach to research that combined elements of heuristic (combining self-discovery and problems solving methods), auto-ethnographic (contextual self-reflection) and participatory (grounded in my ongoing activist involvements and including co-activists as conversation partners in the interviews) methodologies, together generated a focus on the obstacles blocking vital responses. Conversations with interviewees were lightly thematically structured, reflecting on safe climate restoration, the barriers to transformative change and the perceived potential for a breakthrough.

Data deriving from the diverse sources evoked by the above methodologies were synthesised, eventually translating into the capability to anticipate constraints and proactively

overcome them; improve leadership capacity and validate emerging possibilities. Hence, the thesis concludes with a strategically optimistic package of possibilities, comprising *Threat, Solutions and Plan* – allowing fear to be 'held' – and a framework, *The Educative Activist*, hoping to equip the next wave of actors and leaders to mobilise whole communities for climate restoration work.

# Preamble

---

*The year is 2020, still early in the 21<sup>st</sup> century.*

*In the distant, hoped-for future decades hence, generations might call these times the Darkest of Ages; that time of crisis, of dire threat to civilisation and so much of the biosphere just before the Great Wake Up and the full flowering of the Sustainability Renaissance. Their stories passed down might tell an exciting tale. How, in the nick of time, we saved ourselves from the plummeting spin of global-warming fat-tails. Imagine the great, great grandchildren of our safe-climate-restored world on a night full of stars and cool air as they snuggle up for the story, soothed into sleep knowing they were loved even right back then.*



# Declaration

---

Except where reference is made in this text, this work contains no material published elsewhere or extracted in whole or part from a work for the award of any other degree or diploma.

This work has not been submitted for the award of any other degree or diploma in any other tertiary institution.

No other person's work has been used without due acknowledgements in the main text.

All research procedures reported in the thesis received the approval of the MIECAT Ethics Committee on 21st October 2011.

Name Giselle A Wilkinson

Signature Giselle Wilkinson

Date 26th March 2020

Facing page:  
Fig 2 *East Arnhem Land looking towards Arafura Sea.*  
Northern Territory. Charcoal on paper. 15 x 8cm  
G Wilkinson, 2014

# Contents

---

<b>Title</b>	<b>i</b>
<b>Abstract</b>	<b>ii</b>
<b>Declaration</b>	<b>iv</b>
<b>Figures</b>	<b>x</b>
<b>Section 1 INTRODUCTION AND OVERVIEW</b>	<b>1</b>
Introduction	1
Timeline of events significant to this thesis	10
<b>Section 2 PRELIMINARY CONSIDERATIONS</b>	<b>12</b>
<b>Chapter 1 A PERSONAL INTRODUCTION AND POSITIONING</b>	<b>12</b>
1.1 Barefoot research: out of the classroom and into life	13
1.2 Sustainable Living; Deep Ecology: Off the road, into the rainforest.	16
1.3 Intentions to Actions: the Map and the Milestones on the Road	20
1.4 Collective Crisis: entering Stage Left, the Global Climate Emergency	23
1.5 Conscious priorities: pick up pace, push for change, feel the heat	27
1.6 Further exploring my path: looking inwards and traveling far and wide	31
1.7 Looking the tiger in the eye: a devastating detour	35
1.8 Overwhelm: Life layers with a background of existential threat	39
1.9 The road through the swamp: Challenged by love and fear and hope	42
1.10 Demonstrating change: creating a breakthrough	45
1.11 Act, affirm life, whatever it takes: As if the future depends on it!	47
<b>Chapter 2 THE MESS AND THE URGENCY</b>	<b>53</b>
2.1 What is going on?	54
2.2 How bad it is	56
2.3 Why the world is not doing enough	60

---

2.4	What is happening and what's wrong with it	63
2.5	The Precautionary Principle	66
2.7	Address the Mess	70
2.8	Common responses and some underlying assumptions	76
2.9	The Climate Emergency Approach	78
2.10	Groups, in Melbourne and beyond, have worked tirelessly for years	80
2.11	The climate mess, this thesis and some hurdles identified	85
<b>Chapter 3</b>	<b>RESEARCH PROCESS &amp; METHODOLOGICAL REFLECTIONS</b>	<b>88</b>
3.1	Introduction	89
3.2	The normative-ethical foundations underlying research and approach	90
3.3	From Axiology to Ontology/Epistemology	93
3.4	Paradigmatic orientation: participation-writ-large	98
3.5	Methodology: choices and contexts	99
3.5.1	<i>Living inquiry – Heuristic research and creativity</i>	100
3.5.2	<i>Auto-ethnography</i>	106
3.6	Making sense and generating data	109
3.7	The data	114
3.8	The interviewees	118
<b>Section 3</b>	<b>WHAT I FOUND, WHAT I NOW KNOW</b>	<b>120</b>
<b>Chapter 4</b>	<b>WHAT MUST BE [FULLY] UNDERSTOOD</b>	<b>120</b>
4.1	Introduction	121
4.2	Tackling the why, what, how and when of getting through the mess	125
4.3	The Fragments of our collective Emergence – in seven baskets	134
4.3.1	The Nature of our Response	135
4.3.2	Our Capabilities	142
4.3.3	Our Resilience	150
4.3.4	Our Change Knowledge	157
4.3.5	Our Awareness	165
4.3.6	Our Big Picture	171
4.3.7	Our Planning	174
4.4	Conclusion	179

---

---

<b>Chapter 5</b>	<b>THE REFLECTIVE CLIMATE CHANGE PRACTITIONER: FRAGMENTS OF A ‘THEORY-IN-USE’</b>	<b>180</b>
5.1	The Reflective Climate Change Practitioner	182
5.2	Practitioner Insights	183
5.3	Hurdles to effective action	186
5.3.1	A bit of hindsight and now known context	186
5.3.2	The Evolution of response	188
5.4	Levels of understanding	189
5.4.1	Change Knowledge	189
5.4.2	Telling a new story: Threat, Solutions and Plan	190
5.4.3	Practitioner Attributes	191
5.4.4	Self Blocking is insidious	191
5.5	Fragments of a Theory in Use	193
5.5.1	The process undertaken	193
5.5.2	Hurdles and some ways to overcome them	194
<b>Chapter 6</b>	<b>BREAKTHROUGH AND MOBILISE</b>	<b>225</b>
6.1	My Paris experience – Australian practicalities	226
6.2	Terror Attacks	227
6.3	Global warming as a civil unrest ‘threat multiplier’	229
6.4	Martial Law	232
6.5	The Movement’s Response	234
6.6	Place To B.	238
6.7	The Paris Agreement	244
6.8	Global mass-mobilisation – what to expect in Australia	249
6.9	The Mobilising Package	255
<b>Section 4</b>	<b>THIS IS WHAT I PROPOSE</b>	<b>258</b>
<b>Chapter 7</b>	<b>FROM EMERGENCE TO SAFETY: The importance of the educative activist framework</b>	<b>258</b>
7.1	Introduction	259
7.1.1	The Quilt	259
7.2	Survival	263
7.3	Straight talkers call it an emergency.	264
7.4	The anatomy of inaction	266

---

---

7.5	Deconstructing the barrier	271
7.6	Crafting a Breakthrough Approach	273
7.7	Statist intervention	279
7.8	Time-line tensions	281
7.9	Revolutionary change IS underway	283
7.10	Opting for a successful outcome	285

---

<b>Section 5</b>	<b>OTHER BITS</b>	<b>289</b>
	Appendices	289
	Appendix One – Interview Questions	290
	Appendix Two – Request for an Interview	299
	Appendix Three – The Interview Schedule	308
	Appendix Four – National Summit 2011 Whole Systems Change	310
	Appendix Five – To Achieve Shared Conviction	314
	Appendix Six – South Africa’s Campaign Streams	318
	Appendix Seven – BZE’s ‘secrets to success’	321
	Appendix Eight – Engaging the Right	324
	Appendix Nine – Frank Fisher on ‘Urgency’	327
	Appendix Ten – Chris Jordan’s art depicts huge statistics	330
	Appendix Eleven – The Portland Climate Coalition	333
	Appendix Twelve – The Twenty Mile March	337
	Appendix Thirteen – On Geo Engineering	339
	Appendix Fourteen – The Oath of Paris	345
	Appendix Fifteen – Keeping Climate Action On Track (infographic)	349
	Appendix Sixteen – Super Majority (infographic)	351
	Appendix Seventeen – Collaborative Mega Strategy (infographic)	353
	Appendix Eighteen – National Climate Emergency Summit 2020	355
	References	360
	Glossary	374
	Acronyms	388
	Websites	390
	Acknowledgements	392
	Dedication	393

---

# Figures

---

- Figure 1 Cover *Finding safe passage.* Gippsland Lakes, Victoria. Acrylic on linen 2 x 1.5 mts. Section only. G Wilkinson, 2020
- Figure 2 pg.iv *East Arnhem Land looking towards Arafura Sea.* Northern Territory. Charcoal on paper, 15 x 8cm, G Wilkinson, 2014
- Figure 3 pg.4 *Timeline of events significant to this inquiry.* Schematic representation. G Wilkinson, 2020
- Figure 4 pg.7 *Community Homestead.* Near Balingup, south west of Western Australia Watercolour. 15 x 10cm, G Wilkinson, 1976
- Figure 5 pg.12 *Buff-banded Rail.* Australian east coast and widespread. (*Gallirallus philippensis* Photograph by Matthew Meier, 2006
- Figure 6 pg.26 *Serpentine Gorge.* Central Australia, Northern Territory. Water colour, 15 x 10cm, G Wilkinson, 1983
- Figure 7 pg.27 *Exploring contrasts – Brazil.* YouTube video. G Wilkinson, 2009
- Figure 8 pg.28 *Noosa River pelicans.* Queensland. Charcoal on paper, 15 x 8cm, G Wilkinson, 2012
- Figure 9 pg.31 *The Pool of the Golden Dragon-fly.* Russell Heads, nr High Island, Far North Queensland. Watercolour. 15 x 10cm. G Wilkinson, 2011
- Figure 10 pg.32 *Laguna Bay, Noosa Heads.* Queensland. Charcoal on paper, 15 x 8cm, G Wilkinson, 2012
- Figure 11 pg.42 *Avatar at Brown Mountain.* East Gippsland, Victoria. YouTube video. G Wilkinson, 2011
- Figure 12 pg.44 *We find ourselves alive in a listening speaking world.* A quote from *The Spell of the Sensuous* by David Abram (1997, p.87) Water colour. 8 x 5cm, G Wilkinson journal entry 2012
- Figure 13 pg.51 *Influence of all major human produced greenhouse gasses 1979 – 2018.* Graph from National Oceanic and Atmospheric Administration (NOAA), United States. 2019
- Figure 14 pg.63 *Methane clathrate.* 7 x 7cm Photograph. Google images zo.utexas.edu
- Figure 15 pg.69 *A safe operating space for humanity.* Diagram. Rockström et al. 2009, p.472 – 476.
- Figure 16 pg.70 *Planetary boundaries guiding human development on a changing planet.* Diagram. Steffen et al, 2015
- Figure 17 pg.71 *The Oxfam Doughnut.* Economic model. Diagram. Raworth, 2017
- Figure 18 pg.80 *Kyactivists block coal port in Newcastle, New South Wales.* Four photographs. 2016
- Figure 19 pg.113 *Climate Change: Guardian / Our Dirty Laundry.* YouTube. G Wilkinson, 2019
- Figure 20 pg.116 *Content analysis chart. Table.* G Wilkinson 2020
- Figure 21 pg.122 *Interview schedule and spread of topics covered.* Table. G Wilkinson 2020
- Figure 22 pg.161 *Climate Emergency Declarations by country – Number of jurisdictions that declared a climate emergency.* Embedded table from CEDAMIA 2020
- Figure 23 pg.161 *Climate Emergency Declarations by country – Population % in Climate Emergency Declaration areas.* Embedded table from CEDAMIA 2020
- Figure 24 pg.162 *Australian – Climate Emergency Declaration population % by region.* Embedded table from CEDAMIA 2020

- Figure 25 pg.162 *The Global Map of Climate Emergency Declarations*. Embedded map from CEDAMIA, 2020
- Figure 26 pg.172 *Inertia Time Scales*. Intergovernmental Panel on Climate Change (IPCC)  
Web image from Climate Change 2001 – Synthesis Report.
- Figure 27 pg.208 *Clouds*. Oil on board, 40 x 35cm G Wilkinson 2014
- Figure 28 pg.229 *Map of the Fertile Crescent*. Scientists linking drought to climate change. Web image. NASA 2008.  
<https://earthobservatory.nasa.gov/images/200010/drought-in-the-fertile-crescent>
- Figure 29 pg.230 *Warming-worsened drought causing problems all around the Mediterranean*. Web image. Map by NOAA 2011 reprinted in ReNew Economy 2013 “Syria’s climate warning to the world” by Joe Romm.
- Figure 30 pg.232 *Martial law shuts down much of Paris*. Photograph. G Wilkinson, 2015
- Figure 31 pg.232 *Map showing location of terror attacks and place of previous night’s accommodation*. Paris. Web image. BBC.com/news/world-europe-34818994
- Figure 32 pg.234 *Our shoes march for us*. Subway poster promoting the demonstration replacing the cancelled People’s March. Paris. Photograph. G Wilkinson, 2015
- Figure 33 pg.234 *Preparing the installation of 11,000 pairs of shoes*. Paris. Photograph. G Wilkinson, 2015
- Figure 34 pg.234 *Place de le République at Dawn* – Paris. 29 November, 2015. (Maybe Pinterest.it)
- Figure 35 pg.235 *Private demonstration. Shoes cover Place de le République*. Paris. Photograph. Miguel Medina. Agence France-Presse (AFP) November 30, 2015
- Figure 36 pg.235 *Boulevard Voltaire*. Paris. November 25, 2015. Photograph. G Wilkinson
- Figure 37 pg.235 *Boulevard Voltaire*. Paris. November 25, 2015. Photograph. G Wilkinson
- Figure 38 pg.235 *Boulevard Voltaire*. Paris. November 25, 2015. Photograph. G Wilkinson
- Figure 39 pg.235 *Boulevard Voltaire*. Paris. November 25, 2015. Photograph. G Wilkinson
- Figure 40 pg.235 *Boulevard Voltaire*. Paris. November 25, 2015. Photograph. G Wilkinson
- Figure 41 pg.236 *Walking along the Human Chain*. Paris. Video. G Wilkinson, November 25, 2015.
- Figure 42 pg.236 *People’s March. Melbourne’s reported as largest in the world*. Photograph. [australianaid.org](http://australianaid.org) November 25, 2015.
- Figure 43 pg. 236 *People’s March. Melbourne’s reported as largest in the world*. Photograph. [3CR.org.au](http://3CR.org.au) November 25, 2015.
- Figure 44 pg. 236 *People’s March. Melbourne’s reported as largest in the world*. Photograph. [ABC.net.au](http://ABC.net.au) November 25, 2015.
- Figure 45 pg. 236 *People’s March. Melbourne’s reported as largest in the world*. Photograph. [socialist.alliance.org](http://socialist.alliance.org) November 25, 2015.
- Figure 46 pg. 236 *People’s March. Melbourne’s reported as largest in the world*. Photograph. details can’t be found. November 25, 2015.
- Figure 47 pg.237 *Red Line Day – end of COP21*. Paris. Photograph. G Wilkinson. December 12, 2015
- Figure 48 pg.237 *Red Line Day – end of COP21*. Paris. Photograph. G Wilkinson. December 12, 2015
- Figure 49 pg.237 *Red Line Day – end of COP21*. Paris. Photograph. G Wilkinson. December 12, 2015
- Figure 50 pg.237 *Red Line Day – end of COP21*. Paris. Photograph. G Wilkinson. December 12, 2015
- Figure 51 pg.238 *Anne-Sophie Novel at The Place To B*. Photograph. G Wilkinson November 2015
- Figure 52 pg.242 *The Creative Factory’s Ten Principles*. On the central column, Creative Factory, Place To B. Photograph. G Wilkinson November, 2015

- Figure 53 pg.244 *Taking the Oath of Paris on the steps of the Trocadero*. Paris. Photograph. G Wilkinson, 12 December, 2015
- Figure 54 pg. 244 *Taking the Oath of Paris on the steps of the Trocadero*. Paris. Photograph. G Wilkinson, 12 December, 2015
- Figure 55 pg. 244 *Taking the Oath of Paris on the steps of the Trocadero*. Paris. Photograph. G Wilkinson, 12 December, 2015
- Figure 56 pg.261 *The Quilt*. Excel diagram. G Wilkinson 2018
- Figure 57 pg.341 *Testbed Deployed Position*. Diagram. Hugh Hunt. 2015
- Figure 58 pg.350 *The Climate Tracker*. Infographic. The Climate Reality Project, 2006
- Figure 59 pg.350 *The Climate Action Tracker (CAT)* Infographic. 2009
- Figure 60 pg.352 *The Concept of Super Majority*. Infographic. G Wilkinson, 2018
- Figure 61 pg.354 *Collaborative Mega Strategy*. Infographic. G Wilkinson, 2018
- Figure 62 pg.395 *Finding Safe Passage*. Oil on linen. 2.0 x 1.5 mts. G Wilkinson 2020

## A NOTE ABOUT THE ART WORKS AND POETRY

*Some of this artwork goes back to my very early days with brush and paints and its lack of sophistication is plain to see. The videos in particular, are somewhat clumsy, especially from a professional artist's point of view. Yet this I consider an attribute worth commenting on as I believe in a climate emergency that time is too precious to spend finessing everything to its most polished best. I also believe that as it is vitally important now to encourage every concerned person to make their voice heard, that unpolished work is likely to encourage people to have a go where ultra polished work will almost certainly deter them. I do not apologise for the rawness in some of these pieces. Although I would have loved to have had the knowledge and skills to create better results I do find artistic self-expression satisfying and, judging by the compliments I have received over the years, so do many others. Every piece of art work, video and poem has been included for its relevance to the critical need for the strongest sense of connection to the sentient world that we can muster, of our appreciation of the beauty, uniqueness and importance of the biodiversity on which we depend and in order to reinforce the need to responsibly respond to the threat to our civilisation. They each give voice to the concerns and motivations encapsulated in this dissertation. They reinforce the need to meaningfully address the threat to our planet, our biosphere, our life support system. The case for climate restoration is implied in this work. It seeks to encourage others to give voice to love of life and the fear, grief, sadness that accompany the current failure and the acute need for scale and pace to succeed. It enjoins action to break silences through creative self-expression in whatever form.*



The first part of the document discusses the importance of maintaining accurate records in a laboratory setting. It emphasizes the need for clear labeling and consistent data entry to ensure the reliability of experimental results. The text also touches upon the ethical considerations of data handling and the potential consequences of negligence.

In the second section, the author details the various methods used for data collection and analysis. This includes a comparison of manual versus automated data entry systems, highlighting the advantages of automation in terms of speed and accuracy. The discussion also covers the use of statistical software to interpret complex data sets and identify trends.

The third section focuses on the practical aspects of laboratory safety and equipment maintenance. It provides a checklist of essential safety protocols that all personnel must follow to minimize the risk of accidents. Additionally, it offers guidelines for the regular inspection and calibration of laboratory instruments to ensure they are functioning correctly.

Finally, the document concludes with a summary of the key findings and a call to action for continuous improvement in laboratory practices. It encourages the implementation of a quality management system to monitor and enhance the overall performance of the laboratory.

# SECTION 1

---

## INTRODUCTION AND OVERVIEW

---

# Introduction

---

Dear Reader,

We live in a time of complex problems, global warming overarching all others. A formidable burden with many facets threatens to defeat all hope. Yet a hope shared and activated may be expanded in countless multiples. Although discourse on reversing global warming is scant, my work shows that there's a real alchemy of possibilities waiting to be engaged in.

This is just a story—one I am eager to tell—of my experience of the last ten years, including those I've talked with, what I've learned, my current thinking and why I believe a measure of hope remains present and permitted.

In 2003, satellite imagery of polar ice melt turned the 'future' climate change threat into a current emergency. Then as now sane responses appeared obvious; that all sensible efforts be embarked on to restore safe climate conditions.

Over the ensuing years, I ran myself ragged promoting action while struggling with the resistance(s) to the call for precautionary action. I was alarmed by inadequate responses and strange silences and distressed by incoherence—my own and the movement's. I flirted with despair, sadness and rage affecting my health. I needed parameters to support me, so in 2009 I took the strategic decision to develop my work through engaging in doctoral studies.

In the process, I recognised that some key things were missing altogether—some were invisible or had fallen through gaps; some had been deliberately misrepresented.

One clearly identifiable trait, unhelpful and with serious consequences, was 'Brightsiding' when dangerous things are made light of, bad news is unmentionable and silenced and good news is marketed. Brightsiding represents:

*a strategic failure to communicate. .... We have achieved a collective cognitive dissonance where the real challenge we face is excluded from the discourse. There is no solution within the politics-as-usual frame; and there is no developed frame outside it.*

(Spratt, 2012, para 4)

(<http://www.climatecoded.org/p/brightsiding.html>)

As these silences became increasingly alarming and maddening to me, doctoral studies grounded my work and allowed me to put principles and supports in place. They reassured when urgency threatened to overwhelm me. Their purpose was to more comprehensively understand the barriers preventing actions that could return the climate to conditions safe for this planet's current life forms – i.e. for the sake of all people, species and our civilisations, atmospheric carbon levels must be returned to around 280 to 300 parts per million (ppm).

I am deeply engaged in the groundswell-building work and, at the same time, curious how the movement can become more effective and successful; how it can keep its people together and deal with the traumatic set of circumstances we have to face. This thesis and the investigations it documents reflects deeply into what I and others do, what is being achieved and what more and what else needs to be done. My own journey is predicated on a belief in the societal and individual benefits and empowerment engendered by life-long *experiential learning* (Kolb, 1984) and *the learning society* (Schön, 1983) and by trusting that these approaches can generate enough awareness amongst enough people to step up and surmount the seemingly insurmountable (Heron & Reason, 1997).

My real interest is in the proposing of theories about and practices by movements intending to change the world as galvanising and supporting relational processes, at times leading from behind and occasionally from the front, encouraging others to become active and more active.

As a '*reflective practitioner*', a persistent thread has been the importance of *experiential learning*. First as a student-teacher learning about the work of Jean Piaget and others, and then in 1982, with the Queensland University's Centre for Applied Behavioural Science, learning about change strategies and techniques (Dick, 1982) and Management and Organisational Development. Then, in 1998, studying Kolb's Learning Cycle for Post-Graduate studies in Leadership and Change. My life-time commitment reflects all of this, the participatory processes leading to the deeply reflective writing of this work its most recent expression. My lasting interest has been and is the quest to 'get people moving' and supported to keep moving, to look back at what we have done, to consider what has worked, what we have to do differently, to understand why things went wrong or were not enough. This is what Schön (1983) describes as *theory-in-use* which is further discussed in Chapter 3. Heron and Reason's notion of practical knowing is also useful here as it is grounded in all the other ways of knowing - the experiential, the presentational (arts and writing) and the conceptual (theoretical perspectives) For them practical knowing is the action that ideally leads to planetary flourishing.

It became evident that everything we humans have at our disposal needs to be gathered and

---

activated now, to be as well-equipped as possible to deal with the hurdles we face – many of which we put in our own way. Active discouragement – even censorship - of climate emergency conversations and of the use of terms like *climate change* are examples of a massive blockage still in the way of achieving the scale and pace needed to tackle the problems we face. Sustained reflections on our experiences in this regard will increase our chances of success. While efforts to address and clean up the ‘mess’ (discussed in Chapter 2) are growing apace, even the best-case scenario for climate change reversal looks unlikely to avoid terrible trouble. Whatever happens, circumstances for billions of humans and countless species are set to get far worse even in the short term. The moral imperative remains: how to *reduce and manage risk*?

It is not surprising if the response to global warming appears to be ‘*all over the place*’; on the one hand, we need to be doing so many things simultaneously that prioritising becomes extremely difficult. Indeed, time for incremental change and a strictly linear approach has passed. The scattergun, ‘*knee jerk*’ response can be consistent with an initial reaction to an emergency, but must now quickly give way to something more strategic, where priorities can be set and met (example: COVID-19!). More than one top priority needs to be identified and pursued.

Many reasons are elaborated in this work, indicating that not enough is being done to address the dire threat playing out as greenhouse gas emissions and Earth’s temperature continue to climb. The effort to generate the willingness and the demand to ‘*change tack*’ is challenging, yet movements are growing and, while it’s true that not a lot is coming forth from the ‘official’ side of things, a lot is happening on several grounds and now noticeably picking up pace. One way of galvanising community actions is via local, relevant groups; joining and supporting existing, authentic, ‘safe climate’ initiatives; and creating the authentic and unequivocal voice conveying a distinctly electoral message politicians cannot afford to ignore. The actions at the local level are also effective in introducing sustainable change, connecting people and enabling the transfer of ideas and greater awareness conveying a ‘can-do’ message with inspiration and ‘progress’ attached.

In her chairperson’s forward to Our Common Future report, Gro Harlem Brundtland wrote:

*In the final analysis, this is what it amounts to: furthering the common understanding and common spirit of responsibility so clearly needed in a divided world.... To this end, we appeal to “citizen” groups, to nongovernmental organisations, to education institutions, and to the scientific community. They have all played indispensable roles in the creation of public awareness and political change in the past. They will play a crucial part in putting the world onto sustainable development paths, in laying the groundwork for Our Common Future. (Brundtland, 1987, p.9)*

The upside is that the movement, building on the work of previous generations, standing on the shoulders of history's advocates for justice and a safer, healthier world, is (re)awakening now to improve lives and health within the biosphere globally. It may contain the potential to do just that.

*To manage change is to manage the future. To manage the future is to create a future that is different from what it would otherwise be. It is to do now those things that would bring about a better future.... Controlling the future is not easy. It requires changing the behaviour of other people, in other places, at other times. (Dick, 1982a, p.2)*

And now to the reason for this thesis...

The future is in our hands. The knowledge and conviction that global warming - *Anthropogenic* climate change - is a problem we, humans, created and that we can and should, therefore, contribute to solving continues to urge us to take action. We are at present part of humanity's shared quest to protect and evolve our own kind, build and be part of thriving communities, preserve a good life for our children's children and act responsibly vis-à-vis the multispecies and material conditions that sustain us. Having the capabilities to address and solve the alarming and complex problems we've created, the task in front of us is to halt and reverse the warming trend and restore safe climate conditions. Hence this work; I undertook it in the hope that it adds to my and others' efforts to make a difference.

The work is based on the premise that stopping the suicidal trajectory of a changing climate is still possible. The most important goal is to firstly and rapidly stop most if not all further carbon emissions. As well, the removal of carbon molecules from the atmosphere by bringing back to terrestrial earth the historical accumulation of carbon already emitted, a process referred to as '*draw-down*.' According to the National Oceanic and Atmospheric Administration (NOAA) and the Earth System Research Laboratory (ESRL)'s Global Monitoring Division, the measurements recorded at Mauna Loa hit a new peak of 414.11 ppm in February 2020 (<https://www.esrl.noaa.gov/gmd/ccgg/trends>) up from the monthly average of 401.51 ppm only three and a half years earlier in October 2016. (NOAA, 2017)

Notwithstanding climate change and the 6th mass extinction now on the way, the Earth will continue to exist; however, *life on Earth*, its diversity and viability will be severely impacted by human activity. "*Many scientists believe the world has begun a sixth mass extinction, the first caused by a species – Homo sapiens. Other recent analyses have revealed that humankind has destroyed 83% of all mammals and half of plants since the dawn of civilisation and that even if destruction were to end now, it would take 5-7million years for the natural world to recover.*" (Carrington, 2018, para 6)

The exquisite, exotic, fragile and vulnerable will be and are being extinguished and the first to go. As a species, humans may continue to exist, but in vastly reduced numbers. On the current trajectory, the experience of life will be impoverished to a degree most find unimaginable. The homeostasis that has supported humans since the most recent ice age throughout the Holocene epoch for the last 11,700 years is now being radically changed as the Earth responds to the excess of carbon. This very recent period during which humankind's influence has become so profound is referred to as the Anthropocene or, depending on the basis of the underlying analysis, by Donna Haraway (2016), Anna Tsing (2017), Timothy Morton (2016) and many others, the *Capitalocene*. Growing numbers of scientists believe that restoring homeostasis can potentially maintain most of the conditions that existed during the Holocene and that this must be our shared quest: preserving and restoring the biosphere. The decisions determining whether we will continue to inflict the damage on the Earth are being made *now*, by commission and by omission.

In the absence of any other remotely plausible meta-plan, a starting point for rapid transformative change is focused on clean energy, carbon drawdown and, quite possibly, as things stand, solar reflection methods (SRM). For this plan to work, we first have to accept that we are working to a very tight time frame and be prepared to apply the *precautionary principle*.

The permafrost areas are already defrosting and “*landslides in the European Alps are already becoming serious. The Mount Kilimanjaro ice cap, which has been intact for at least 11,000 years, is well on the way to disappearing*” (Spratt & Sutton, 2008 p. 90). As this extensive permafrost area, replete with methane, thaws and this trend continues, enormous quantities of this greenhouse gas, far deadlier in the short term (and the short term is what matters!) have the potential to be released. Sutton and Spratt go on to warn that:

*the permafrost and other sources of natural carbon could be so strongly mobilised, and the natural sinks so damaged, that the process of taking carbon dioxide out of the air would be overwhelmed. In one century, enough ice could be lost from the Greenland and West Antarctic ice-sheets to raise sea levels by several metres. If most of the ice in the Himalayas were lost, food production in nations from the Indian sub-continent to China would be drastically reduced. These would be civilisation-disrupting changes, even if run-on heating was avoided.* (Spratt and Sutton, 2008, p. 130)

The indications from nature are that the opportunity window for the necessary restorative work is only a few decades at most.

For the work to achieve the stated objective within such uncompromising timeframe, a number of elements must be in place, which brings us to the dark side of the ‘mess’: the contradictions,

conflicts and shadow side(s) within the multi-layered human response to the ‘emergency’. Indeed, as the clamour grows, it is often to exhort *someone else or something else* to come up with and apply possible or plausible solutions. When asked, most people have a sense of one or two things getting in the way of action. There are in fact many reasons. Some people point to the self-serving actions of the oligarchs who apparently believe their enormous wealth can protect them; others point to prevarication, obfuscation, procrastination, self-blocking and political corruption as entrenched behaviours that may squander the little bit of time we appear to have. Yet others blame neo-conservative capitalism, institutional silos, consumerism, individualism, narcissism, paternalism, anthropocentrism or some combination of all of those, altogether leaving responsibility for consequential action to ‘others’, the ‘system’ or even to some transcendental force.

Nevertheless, pointing to the impending disaster and to the potential solutions at hand, standing up to be seen and heard, demanding action of those who can take it is critical. If it is indeed doable and affordable, as it appears to be, and if it is agreed that we must give this our best shot, the role of the human dynamics currently getting in the way of effective action must be examined, a key interest propelling the research I undertook. There are signs that finally, after many warnings, we have started to understand the consequences of being mentally and emotionally disconnected from our Earth and are starting to address – however tokenistically – the ‘mess’ we have made of our fragile planet.

Methodologically the process commenced with a deep heuristic inquiry, fathoming my own motivations, responses and optimism in an auto-ethnographic process, observing, recording assimilating and analysing while experiencing my own real-time decisions, choices and daily actions. The need to explore safe climate restoration potentials, barriers and scale-able options involved me into a process of interviewing a number of long-term climate activists. The subsequent synthesis of the resulting data resembled the weaving in of many threads to form a Big Picture tapestry of the weft and warp and the many threads of information, creating a multi-layered, non-linear representation illustrating both the complexity and the resistance to siloing elements of the predicaments we’re facing. Some threads relate to international climate governance, to national level climate (in)activity and others to individual and small group actions, all inextricably nested in the overall context of the existential threat to human survival the myriad dimensions of the climate emergency. The multi-faceted picture that came into focus demanded an analysis identifying many key influences and ingredients for comprehensive action summarised in *The Quilt* and its many patches explicated in the final chapter. I formed the thesis that all support the case for active hope and from there, tactical guides for action began to emerge, all the while acknowledging that the situation remains dire and merely holding knowledge doesn’t change that.



---

## OVERVIEW OF CHAPTERS

### Chapter 1 A Personal Introduction and Positioning

This chapter takes the reader through the unfolding of my life and the nature of my barefoot research that began to flourish as I stepped out of the classroom and into life as a young adult. I show how my response to that era and the journey I took shaped me. My curiosity and creativity are expressed through the disclosing of my story and the choices I made, communicated through some of my art, my poetry and videos. I share the seeds of my motivation and intentions, why I believe mobilising people to accept, demand and work towards safe climate restoration is even possible, what drove me to do this research and to present it in the way I did.

### Chapter 2 The Mess and the Urgency

The context of the extreme urgency for the complex messiness of the climate emergency to be understood and acted upon is explained; I detail what's going on, how bad it is and why Australia's and the world's current responses and commitments will not be enough to get us out of trouble. The chapter explains and argues for the application of the *precautionary principle* and outlines the Climate Emergency Approach to address *the mess*, as advocated by groups in Melbourne and beyond.

### Chapter 3 Research Process and Methodological Reflections

I describe the ways in which this mixed methodology, that includes elements of autoethnography, heuristic inquiry, participatory research and a more traditional post positivist content analysis of interviews can illuminate the challenges of attending to global warming.

Looking at the broad context through observational approach and heuristic research, exploring my personal journey and lived experience through auto-ethnography go some way to explain the participatory paradigm this thesis predominantly sits within. Chapter Three goes further, fleshing out values and ethics and the reasons and methodologies behind the investigative paths I trod. It introduces the methods used to generate and then make sense of the data and explains why I decided on interviews, why and how I chose the ten interviewees (including the group interview in the US), and where it led. The transcripts are not included in the appendices due to their length, but they are available on request. Chapter 3 explains how the seven sets of questions (See Appendix 1), when synthesised with the interviews, threw up four clear categories.

1. '*Know Why*' reasons behind the moral, economic and intellectual imperatives to foster restorative living for ourselves and our society;
2. '*Know What*' mobilisers, practitioners and campaigners need to do to crank up People, Scale and Momentum;
3. Change knowledge, practices and actions; the '*Know How*' for practitioners and the new leadership coming through;
4. Timeframe of '*Know When*' – collating the meta strategies and breakthroughs aimed at restoring safe climate conditions for our species and biosphere.

#### **Chapter 4 What Must Be [Fully] Understood**

In Chapter Four I demonstrate how the aforementioned knowledge categories, Know Why, Know What, Know How and Know When, helped me analyse and explicate the findings. The process of analysing the data revealed a pervasive problem: the behaviour, action and prioritising undertaken provides a good indication of how well or poorly a threat is understood (Covid-19 is another case in point). Looking at our collective responses to our emerging understanding led to a key point of great clarity which was articulated with the adverb *Fully*. Whilst we may think we understand the problem and the urgency for action, our behaviour might indicate otherwise. Scrutiny and proactive work are required to bridge these gaps and overcome discrepancies between thinking, understanding and necessary action.

#### **Chapter 5 High Level 'How'**

This is where the way forward begins to take shape towards the telling of a new story that includes not just the outlining of the threat and urgency and promoting and advocating for all the solutions, but goes further to flag a Plan. This chapter dives into some specifics, some hurdles that need to be overcome, some attributes that need to be brought to the equation, whilst maintaining a rock-solid overview perspective at a comprehensive, multi-dimensional overarching level which is applicable at the global, national, local and personal spheres of influence.

---

## **Chapter 6 Breakthrough and Mobilise**

Chapter Six takes the story to Paris at the time of the CoP21, tying this in with the interviews undertaken locally and overseas and the reason why it was necessary to go looking for ‘safe climate restoration’ conversations across the world. The global mass-mobilisation that ran alongside the Paris campaign events and the Paris Agreement that concluded the CoP signalled a worldwide shift in awareness and willingness to act. It also heralded a denouement for the heuristic and participatory research for this dissertation bringing into this chapter some of what we might expect in Australia.

## **Chapter 7 This Is What I Propose**

Knowing the details of the Mess and the *Urgency of What Must Be Fully Understood*, leads to an exploration of the implications, conclusions and some recommendations. Developing a sense of what’s needed to break through the impasse and of the next steps for you, me and our society helps explain how and why I have become less frenetic through this process. Facing what you’re up against and mapping a course of action that sits within a comprehensive plan is a big step towards addressing and hopefully solving any difficult problem.

I have sailed the course from unhelpful distress to beneficial eustress. Now, dear reader, as you turn these pages, I hope you will come to understand why - in the end - my optimism prevails and has new wind in its sails.

Let this journey begin. Climb aboard.

# Timeline of events significant to this thesis

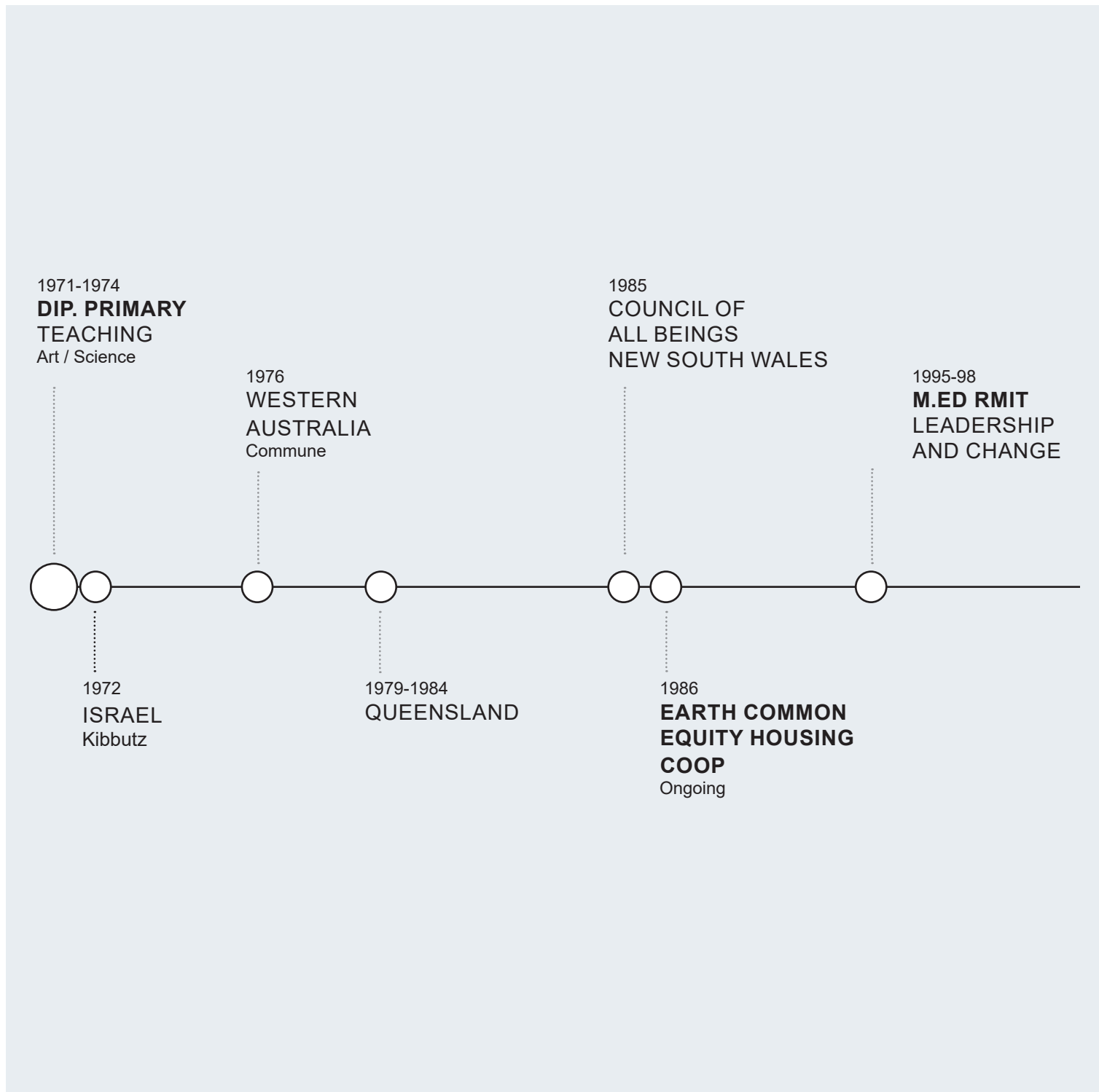
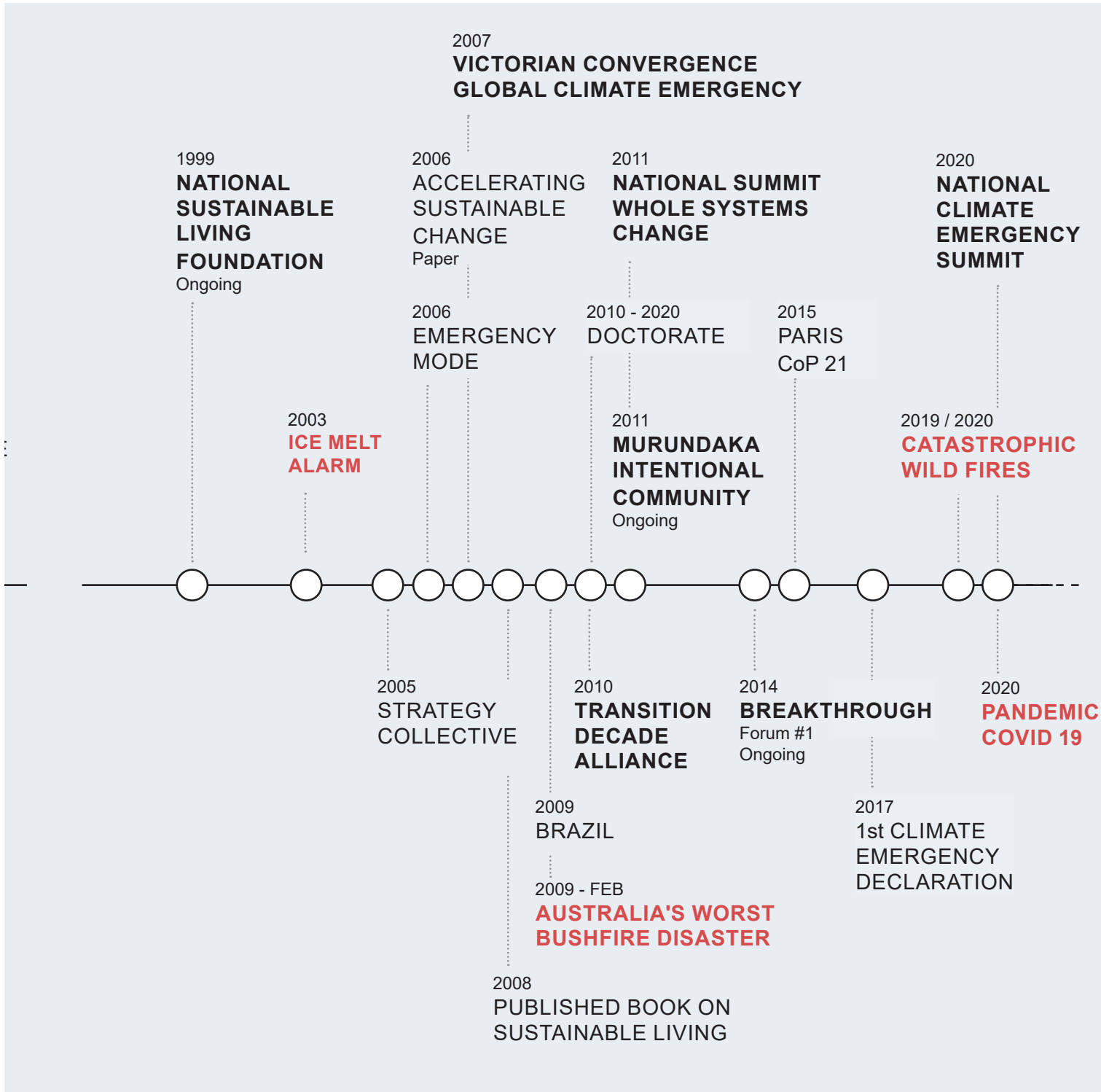


Fig. 3 Timeline of events significant to this inquiry. Schematic representation. G Wilkinson, 2020



# SECTION 2

---

## CHAPTER 1

### A PERSONAL INTRODUCTION & POSITIONING

## 1.1 Barefoot research: out of the classroom and into life

At twenty-three, leaving my Grade One arts teacher job after being in a classroom from the age of five, I went to live in a ‘new-age’ commune in Western Australia, hungry for “real-life” experience. In this consciousness-raising era of the 70s, young people were on the move, embracing change and impatient to make a difference in the world. My spirit had wings, eager to engage in *barefoot researching*.

*Barefoot, as a methodology, has its origins in the medical profession and in Third World Development. The Barefoot Doctor and the Barefoot Midwife were approaches to provide appropriate support services in poor countries, often led by local people themselves. Barefoot research implies a methodology that is without pretense, sensitive to needs and above all, close to local realities. (Hartworth, 2005, para 1)*

A glimpse of communalism gained from a visit to an Israeli kibbutz a few years earlier had piqued my curiosity and led me to explore further. It was in the commune in the west, amongst baking, milking and caring for the community’s toddlers, that I experienced a sense of belonging and



Fig. 4 *Community Homestead*. Near Balingup, south west of Western Australia  
Watercolour. 15 x 10cm, G Wilkinson, 1976

sharing going far beyond family, school or workplace. This led to an extraordinary year of traveling from Balingup in the south-west right around Australia, visiting communities. In hindsight, this was a search for a sense of connection.

My practice of autobiographical reflection started as a consistent thread recording my life experiences; already, as a schoolgirl at seventeen – experiencing what I called ‘revelations’ – poetry had established itself in my vernacular of self-expression. Inspired by my travels, journaling, letter writing, the watercolours, drawings, acrylics, oils and photographs became part of my repertoire. I was trying to capture, in shareable words and pictures, my own evolving understanding of the extraordinary circumstance of life on Earth. Me, we, humans, a planetary species, having short lives on this most amazing planet, spinning in space-time in an unfathomable cosmos... The joy of exploring the landscape of deep space and the exquisite sense of the amazing ‘blue pearl’ – our precious planet Earth – stays with me to this day.

My journey in ‘76 took me to Far-North Queensland where, on a particular sandy dune by a particularly sparkling ocean, I felt an epiphany of connection with the Earth as a living entity; aged 23 waking-up to the beauty of the planet, I experienced a blissful love, realising that “*Alone-ness is really all-one-ness*”.

*All alone, aloneness – precious to me  
Something sacred and diamond rare  
Finding me, perspective, peace and love  
I melt and calm myself there.  
Don't we all need time and to know a way  
To establish the patterns we want?  
To bless the me in this happening day  
Sip water pure, from a spiritual font  
Magical water – blue essence of me  
Glittering, shimmering, quivering drop*

*Spark of soft sun – golden energy  
Life rolls like the sea and I sparkle on top.  
A tiny taste of my soul's sweet nectar  
A whiff of the heavenly fragrance  
A glimpse of the ‘me’ that's yet to be  
Sun shower, a bubble of romance.  
When by myself I feel the gentle breeze  
Appreciate and share warm oneness  
Never alone when I'm on my own  
For aloneness is really all-oneness.*

(Wilkinson, 1976)



---

Almost immediately though, distress followed as I began to see the future-threatening scale of human pollution, forest destruction and the then still-distant consequences of global warming. Together with others and knowing this prospect to be true then as I do now, my enthusiasm to make change steadily grew.

James Lovelock gave an ancient Greek name to the Earth as a sentient being: *Gaia*. (Lovelock, 1974) Although hardly a new concept to Indigenous peoples and others deeply connected to the land, for me and my other “WEIRD”—i.e... Western, Educated, Industrialised, Resourced, Democratic—contemporaries, the idea of *Gaia* could potentially awaken us to a different appreciation of the world as one we live not so much ‘*on*’ as ‘*with*’.

Life outside the classroom had much to teach me; as my awareness grew so did the scope of my concerns, causes and commitments. Although not yet calling myself a ‘change agent’ back then, I was on my way to becoming one. Living in Queensland from ‘79 to ‘85 under the Queensland Premier Bjelke-Petersen’s nineteen-year regime—‘68 to ‘87—was a wake-up call. Then fighting and winning a national campaign to reverse a federal government budget decision axing a labour market program, the Community Youth Support Scheme – CYSS, gave me my first taste of people power and I realised I was part of a global movement.

According to US research in the late-1990s, (Ray and Anderson, 2000), a new social category of people, the ‘*Cultural Creatives*’, had emerged. Comprising 26% of the US population by 2000 and 35% by 2008 with similar ratios and growth rates globally, they have an affinity with not just one or two, but half a dozen or more movements – any combination of women’s rights, racial equality, the environment, peace, social justice, access to housing and jobs, alternative health, psychotherapy, spirituality, bio foods and organics. Neither ‘traditionals’ nor ‘moderns’ and transcending the common ‘right-left’ dichotomies, people in this group hold values and think with an enhanced *planetary consciousness*.

## 1.2 Sustainable Living; Deep Ecology: Off the road, into the rainforest.

---

The introduction of the now common concept of ‘*sustainability*’ – its essential meaning to *leave the planet better than we found it* – and of ‘*deep ecology*’, elaborated further below, prompts us to ask deeper questions and accept its answers.

My continued thirst for new knowledge and understanding led me, in the mid-1980s, to *The Channon*, north of Lismore in Northern New South Wales. For most of a year my home was a tent pitched at ‘*Dharmananda*’ on the banks of Terania Creek, just across the ridge from ‘*Bodhi Farm*’ and down from the once-famous Protestors’ Falls. Located in the Rainbow Region near the Nightcap Ranges National Park, the two intentional communities based on Buddhist spirituality had moved to the land in the early ‘70s to live as sustainably, self-reliantly and in harmony with nature as possible. I was drawn to their three-month rural, sustainable living immersion experience, developed by the Sustainable Living Education Collective (SLEC), a trial funded by the Hawke Labor Government (1985).

A budding ‘*sustainabilist*’, seeking clarity on what it is that we hope to sustain, I immediately discovered that *forming a deepening connection with nature and with other-than-human life forms came with reflection and slowing-down to notice things*. Dharmananda and Bodhi Farm shared a Meditation Centre in the rainforest that became the location of the *Council of All Beings*, a highlight in the SLEC Sustainable Living course. Developed by Joanna Macy and John Seed (1984), the *Council* powerfully combines Macy’s *Despair and Empowerment* work with Seed’s *Deep Ecology* approach, a life-changing experience described below.

*I attended the Council during Winter Solstice, June '85. The first two days involved preparation, mask making (in silence), learning rituals, such as the Kalahari Bushmen's' greeting, (Thumb, 2014) singing and building trust, extending our understanding and learning to connect and resonate with nature in a new way. We were given guidance on how to go into nature to wait to find connection with an ally, real or imagined, which we would later represent at the Council. Be it whale or bee, glacier or tree, sunbeam or fungi, this involved reflection, openness, immersion in the forest, quiet attention and presence. (Senge, Scharmer, Jaworski & Flowers, 2005)*

*Plunging deep into the natural world of that beautiful rainforest, I clambered through tree trunks and ferns until finding my spot. There, staying still amongst the leaf litter on the forest floor, patiently waiting and hoping to be 'chosen' by the life form I would represent at the Council, I let my thoughts drift observing life in the shadows and sunbeams around me until 'meeting' the entity of the forest as she revealed herself to me. A small, well-camouflaged ground-bird resonated with me. Later identified as a Buff-banded Rail, (*Gallirallus philippensis*) I shared her space for a while losing track of time, lost in a sense of privilege and of boundaries dissolved.*

*When emerging from the gloom later, I walked up the hill to join the others on the sunny knoll above. A guided meditation called Evolutionary*

*Remembering took us on a long and extraordinary journey in space from The Big Bang through cosmic time. Quite suddenly, it seemed, we were on Earth evolving as humans and then, we had arrived; our little group lying in the grass on the hill bathed in warm and ancient sunlight.*

*When the Council commenced we each took turns to speak. Wearing our masks and having shed our human identity, we spoke on behalf of other life forms addressing the circle of listening witnesses who were deeply empathising with the shared pain of the sentient world. When my turn arrived, I stepped into the talking circle and spoke up for the humble ground bird, representing her, speaking in her voice, from her perspective, stating her reality – as I understood it. Living in an environment made dangerous by feral animals, motorbikes, loggers and scrub clearers, she was asking humans for help to protect her habitat. "My life's purpose is caring for the forest floor and looking after my little chicks."*

*(Wilkinson, 1985)*

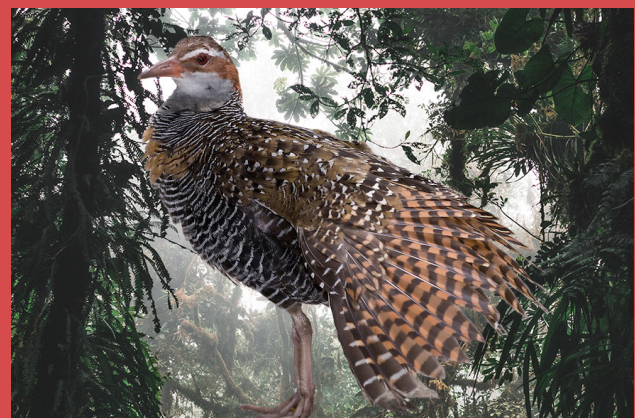


Fig. 5 Buff-banded Rail. Australian east coast and widespread. *Gallirallus philippensis* Photograph by Matthew Meier, 2006

To accept the role of advocate for another life-form at a Council of All Beings indicated that my life's job description now included '*Instructions*' current to this very day. I was to be intentional and to take every opportunity to speak out and interpret on behalf of this diligent, unassertive, flightless, vulnerable bird and, by extension, *all sentient beings*.

Locating the need in myself to protect life and our planetary home was a pivotal point for that mission. My time in the rainforest and the Council of All Beings awoke me to other living creatures. Doing a refresher with John Seed in Melbourne twenty years later in 2005, the 'ground-bird' was still there for me and I for her; this awareness still profoundly underpins my work. I am constantly looking, listening and yearning for those with whom it resonates as expressed in this excerpt from *The Huntress*.



*Fig. 9 The Pool of the Golden Dragon-fly.* Russell Heads, nr High Island, Far North Queensland. Watercolour. 15 x 10cm. G Wilkinson, 2011



*I have become a huntress.  
I sniff the air for what nourishes me  
  
I smell the damp of the ageless soak  
The humus of our past and the sands of time  
The waters of wisdom and the trees of life  
The slightest whiff of this pool and I am  
energised  
And am drawn to it inexorably  
As to a dear old friend  
  
I test the waters  
I lie down on the cool ground and drink deeply  
Thirsty for the sweet waters of understanding  
To slake my thirst  
Restore my parched throat  
  
Is this the knowledge I ache for?  
To protect what I love?  
  
Immersing myself in the jungle of my nature  
I walk slowly along the quiet path in the gloom  
I feel safely camouflaged.  
In the dark green of my forest.  
  
I see the tender bud  
I am the tender bud.  
I am the curled frond  
I gracefully unfurl*

*I seek out others  
I find that others will emerge from the shadows  
When my eyes are accustomed to their light  
  
The invitation is unspoken and unmistakable  
We gravitate to each other  
We spend a moment acquainting and looking for  
agreement.  
  
Speaking softly with determination  
We confer on things of great importance  
Looking for resonance.  
Looking for common ground.  
Testing for consensus.  
  
We might cavort a bit with the moths and  
butterflies  
In the sunbeams of life  
Seeing who can leap the highest  
Seeing who can touch a star  
  
Awe-struck together at the magic of the fireflies  
Enjoying the view and each tender drop of dew  
  
Dance - Sing - Listen – Love  
  
Each humbly holding a tiny sparkle of life's  
energy  
We can only smile and sigh,  
You and I  
And gaze  
At the incredible immensity of the endless  
night sky*

(Wilkinson, 2015)

## 1.3 Intentions to Actions: the Map and the Milestones on the Road

---

The experience of the Council of all Beings occurred more than three decades ago; the book, *Thinking Like A Mountain* (Seed, Macy, Fleming & Naess, 1988) was written three years after my Council experience, but I read it many years later. As its intention was to catalyse people into creating community groups and organisations and becoming activists, there was synchronicity with my co-creating a housing cooperative—Earth Common Equity, in 1986. With soon two daughters and five stepchildren enriching my life, achieving a Master’s Degree in Education - Leadership and Change, 1998, and co-creating a nongovernment organisation, the Sustainable Living Foundation (SLF) in 1999, life became very rewarding.

As a positive, solution-oriented not-for-profit, SLF’s mission to accelerate the uptake of sustainable living inspired me. What had started as a short-term offer for the set-up phase, turned into a major life commitment, where I found myself ‘holding the flame’ in an exciting field, involved in still ongoing strategic and creative work where all the threads of my life seemed to come together. The reward was enormous: satisfaction, sense of purpose and the privilege of working with highly talented, capable and generous people.

Earth Common Equity Co-op supported me in this largely voluntary work as it has supported all its members for over thirty years, successfully providing secure and less unaffordable, self-governed housing. It also provided a unique chance to create a more sustainability-focused cooperative-living model of housing that supported sharing and other sensible practices between households and inside homes. SLF recognised the challenge to transform the mainstream housing model in the suburbs into a form more conducive to sustainable living, forming a sub-group to reinvigorate the intentional communities movement. Cohousing, combining private homes with shared community spaces, was identified as the model most likely to be embraced by mainstream people living in suburbs. We thought that an intentional, co-located, suburban cohousing community, expressing a more socially and environmentally sustainable form of co-operative housing, could demonstrate a more resilient and innovative way of living and how rapid change could be achieved.

The Murundaka co-housing cooperative came about in 2011... finally success! It was, however, very big for me and not without a sense of sacrifice did I let go of my co-op home, moving out on a very hot day in December 2009. I had raised my family and tended my gardens there for 20 years. Our old house (and two adjacent ones), our gardens, orchard, ducks, chooks and an enormous majestic fir tree nearby all needed to be removed, bulldozed, to make way for a building designed to co-house almost twenty households....

*A large healthy tree was demolished to make way for new buildings  
Magnificent in its own right  
This tree was the home to a family of magpies  
Their roost and their crèche  
And they were displaced*

*I used to watch in delight  
As they taught their squawking babies to fly  
Perched right up on high  
With such a long way to learn  
Greeting the day in their own grateful way  
Their warbling would lift any heart  
And herald Rain Joy*

*The tree would sigh in big winds  
Standing tall and proud over decades  
It was habitat to untold numbers of beings  
Holding court on the crest of our hill  
An icon of this community  
Although valued consciously by few, too few*

*It was a link to a past full of paddocks  
When life was slower and more connected  
Before the craziness of consumption had become rampant  
Before the disconnect from nature had become a mental illness  
Back then when the climate was still safe*

*That tree was part of the 'heim'*  
*The heim that means "country" - all the elements*  
*This place, this home*  
*Where our lives are lived*  
*Where children grow to young adults*  
*Where puppies play and grow old*

*Buildings, trees and hills, culture, animals and birds*  
*Clouds and people and blossoms*  
*The minute and invisible, the gardens and orchards*  
*The creek down the hill where the wild foxes live*  
*Time, love, endeavour and spirit: everything*

*I am part of this place; it is part of me*  
*The magpies are part of it and it is part of them*  
*That tree was part of this place and it was part of that fine living thing*  
*And now the tree is gone and I miss it like a phantom limb*  
*And I feel the dispossession of my friends, the magpies*  
*And I feel sad and somehow responsible*  
*The sadness of the failed steward*

*The magpie family will find a new home*  
*And we have work to do on the repair of our place*  
*As we learn to share country and understand heim*  
*And we realise that we have so little time*

(Wilkinson, 2009)

I still live at the same address but much has changed; the huge pine tree has gone but some big beautiful gums remain important today to magpies, parrots, cockatoos and me and now there's a glowing example of community, courageously inspiring sustainability and transformative change.



## 1.4 Collective Crisis: entering Stage Left, the Global Climate Emergency

---

When first hearing about global warming in the 70's, it looked like a far-off problem, something my great-great-grandchildren might experience. By the early 80's concerns were growing and our conversations more often went in that direction. The late 80's saw me busy with babies, finding TV news too disturbing to watch and only vaguely aware of the increasing focus on climate change. Attention reached a peak around this time but got 'messy' and by 1999 everything had changed.

As environmental damage accelerated, my apprehension increased during those few years. As I have mentioned, SLF was established just as awareness of our governments' retreat from action on climate change began to consolidate. In the 1980s, Australia was acknowledged as the country best informed about climate change in the world; Maria Taylor's investigation *What Australia Knew and Buried* (2014) is a fascinating study of "where we have been, how we thought and talked, what we once believed about global warming and climate change". (Taylor, 2014, p.xi) She shows how it came to be "reframed into a different story—all within 10 years, leaving us with the 'debate' we still struggle with today." (Taylor, 2014, p.xi) In the early 2000s this context was initially unclear to me and I found it hard to comprehend, but after "the first rumblings of opposition from the mining sector" (Taylor, 2014, p. 35) became louder, the intervention of national and international politics on behalf of industry became visible. Taylor's chapter 5—*Australians were persuaded to doubt what they knew*—describes how the "fossil fuel and allied industries got into gear." Taylor (2014) cites Fred Pearce (2005) asserting the Intergovernmental Panel of Climate Change (IPCC) was created (in 1988) "to put scientists back in their cages." (Taylor, 2014, p. 28) My work and life became centrally focused on achieving rapid change.

The rapid pace of arctic ice melt was brought to SLF's attention in 2003. As the terrible implications began to sink in I, and others, started to appreciate the scale and pace of the full structural and social transition needed in response. In 2005 some in SLF committed to

investigate what an appropriate society-wide response would look like and how to make it happen.

We formed a small Strategy Collective convinced that global warming can be reversed. Safe climate conditions for all sentient beings require atmospheric conditions close in composition to pre-industrial levels most importantly this means restoring CO<sub>2</sub> levels to around 280 ppm back from the current level of 414.11 as of 5 Mar 2020 (NOAA-ESRL). We could see that if there were to be any chance of achieving such a goal, a belief would have to be established and widely-held in Australia and globally. A sound basis for that belief was essential and a plausible scientific case considering that proposition had to be made. In long and tortuous meetings over subsequent years to 2009, we set ourselves the challenge to develop a strategy to catalyse and begin to scope a serious response to the climate emergency.

One such meeting in 2006 created a far deeper understanding of 'Emergency Mode'.

## *My experience of Emergency Mode*

*A pivotal moment in understanding the implications of Emergency Mode (EM) came on a dark night in the depths of winter, 2006. The Strategy Collective, determined to grapple with the challenging complexity, missed the last train home. The talk was about what had to happen in Emergency Mode, also looking at when such mode needed to happen and what was blocking it. We asked ourselves: "When will people be prepared to swing into Emergency Mode?" The answer: "When they understand the Emergency" begged the next question: "If WE understand the nature of the emergency, what is preventing US from stepping into Emergency Mode?" That question threw a switch: "Nothing! WE must do it. Tomorrow we wake up and say, today we are in Emergency Mode."*

*Stepping myself into Emergency Mode as a conscious decision hadn't occurred to me until then, but I still didn't know what that actually meant. I would find out through experience. The next morning I woke excited to see how the world looked different. I began to observe myself going through all the usual things in my*

*average day and soon noticed all was different. Every single thing was evaluated against the stark backdrop of 'urgency' and 'everything at stake'. Yet, other than a heightened awareness and a sense of witnessing myself move through my day, the day was not that different from other days. I was prepared for life to become more difficult in Emergency Mode, yet, over the next few days, as I sat with this observational outlook, I found something unexpected.*

*Even after just that first morning, I reprioritised and changed some habits. In one fell swoop, things became bleaker and yet simpler. I found the weighing up was not about half-full or half-empty either. Clarity replaced overwhelm. What most affects my prioritising is savvy evaluation of relevance in the context of the climate emergency. The most immediate and remarkable effect was the sense of liberation; I felt relief and there was no turning back.*

*The things that really mattered became crystal clear. A vast array of endeavours, concerns, issues, campaigns and commitments instantly paled to lesser significance in this rearranged landscape of life matters. Things previously*

*deemed important became moot. I realised if climate disruption was not reversed and healed, these worthy issues would simply be swept away by the rising tide of terrible impacts. I felt released from the need to champion my array of causes and injustices and became focused on the overarching issue of restoring safe climate conditions. For me this has translated into a life focused on the contribution I can make now to positive change in the world. My vocation is teacher and agent of social change.*

*I began to re-examine my behaviour and have been doing so ever since. I could immediately see my experience as a fractal of the emergency mode I envisaged.*

*An Emergency Mode will tackle climate change, harness the potential to change the direction of the trend and reverse back to safe climate conditions. Challenging definitely, but surely not impossible. For me, just the striving alleviates guilt and anxiety that might otherwise immobilise or distract me. I know that not everyone can be fully energetic or convinced. Feelings of overwhelming sadness can be crippling but even just having the compassion*

*to share feelings and accept incapacities enables greater and shared capabilities to also emerge. There is a list of other reasons too, practical and emotional, why a person might not engage. Some succumb to despair but, in my experience, desperation can also pass as with a rite of passage.*

*With the clarity of this realisation and the strong lens through which to focus my attention, my life began to change. In short order, I mastered public transport, conquered riding the pushbike in all weather and published a paper for the Australasia Pacific Extension Network (APEN) on Accelerating Sustainable Change (Wilkinson, 2006). Fear motivated me to do more, realising there was a need to reach people who don't opt in to SLF Festivals. So the next few years were spent creating a book on sustainable living seen through the 'lens' of a topic to which I hoped everyone could relate: food. In 2008, 'The Conscious Cook: Sustainable cooking and living' was published.*

*(Wilkinson, 2008)*

## 1.5 Conscious priorities: pick up pace, push for change, feel the heat

---

By now I understood the urgency of the situation and the daunting scale at which the transition was to take place in all the sectors: stationary and transport energy, built environment, industrial agriculture, not to mention consumerism and other areas of ‘overreach’ rendering incremental change inappropriate. There was so much to do and so little time... John Seed, Joanna Macy, Pat Fleming and Arne Naess considered the threat was potentially more serious than a nuclear war:

*“it was the destruction of our life-support systems that is the deepest and most pervasive source of anxiety in our time. It is not a hypothetical danger, like nuclear war, for it is happening now ... and people, as much as they would like to deny it, sense it, feel it, often on an inchoate level, in their bodies. The very enormity of the threat makes it harder to talk about it or confront it squarely.” (Seed, et al, 1988, p. 7)*

It became obvious to the Strategy Collective that the pace, scale and intensity of the response were the equivalent of being on a ‘war footing’. The war analogy, although far from perfect, drew on the US government’s response after the bombing of Pearl Harbour and the subsequent post-WW2 Marshall Plan. It felt adequate. Discussing the ‘mode’ that we’d need to be operating in as a society, we had started to use the term Emergency Mode as mentioned earlier, to communicate the extent of the scale, the kind of decision-making and the needed speed of the transition, for example, from fossil fuels to renewables.

The proposals coming to SLF for festival presentations clearly pointed to a growing alarm about global warming and a corresponding increase in number and diversity of responses from individuals and organisations. Upon examination the field we saw taking shape supporting ‘many flowers to bloom’ was also dissipating energy and absorbing scant resources in the movement. The need to apply a more strategic

approach led us to an element of broad transition work focused on social change. The fostering of a *sense of emergence* refers to how large-scale change can be nurtured to arise or blossom.

The *Sustainability Renaissance* I see materialising before me is an example of emergence and is one reason why determination and hope are justified, why they must be activated to do their work, to notice how we are progressing in our efforts to increase the pace of change and what to do next. When asked by science writer, Fred Pearce, whether we could be at a positive tipping point in humanity's response, global sustainability expert, Johan Rockström, said, "Change is happening. We may be entering a new era, a renaissance in which sustainability is essential to the success of businesses." (Rockström cited in Pearce, 2019, p. 41)

Engaging in radical change on all fronts uncompromisingly demands a paradigm shift away from rampant consumerism to a more socially connected world, in tune with nature and sustainable living. One consequence to individuals and organisations at the forefront of this shift was that 'paid' work became more difficult to secure. This could be seen as a conscious or unconscious backlash from that same paradigm not surprisingly unwilling to fund efforts aiming at their demise.

The emergence of the Sustainability Renaissance also brought with it a burgeoning interest in the nature of human consciousness. However, I felt 'mindfulness' resembled an industry, appropriated and packaged into a (post-) modern buzz of "*Living the Dream*" and with climate denial being rife and scientific ignorance nurtured, I was unwilling to venture into this new enthusiasm. It could include expensive weddings on Balinese beaches, meditation by smartphone apps, retreats in luxury eco-resorts, high-end raw food, prestige but no electric cars and hanging out with beautiful people seen by everyone who matters on Instagram and Facebook – compare and despair. The potential for distraction was and is still huge, but some of those entering that 'zone', perhaps for faddish reasons, nevertheless did experience profoundly meaningful conscious revelations and awakenings. Similarly with corporate responsibility; apart from ticking boxes, a possibility exists that the importance of transition is revealed and could lead to more serious involvement; but it took me a while to come around. Now I practice meditation via smartphone app too.

The *Business-As-Usual* (BAU) approach to economics was even more off-putting. Whilst I realised that crucial areas central to large transformation fall squarely into the economic arena and the associated (and often disingenuous show of) political 'argument', I slowly grew to accept that working with the political and economic power-holders provided great potential for change and breakthrough making a safe climate economy is possible.

The recent and current wildfires of 2019 and 2020 have changed the debate in Australia (not to mention COVID19 the debate around which is just starting). However, just how daunting our

challenges were was brought home in the most dramatic and painful way during the horrendous heatwave of 2009. (ABC News Online, 2009) Melbourne experienced 40°C temperatures for nearly two weeks with the nights remaining hot. On Saturday February 7<sup>th</sup>, the two weeks of killing heat culminated in Australia's worst bushfire disaster. The Bureau of Meteorology had predicted hot, dry conditions with wind gusts expected to exceed 120 km per hour. Ten years of El Nino "drought" had desiccated the state and temperatures soared to 46.5°C, an all-time record for any major Australian city. The state erupted in fires so fierce, breaking a series of terrible records and generating a horrifying death toll. I saw the face of global warming....

Too few media sources connected the heat wave with the Black Saturday tolls much less mentioned the exacerbating effect of climate change. The Guardian newspaper was the only one I could find that did so explicitly (Flannery, 2009).

The dearth of media linking the heatwave deaths with the fire deaths meant the message of the total human costs was barely communicated until much later.

*In 2009, the heatwave preceded Black Saturday, one of the most devastating bush fires in recent times. The human cost of the 2009 heatwave was more than 374 deaths, in addition to the 173 people who died in the fires." (White, 2014, para 2)*

All told, 547 children, women and men had died in less than three weeks and a further 414 were 'officially' injured in the fires, nearly 1,000 victims. The Victorian Council of Social Services later included in their 'Feeling the Heat; Heatwaves and Social Vulnerability in Melbourne' report (VCOSS, 2013, p.4):

*"Heatwaves cause more deaths in Australia each year than any other natural disaster and have a greater negative impact on population health than any other natural hazard." (Price Waterhouse Coopers, 2011)*

*and*

*"Over recent years, Australia has experienced unprecedented heatwaves, .... and the frequency and intensity of extreme heat events is likely to increase as our climate conditions changes. (Loughnan, et al, 2013)*



*My own experience approaching Black Saturday was one of grave apprehension. After a fortnight of intense heat and lots of warnings, I anticipated that on this day much of Victoria would go up in smoke and flame. Holding the sure knowledge that people would die was terrible; thoughts of wildlife that could not get away and the forests also preyed on my mind.*

*As the crow flies, I was 120 km north-east of Melbourne but no life-loving crow would have flown that way that day; directly over the worst bushfires in Australia's recorded history. I was at a house on Eildon Weir filled with thick smoke in unbearable heat. Visibility was less than 30 meters. Staying an extra two days to keep an eye on the situation was actually foolhardy - the large wooden building would have been hard to defend.*

*I remember looking at a map of the area and having my illusions of safety smashed, realising the water in the weir amounted to very narrow ribbons lacing through the hills. Radio reports spoke of embers the size of footballs flung 35 or 40 kilometres ahead of the fire front which was only 25 kilometres away. Brave fire fighters were trying to hold and keep apart fires at Taggerty, Snobs Hill and Rubicon, just the other side of Eildon weir. Had those fires joined, our situation would have become extremely serious.*

*The next day, the shock began to set in as reports started arriving; everyone was reeling from the enormity of the toll. Fires were still*

*burning and the risks were still high; people were on tenterhooks. We all knew people and places in danger everywhere. Empathy was painful; Kinglake, St. Andrews, Strathewan, Flowerdale, Marysville, Toolangi ... old people, young, recluses, everyone and other beings, wildlife, pets and livestock, old growth forest, whole ecosystems; the list was long and devastating. Emails were quietly circulating with single sentences like: "Has anyone heard from Daryl?" ... the next day: "Daryl's safe". But many were not and the stories coming out bit by bit were horrifying.*

*Finally, Victoria's Premier Brumby mentioned the changing climate on ABC's Lateline, subsequently developing a new fire risk warning to be included on the public danger rating roadside signs: "Catastrophic" and "Code Red". In 2013 a new colour, iridescent purple, was added to maps to indicate the unprecedented intensity of heat and danger (Carrington, 2013) ... small victories for common sense.*

*Frustration and sadness engulfed me; 'ordinary' bushfires are bad enough but climate change is loading the dice, exacerbating disasters. Climate change could have been avoided and can still be turned around, but 'BAU' and the Murdoch Press followed by a growing phalanx of conservative politicians refused to participate in the discussion. (Taylor, 2014, pps. 14, 105- 111 and 124 - 127)*



## 1.6 Further exploring my path: looking inwards and traveling far and wide

---

The heatwaves, the fires, the deaths and the worsening prospects for the future of all helped me concentrate as it did for others. Whether through the disaster, an epiphany or incremental learning, attention and discussion was stirred, mobilised and new knowledge, values, awareness and greater caring seemed to emerge.

Yet, like most people's, my priorities were entangled with biases, stressors and illusions. Whilst unwavering in my focus I used heuristic reflection to challenge and interrogate myself. Drawing from Moustakas' work on deep reflection I developed ninety-nine deeply confronting questions. (Moustakas, 1990) These questions probed my seminal experience at depth, including connection with others, the world of inner teaching, the process of damage repair and creative self expression. I then found my central question and began writing of trust, self-expression as communication, imagination and internal dialogue, core themes, the heuristic path and the gaps, bridges, significance, healing and more.

This reflective approach and the questions also made their way into the process of the research through the ten interviews with activists, artists, scientists and change agents that I conducted (5 in Australia + 5 overseas) (8 in a schedule + 2 others) (9 with individuals + 1 with a group) of which more will be spoken later.

Then, reflecting on my experience, I wrote twenty-five valuable pages of expansive but honest answers to all 99 questions. For example this journal extract from 2014 answers my question "Have I had a Eureka moment?"

*Understanding the fractal picture in the context of this work was a breakthrough, if not quite a run-down-the-street-naked Eureka moment, helping me grapple with the scale of the problem and to put things in perspective. I can just as easily see the cosmic immensity whether outwardly*

*looking at the universe or inwardly looking at the cellular or molecular or beyond. In the constant moving, instability, impermanence and unpredictability and the as yet unknown and even the unknowable, I can see the same cosmic intensity and movement, in and out and around, and the seeking of homeostasis at all levels of scale. I can see the deviance away from homeostasis with the determined efforts of many humans working against natural balance, against common sense, against harmony and moderation, whether consciously or unconsciously, and I can see the forces of nature, the laws of physics and even the cosmic energies shifting to restore balance with or without humans and at a cost to vast numbers of other species as well. I understand the wisdom of humankind exists even as the destructive drives of humankind continue to do such damage. I see the role of grass roots campaigners and community groups of people are given vastly greater power to penetrate through the fractal equation.*

(Wilkinson, 2014)

I recognised how my assumptions and emotions rendered my vision myopic and slowed me down and how I tended to avoid what I found distasteful or incomprehensible which was a rather unhelpful attitude when dealing with climate deniers and sceptics who dislodged me from my comfort zone. Learning to recognise the broader complexities affecting them, deciphering and understanding their fears and motivations, I could start to let these biases and judgements go. Appreciating this allowed the intensity of my own fears and rage to subside a little, surely a critical factor if spaces for constructive dialogue are to ever open. Whilst empowering initiatives generated during these years often did not seem effective or sufficient and the world seemed replete with astounding pessimism and self-defeatism, positive change *was* occurring; for example, the acceleration of the switch to clean energy.

I was offered an opportunity to attend a Kanyini retreat, ([www.kanyini.com/](http://www.kanyini.com/)), explained at length in a film of that name (Hogan, 2006), and experience the awe sitting at the feet of revered Indigenous elder, the late Uncle Bob Randall. He taught us about Australian Aboriginal consciousness and patience. With over sixty-thousand years of Indigenous survival to draw from, his introduction to Kanyini held the tenets of philosophy and lore, connecting us to the land, to each other and to our selves. Indigenous people around the globe have been waiting patiently to teach us but ‘we’, privileged carriers of the wonders of the ‘Western World’, dazzled by our own ‘progress’, have been slow on the uptake – if not outright rejecting of their wisdom. With Uncle Bob and his partner Barbara we continued the conversation at their Mutitjulu (<https://parksaustralia.gov.au/uluru/discover/history/mutitjulu-community/>) home in the shadow of the powerful presence of the great

rock, Uluru; sleeping under the stars, I watched the sky move as the Earth turned through the night. Daybreak was heart-break - so beautiful; at dawn, I walked in the footsteps of the ancestors... singing... dancing...

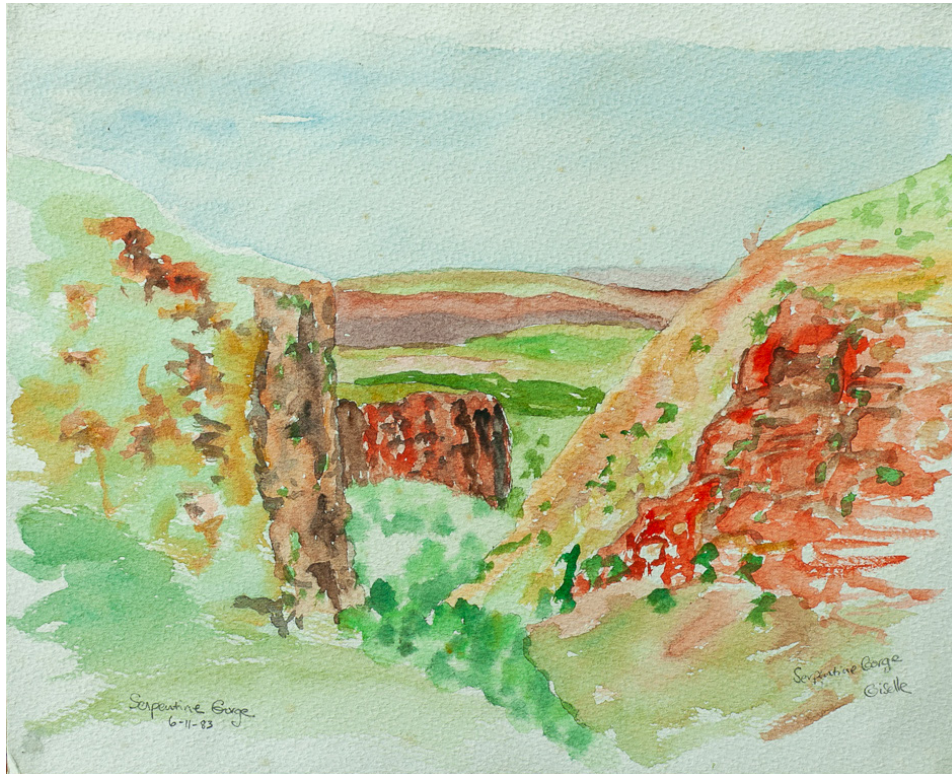


Fig. 6 *Serpentine Gorge*. Central Australia, Northern Territory. Water colour, 15 x 10cm, G Wilkinson, 1983

I left the centre, Australia's heart, with gifted words tucked into my kit bag, then travelled to a faraway land across the Pacific Ocean. Having heard about a 'Global Climate Leaders' conference in Bello Horizonte in Brazil aiming for a ten year transition, their expressed goals of "**2050 by 2020**" were music to my ears. I hoped this would be where safe climate restoration actives and creatives would show up. Crowd-funded to get there, I was disappointed and disturbed that the main agenda was not the global social and structural transition - a topic decidedly avoided - but rather *transition in human evolutionary thinking*. The 'Integral Theory' focus maintained that action to avoid climate disaster would deliver great business opportunities and climate prosperity. In my August 2009 *Trend is Not Destiny* report to my donors for that trip, I wrote about my half buried fear and subsequent realisation, underlined by the 'Climate Leaders' Conference in Brazil, that our minimally-resourced Melbourne-based initiatives could be critical to raising an awareness of the need of an 'Emergency Response Mode'.

Still, meeting a few equally dismayed others there was valuable as was heading south to Curitiba, a city known in sustainability circles especially for its innovative public transport system and its free university. Having started my year with the terrible Victorian fires, bookending it with a journey across to the west of Brazil to Foz du Iguaçu and experiencing the wondrous, world famous waterfalls, was somehow healing. Wider than 2.7 kilometres, it is the largest waterfall system in the world. Every second 1,750 cubic metres of water spills magnificently down the 275 falls. To reflect on the black devastation caused by ferocious bushfires back home remembering the sheer numbers of dead wombats lining the burnt-out roads while immersed in the thundering sound of tumbling water, the amazing sight and the feel of the misty spray, trying to hold these two experiences together in my mind was extraordinary. I created a short YouTube video to capture this contrast. (Wilkinson, 2009) (<https://youtu.be/SwMGbTo-2Ks>)



Fig.7 Exploring contrasts – Brazil. YouTube video. G Wilkinson, 2009

Back home, I threw myself in the work. The search continued for ‘*the safe climate conversation*’ that involved a lot of traveling, searching, speaking, facilitating workshops, teaching, doing radio and promoting the topic around Australia. In February 2010, the Transition Decade Alliance was launched at the Melbourne Town Hall with the help of the Victorian Governor and scientist, David de Kretzer, and Uncle Bob Randall. Murdoch Press columnist, shock-jock apologist for the fossil fuel lobby, Andrew Bolt, attacked the Governor for his ‘political’ role and described the MC, me, as a ‘*sustainable living evangelist*’. I chose to be flattered.



## 1.7 Looking the tiger in the eye: a devastating detour

---

Really wanting to understand what was getting in the way of action and establishing timeframes commensurate with the gravity of the problem, I had committed to engaging in doctoral studies; I was hoping that the research would offer a structure that would help me stay focused and find the ‘breakthroughs’ and people who had ‘made’ them, and would reveal the hurdles we had to overcome. I knew work towards ‘safe climate’ was happening in Melbourne. I needed more evidence and detail of what this work elsewhere in the world was focused on (sociological, psychological, technological and/or behavioural change; legal, political; academic; grassroots campaigns) To better understand what climate change really meant, I also needed to find out what warming of 2°C above pre-industrial levels would be like in different parts of the world.

With increasing apprehension, I read *Six Degrees – our Future on a Hotter Planet*. (Lynas, 2007) I entered this scary zone to find out what temperature increases of 3°, 4°, 5° and 6° would mean to earthly beings and to life generally. My experience is captured in this journal extract below – ‘*Looking the Tiger in the Eye*’ (2011).

### *Looking the Tiger in the Eye.*

*Global warming, global heating, global cooking; the first exposure to the reality of this fearful zone was the worst. Fear gripped me in its claws. Experiencing the madness of desperate terror as I saw the huge tiger of my dread ready to leap, staring me in the eye, I quaked. I could smell the more than mortal danger knowing the tiger also smelt my fear. I knew unsheathed claws and bared teeth could quickly shred and devour me in*

*a murderous bone-licking bloodbath. I wanted to run away but I froze, incapacitated. Total misery took my breath away. I felt weak, eviscerated.*

*I breathed. I survived. I went away and cautiously came back. I thought I had been mistaken; ‘there is nothing to fear here’. But no, huge, he was there in the shadows, waiting, growling. Engulfed in an anguish of despair, I felt again such powerful fear*

*surging in terror and desperation, coursing in crisis through my body. I felt the vulnerability of my thin, blood-filled veins and the feeling was every bit as bad as I remembered.*

*Each time I looked into the not so far future of temperature rise the repeating shocks that this ridiculous climate change mistake could even happen, left me reeling, feeling punch-drunk. I cried myself blind, everything ached; I couldn't function, I couldn't cope. I wanted someone to save me, protect me but there was no-one. We're all in it together, the present and the future. Only the past and the already dead escape as this shocking thing plays out.*

*Yet I came back again and again. I felt compelled to make a practice of it; to stand*

*before my fear; to look my tiger in the eye. Yes, this fear was real - not imagined. Unbelievable but real. I thought about all that was at stake, all that I would miss, all that I cherished. Beyond mere mortality I now understood the meaning of existential threat but still I struggled with persistent disbelief.*

*I looked at the tiger and gradually understood the look in his eyes, 'not yet, not quite'. I thought about inevitability and how it hinges on how we act in the moment to find a better path, away from danger.*

*This is the time and place. This is the moment. My tiger is not stopping me from taking action, from continuing on this path. Not yet. Not quite, anyway.*

(Wilkinson, 2011)

Although exploring my fear was a useful experience, bringing me closer to understanding my/our impulses, it was also hard and, as brave as I believed myself to be, it took its toll. As a seeker and speaker of my truth, it was also an opportunity not to be missed, teaching me that courage is renewable if well supported, that truth is organic, growing within new contexts and insights. And writing helped me work through it.

I am emotionally honest and my creative writing and poetry are outlets for fear and angst and the strong emotions underpinning what I do, but I knew they could not be the leading message. They might generate empathy but without then translating into engagement and action are unlikely to generate change or breakthroughs. Hence, my doctoral work to which I bring my whole self and my life journey, includes experiences that reveal the paradigmatic lenses through which I see the world, my refusal to countenance such a catastrophic defeat, my talents and skills and commitment for change, staying positive, enticing all to share the vision and finally to add their power to that of activists past and present.

I persevered. Systems thinkers Andrew Wilford (Wilf) (2011) Ian Lowe (2011) and others convinced me to help put together a national summit on *whole-systems-change*.

‘Wilf’, was Director of “Be The Change” Australia, President of Quest 2025 (an organisation illuminating the illusory nature of current economic systems) and a Director of Best Futures (a global research organisation focusing on biosocial system transformation). Wilf also worked with the Kokoda Foundation (date n.a.) developing National Resource Security Immersive Scenarios examining climate, energy, water, food, ecosystem and economic futures. I first met Wilf at a Global Swarming meeting (October, 2008) in Melbourne. He was an inspiring speaker on whole systems change.

Emeritus Professor of Science, Technology and Society, I knew Ian in his role as President of the Australian Conservation Foundation (ACF) from 2004 to 2014. I wrote to him about a speech I heard him make on wins for the environment. He wrote,

*Giselle, I was launching a book “The Sunshine Coast Environment”, sub-titled “Extraordinary People and Places”, collated and edited by Elaine Green, Jillian Rossiter and Jennifer Simpson. The introduction said that it was timely to recall “what the Sunshine Coast might have looked like without the ‘wins’ for the environment achieved by conservationists”. It gave several examples, a few of which I quoted in that speech. Fraser Island could have been logged and sand mined Cooloola sand mass would also have been mined The mouth of the Noosa River could have been rock walled with a bridge across to a giant resort on the north bank Instead of Noosa National Park, there could have been*



Fig. 8  
Noosa River pelicans.  
Queensland. Charcoal  
on paper, 15 x 8cm, G  
Wilkinson, 2012

*hundreds of hectares of residential development Weyba and Emu Swamps National Parks could have been concrete lined canal estates The top of Emu Mountain would have had a water tower and McMansions Mount Coolum could have been topped with restaurants and other commercial buildings, with a gondola chairlift taking patrons up there Mooloolaba Beach could have had rock walls instead of casuarinas Along the Kawana stretch of coast, the dunes could have been flattened with no Kathleen MacArthur reserve to remind people of what was once there The estuary at Caloundra could have been a rock lined harbour with a marina and easy access to the pulp mill that could have been built on Bribie Island The rainforest of the Conondale Ranges could have been logged And so on. The intro went on to say, This is not conjecture. All these things and more were seriously proposed and would have happened if determined activists had not joined together to oppose them and lobby the relevant levels of government. I thought it was a timely reminder to activists who often feel we are not making a significant difference. Best wishes, Ian*

I. Lowe (personal communication via Messenger, March 31st 2017)

Committing many months of work throughout 2011 to making it happen we gathered in Geelong (Victoria) for three days with over sixty invited Australian climate change agents and activists – handpicked and all indicating their understanding and belief in the need for whole-systems-change (WSC). They brought their particular work and personal experiences and their willingness to talk about safe climate restoration as positively as they could. Although deeply challenging and sometimes painful, the event was, for many, a moment of respite from the isolation and disconnect, the worry and disbelief experienced in our world. It also sowed seeds whether noticed or not, that helped define a path to whole systems change. (See Appendix 4)



*Fig. 10*  
Laguna Bay, Noosa Heads,  
Queensland. Charcoal on paper,  
15 x 8cm,  
G Wilkinson, 2012



## 1.8 Overwhelm: Life layers with a background of existential threat

---

Feeling my impatience building over the years, I had noticed, especially with family, friends and neighbours, my growing reticence to even raise the issue of climate change; I tried to understand the thinking behind the lack of action; people looked away; some of those who became galvanised ran out of steam, creating a palpable feeling of let-down, frustration and disappointment. I felt the mainstream media further deteriorate, dismissing the few competent environmental journalists, and avoiding meaningful conversation. Playing into the constructed silences they seemed to adopt catchphrases like ‘no-one mention climate change’ similar in vein to the well-known idiom ‘don’t mention the war’.

Even some environmental non-government organisations (ENGOS) were (and are still) muting the message and distancing themselves from provocative actions, fearing to ‘*frighten the herd*’ and fearing to lose funding support, the John Mercer effect.

In 1978 glaciologist John Mercer predicted the loss of the West Antarctic ice sheet due to global warming, predicting sea level rise of 5 meters and its social and economic impacts. He was ridiculed, accused of being alarmist and punished for sounding the alarm finding that funding became extremely difficult thereon. James Hanson termed the threat of loss of or cuts in funding as the ‘John Mercer effect’.

Both ‘*frightening the herd*’ and ‘*fear of frightening the herd*’ are problematic. To promote discussion and support courageous action and still be able to offer some peace and enjoyment of life is challenging.

I tried to develop strategies and cleverer ways to distribute information, initially believing that providing *information* alone would lead to *understanding* and understanding then would lead to *action*. I gradually realised that whilst this did help, most people seemed to wait for someone else to act or for the right time for them to come.

## *Cabin Fever*

*At times it felt too much.*

*I would grate at the western world*

*I saw our culture lost in confusion*

*Engulfed in individualism*

*Compassion eroded*

*In an epidemic of entitlement*

*In this sad state flooded with despair*

*Dark moods circle me like big black bats*

*Forcing faked gaiety, feigned equanimity*

*A parallel universe, dark and unfriendly*

*Powerfully pulls and sucks out all serenity.*

*Stress prevails and annihilates peace*

*Where in the world is all our humanity?*

*All is NOT right here.*

*Let me in! I cry*

*As I pound at the door of my sanity.*

(Wilkinson 2010)

---

Living through a drawn-out period of high stress, intimidation and harassment, I came to recognise trauma by a thousand cuts. At one stage I sought support for Post-Traumatic Stress Disorder through therapy, counselling and exercise. This tough time forged greater strength in me and resilience to stay resolute in the face of what I believe will be a tumultuous future. Journaling later, thinking back to that troubled time, I wrote *The Lifting*.

*The awareness of the precariousness of our situation, the burden of the holding of the knowledge, the challenge of communicating it, the crucial role as a 'holder of the flame', of a practitioner of hope in action, and as someone accepting a leadership role working to guide the way and seeking to inspire others to step this way – when all this is combined, it becomes a responsibility that can take your breath away. Yet, it's also an opportunity and privilege to work with others in this area and, strangely, it's a gift to the giver, to be of service even to those who don't quite understand or yet appreciate it.*

(Wilkinson 2014)

I did a lot of work on myself through self-care and with self-help tools I had gathered over the decades. This miserable period dragged on until one day I was hit by the terrible thought that it might never pass.

## 1.9 The road through the swamp: Challenged by love and fear and hope

---

*The Lifting – continued.*

*Week after week, month after month, the black cloud shrouded me, clouding my judgment, wearing me out. I was left confused, indecisive, lacking confidence; a burden sat on my shoulders. Sometimes sitting me down and not letting me move, incapacitated and miserable. Sometimes the pain would hit my solar plexus like a body blow of great force leaving me gasping, burning my throat, making my heart ache and my eyes sting. Spontaneous crying would catch me by surprise. Talking to friends, or anyone really, was risking tears.*

*I was left deflated. Defeated, depleted - these were the words I used to answer “How are you?” if I was honest.*

*I moved on a spectrum from despair and depression, deeply miserable to merely sad and unhappy.*

*Months in this bleak place stretched to a year and then beyond and still the heaviness held.*

*Finally, frustration gave voice to my fear: not ‘when will this pass?’ but ‘will this pass?’*

*Then, on a day in May, in Darwin, far from home, it lifted.*

*The bleak time had felt very isolating and personal yet through it all I clung to my family, a few friends, my therapists and trainer. But for all that, it was a lonely place and I was exhausted. So when the lifting occurred I felt amazed and relieved and it was palpable - almost pinpointed to a day. By mid-June, I began to trust the new state of being, remembering and savouring ‘normal’.*

(Wilkinson 2014)

Examining the landscape of my life and how my blurred impression of ‘me’ and ‘we’ and ‘it’ were represented, I wandered through the visual diary of my decades, the collection of watercolours and landscape paintings and photos I created and realised that I live in many versions of landscape. The landscape of my own complicated life often feels intense and dynamic, my family, my community, my work. One day, John Seed set me on a path instructing me to discover my own ecological identity. With pen and paper in hand my mind wandered between trees and birds, the sun and the soil, seeking affiliation. In the end, I discovered that the whole intricate landscape of nature was what resonated with me most strongly and submitted My Ecological Identity. Here is an excerpt.

*Or perhaps I am ‘landscape’ that I love and sometimes paint  
Expansive and nurturing  
Being a space for many and their work and purpose  
Providing conditions and circumstances.*

*As landscape I am inclusive of those who can live together  
In a version of an eco-system of groups  
Cooperating in the grand scheme of things  
Of which I am but a part – participant and enabler  
But also more than a mere platform of seasonal cycles  
As landscape I bring raison d’être and beauty and value*

*I am the Land  
And I am link to ancient past and the unknown but certain future  
I am fathomable to all who seek the deeper connections  
Yet to many I am just décor; a painting on a wall*

*I live like Landscape, engaged all around  
I hear Magpie and the ground bird and other feathered friends  
Like you, I am Sun – giving and sharing inexorably  
I breathe out, Trees breathe in  
Beings live, Beings die  
In the spaces and places of life that I am – big and small  
I am Landscape*

(Wilkinson 2005)

Having chosen to be guided by love not fear, I decided I was one of the sane ones in our insane world, in a minority but definitely not alone. Becoming selective with who I wanted to connect, I sought out people whose roles included learning and teaching others to see, hear, feel and know nature and to step up to take responsibility, be reliable and put things to right.... eco-warriors.... often tackling socially constructed silences and taking bold action to broaden the discourse across many different fronts.

## 1.10 Demonstrating change: creating a breakthrough

---

As mentioned before, the Earth housing co-op in which I had lived for many years enabled one such front. I was now living at my old address but with nineteen other households, blending our comfortable individual private homes with the generous shared communal spaces, facilities and amenities. We lived cooperatively and learned how to work with the bumps and challenges and discover what living in intentional community means and how to ride the waves and make it ‘hum’.

In our search for a name we were introduced to a Wurundjeri language word meaning *place to stay, place to live* and, going through the proper channels, were granted permission to call our community *Murundaka*. We encouraged people to come and visit Murundaka. Local, national and international visitors, friends, relatives, researchers, media, planners, designers, architects, permaculture practitioners, artists, authors, activists, elected government representatives, school-kids and people from intentional communities all over the world have shared the place. We present ourselves as an *exemplar*, demonstrating that suburbanites can happily transform to a very different lifestyle and live together sustainably and collectively. We practice reciprocity and a values-based lifestyle with a far smaller eco-footprint, striving to do it well and inspiring the practice of sustainable and regenerative living. The community represents transformational change as a living, breathing example, and with practice we improve.

The leadership role I stepped into as the community was establishing itself came with risks. There was lots of fun and many parties but much was confronting too. A co-located, eco-collaborative cooperative community needs a vibrant vision and a set of strong principles if it is to become an agency of social change and more than just a pleasant life-style. We wanted to challenge prevailing practices and set out to explode a few myths, one being that the current mainstream housing modalities are beneficial for society in general and especially under climate emergency circumstances. We wanted to tackle the ‘*Australian Dream*’ version of housing and confront the question of *whose intention we are living* in the sprawl of endless suburbia.

People took notice and the Victorian State Government took notice (Mitchell, 2017). Murundaka is a good example of how to make change happen comparing very favourably to the usually far less affordable or sustainable options generally available as explained by Iain Walker in *'Murundaka Cohousing Community: From I to We (Part 1)'* (Crane, 2017) and *'The Share Market'* (McMahon, 2013) and 'Co-housing. Would you share your home with a complete stranger' (Smith, 2016).



## 1.11 Act, affirm life, whatever it takes: As if the future depends on it!

---

This work is complementary to all explicated before; David Suzuki once said he felt like he was locked in the boot of a car heading straight over a cliff with the driver ignoring his thumping on the hood. I am just one person and I have my own story to tell and part of the purpose of this work is exactly that. Encouraging others to find enough passion, energy and commitment to tell their stories too is important to me. So I tell mine. *Nothing* eclipses the lived experience. Nothing. Voices, stories, words, music, paintings and photographs, all must start as ideas and visions in the imagination. In words attributed to the Buddha, *with our thoughts we create the world*. So I do what I can to get myself out there, I show up, I speak, write, post and pick up the phone, braving the silences, braving the averted eyes, turned shoulders, the atmosphere of discomfort as if the emergency is my personal secret and should remain so. Hundreds of thousands of others around the world are similarly making themselves visible and audible with persistence and courage.

Many techniques have helped embed useful experiences and feelings building the resilience to keep going; visiting mountains and deserts, fire-ravaged forests and beautiful rivers, waterfalls and oceans and watching night skies; reading, talking and listening to what's around me. *The Spell of the Sensuous* (Abram, 1997) introduced me to the profound magic of the sentient world, extending beyond life forms to mountains and even shadows. Visiting the old forest on the Errinundra Plateau and the home of some forest defenders at Goongerah inspired me to create a video [AVATAR at Brown Mountain](https://youtu.be/mVF3kGPfp7U) (see following page) (<https://youtu.be/mVF3kGPfp7U>)



Fig. 11 *Avatar at Brown Mountain*. East Gippsland, Victoria. YouTube video. G Wilkinson, 2011 (<https://youtu.be/mVF3kGPfp7U>)

In June 2013 Peter Cock, co-founder and leader of Moora Moora cooperative community, asked me to co-facilitate a retreat he had created and which was to run at Moora Moora intentional cooperative community. The focus was to be eco-warriorship (see glossary) and he asked me, and those indicating interest, to reflect on some specific questions ahead of the weekend.

I gave it some thought:

*The word 'warrior' can be construed with meanings of division, separation, 'them and us' and aggression. The relevant meaning of 'warriorship' at this time is the preservation of Earth on behalf of future generations and the multitudes of different species together comprising the biosphere. This is a war against division that can only be won if 'them and us' is reframed to become full of the sense of 'all of us together'. Nothing will dissuade me of this view. Warriorship responds to a sense of danger and unwelcome influences. It requires courage, skills, strength and fitness. It can be intense. This is a war of a different kind. The enemies may be seen as the oligarchs, the corrupted, the crazy rich but they are symptoms of our systems and thinking and these can be changed. This war is as much an internal one tracking down, digging out and transforming the opponents we face; the biases, impediments and entrenched practices, the self-blocking that exists within us all. There is an array of human traits at play in the inaction we witness. Warriorship can help actualize and bring out the best in a*

---

*person. It can be valorous (see glossary); it can bestow prestige, status and recognition. The list of hurdles to the solving of the problem is long and these are the things that need to be fought and changed if we are to solve the problem.*

*The process of becoming a 'wise, courageous, disciplined, creative, sustainable activist for all of life' involves a highly reflective practice, access to a community of practice, a willingness to step up and into this job description and the opportunity to acquire some of these attributes from peers by osmosis. The work of the warrior can also involve consciously studying role models, mentoring – both giving and receiving – and lots of reading, exploring and a high level of willingness to experiment.*

*My life as a sustainable activist is really encouraged and supported by friends and colleagues who show interest and ask questions and let me know they value what I do.*

*The response from the wider world also supports me with invitations to speak or consult especially when accompanied by an offer of payment or other reciprocity. Generating only a small income has meant that the need for an affordable lifestyle is high and I have worked to achieve this through co-op living and by embracing frugality as a tool to lighten my ecological footprint. Overall, I maintain good health and fitness and for me, this is essential for the work too. I listen to my body although I don't always do what I'm told.*

*The reality is that the work is often very draining; I have always found engaging with pessimists and contrarians quite painful and defending myself against detractors and attackers is definitely a 'drainer'. My need to be universally loved brings with it sensitivity to slurs, mocking, exclusion or dismissiveness. I have worked on developing a thicker skin.*

*I find paying attention to politics drains me. So seldom is anything offered that fans the flame of hope. Politics either worsens the situation or is irrelevant to the climate crisis almost as if it doesn't exist. And yet it has power to make or break big change.*

*I have had to strengthen my boundaries, learn to work, say 'no' even to myself and to stop taking on too many wonderful projects. Having a few projects on-the-go helps, though; when one stalls I can still keep moving. Deadlines and death lines drain my energy; reading dense material is almost impossible as the sense of urgency tugs at my attention.*

*My long-term commitment to the Earth doesn't show any sign of dissipating now. I need to consciously nurture myself with experiences connecting with nature and in nature. The spotted gum, the magpies and rainbow lorikeets, the skinks and ringtail possums and other natural life that I live in the midst of, help enormously. Even my own artwork and photos remind me of my connection and experience with nature. The great expanse of land and sky from my front door, the heart-warming community garden and activity from my balcony, children playing, these are things I cling to as I live in the city. Getting out is always heart-warming and expansive as I remember my connections. I make a conscious effort to nourish myself, eating well, avoiding packaged, processed food and exercising too. Saying 'yes' to celebrations of the achievements, the wins, appreciating the things that are good and beautiful helps me look after my soul and spirit. I go through times of yoga, meditation, time in nature, time reflecting – patchy but always with the promise of more soon.*

*Being perched up the top of The Great Diving Range, Mt Toolebewong gave us extraordinary views of mountain rainforest, the city and Port Philip Bay. For two days, the handful of committed 'eco-warriors' met sharing hopes and fears with deep reverence and sometimes emotion. These are the experiences that help equip us to keep going when things look particularly gloomy. These are resilience building, optimism-supporting opportunities to be grabbed with both hands whenever possible.*



Fig. 12  
*We find ourselves alive in a listening speaking world.*  
A quote from *The Spell of the Sensuous* by David Abram (1997, p.87)  
Water colour. 8 x 5cm,  
G Wilkinson journal entry 2012



Being present on Mt Toolebewong for an exploration of eco-warriorship broadened my appreciation of activism and taught me that courage is from the heart and needs to be supported.

Four decades have slipped by since stepping out from a classroom into the world outside. The focus on solutions consumes my mind and would send me mad if I were alone in this work. Margaret Wheatley challenges us all to be leaders. She writes,

*“Several years ago, in the face of irreversible global problems and the devolution of leadership, I began to challenge every leader I met with these questions: Who do you choose to be for this time? Are you willing to use whatever power and influence you have to create islands of sanity that evoke and rely on our best human qualities to create, relate, and persevere? Will you consciously and bravely choose to reclaim leadership as a noble profession that creates possibility and humaneness in the midst of increasing fear and turmoil? This book summons us to be leaders for this time as things fall apart, to reclaim leadership as a noble profession that creates possibility and humaneness in the midst of increasing fear and turmoil by creating Islands of Sanity.”*

(Wheatley, 2017, June, p.1)

I embrace positive change and claim a little patch of the new, distributed leadership. Perhaps, as Joel Barker (Brainy Quote); says, *“A leader is a person you will follow to a place you wouldn't go by yourself”* perhaps leaders are just finding a way.

In the next chapter, I will turn to the many others who also attest to the mess we are in and who also feel the urgency. Many, most notably Rachel Carson raising the alarm about the harmful effects of pesticides with her ground-breaking *Silent Spring*, have been telling us this for over sixty years (Carson, 1962). The term ‘*human-induced climate change*’ and talk about global warming have been around since the late-1800s, well before the climate change wake-up calls of the 21<sup>st</sup> century. Indigenous peoples have known about the importance of land and our connection to it for eons. A proverb (probably Cree) tells us that *“You can't eat money”* but we don't seem to agree.

When a global movement demanding better, a world of scientists speaking out and an unstoppable groundswell of transformative change countervail and prevail in spite of everything, my heart soars. I have air under my wings and this is something I'm keen to share. This thesis in essence looks at how to understand the urgency of the climate emergency and the consequential action and changes most needed. By looking back at my own past experience, experiences of others and organisations, the series of ten national and international interviews, it explores how we can – in the present and in

the future – learn and develop approaches from our mistakes and from what we got right equipping ourselves to better coordinate, run with, and enthuse those who do understand and help bring those who don't yet closer to the truth of the matter.

Just as my understanding of the science of climate and the urgency to take action grew apace and together, chapter two outlines the climate mess and what is really going on.

# SECTION 2

---

## CHAPTER 2

### THE CLIMATE 'MESS' AND THE URGENCY



## 2.1 What is going on?

*The Earth's atmosphere has remained much the same for the past 200 million years. 16 March 2017 Atmospheric composition (by volume, dry air): Major: 78.08% Nitrogen (N<sub>2</sub>), 20.95% Oxygen (O<sub>2</sub>) | Minor (ppm): Argon (Ar) - 9340; Carbon Dioxide (CO<sub>2</sub>) - 400; Neon (Ne) - 18.18; Helium (He) - 5.24; Methane (CH<sub>4</sub>) - 1.7; Krypton (Kr) - 1.14; Hydrogen (H<sub>2</sub>) - 0.55. Numbers do not add up to exactly 100% due to round off and uncertainty. Water is highly variable, typically makes up about 1%. (BBC, 2019)*

*The two main gases ... account for about 99% of the gases in the atmosphere. They are: about  $\frac{4}{5}$  or 78.08% **nitrogen** (a relatively unreactive gas) and about  $\frac{1}{5}$  or 20.95% **oxygen** (the gas that allows animals and plants to respire and for fuels to burn). The remaining gases, such as carbon dioxide, water vapour and noble gases such as argon, are found in much smaller proportions. (Williams, 2019, Fact Sheet, para. 6).*

With the exception of occasional ice ages making life difficult or even impossible for many species, Earth has maintained a temperature range that enabled and supported life for millennia. Around the world, temperatures vary according to latitude and longitude, season-to-season and day and night in a comprehensive climate system working on a global and cosmic scale. Notwithstanding local variations, the average surface temperature of Earth is 15°C ... at least *currently*.

The entire climate system and the temperature ranges have been warm and very stable for approximately the last 11,700 years since the end of the last ice-age and have been beneficial for the current biosphere in all its amazing diversity. Generally, humans take this climate for granted, considering it 'normal'. Science-based indications and findings tell us, however, of the rising concern that the planet's temperature and the future of our biosphere is on a trajectory risking radical, long-term impacts. Many scientists have written on this topic. (Steffen, 2018; Karoly, 2014; Anderson, 2015; Bows-Larkin, 2015; Christoff, 2013; Flannery, 2009, 2010; Jacobsen, 2018; Keith, 2018; Oreskes, 2011; Pearman, 1980; Ripple, et al 2017; Rockström, et al, 2009 and many more.) Conditions

---

won't just change to a 'new normal' either... for a very long time, they will keep changing and patterns will remain hard to predict. Earth is heating up.

The science of climate change examines the physics and chemistry of what is occurring and presents us with a daunting, complex and scary problem to deal with. In a nutshell, scientists are telling us that the human species and the biosphere it depends on have existed within an atmosphere holding a precise ratio of life-benefitting gasses as described above: 99% nitrogen and oxygen ( $\frac{4}{5}$  and  $\frac{1}{5}$  respectively) plus 1% other gasses including carbon dioxide ( $\text{CO}_2$ ). Importantly,  $\text{CO}_2$  is in a very narrow range of only 0.04% equivalent to around 280–300 parts per million (ppm), meaning that a sample of atmosphere containing a million molecules contains only 280 to 300 carbon molecules.

In the 1700s, the discovery of the concentrated energy that could be released by burning fossilised coal and oil fuelled an industrial revolution that changed the world. The discovery led human activity to voraciously burn huge, almost unimaginable quantities of these carbon-based fuels, billions of tonnes, gigatonnes, simultaneously releasing equally unimaginable quantities of pollution. These enter the atmosphere predominantly as carbon dioxide and methane and combine with particulates and aerosols forming a layer around the globe that traps the heat. This blanket traps more heat than that being reflected back into space, causing the planet to heat at an ever-increasing, dangerous, unprecedented rate: this is the '*greenhouse effect*' writ large.

## 2.2 How bad it is

---

The terrestrial atmosphere surrounding our planet is thin like an onion skin relative to its onion; most is within 8.5 km from the surface (Williams, 2019, Fact Sheet, para.6). The greenhouse gasses have been pumped as dirty chemical waste into this thin and precious life-enabling, life-protecting—but now opaque—layer. This has resulted in an increase in the parts per million of carbon molecules in the atmosphere of around 25%, well above the known safe levels (280–300 ppm) that have existed and supported life for the human species for the 11,700 years since the last ice age at the end of the Pleistocene Epoch.

*In the 1960s, the global growth rate of atmospheric carbon dioxide was roughly  $0.6 \pm 0.1$  ppm per year. Over the past decade, however, the growth rate has been closer to 2.3 ppm per year. The annual rate of increase in atmospheric carbon dioxide over the past 60 years is about 100 times faster than previous natural increases, such as those that occurred at the end of the last ice age 11,000-17,000 years ago. (Williams, 2019, para 5)*

To avoid severe global warming consequences and ensure the Earth's temperature is kept or restored to stability in the averaged zone of 15°C, *the relatively safe mark for atmospheric carbon is **substantially** less than 350 ppm.*

In 1986 this already too high level was passed. Our polluting practices, particularly during the very recent decades, have been steadily moving the range into more dangerous territory.

The US Government's National Oceanic and Atmospheric Administration (NOAA) (<https://www.esrl.noaa.gov/gmd>) tests the atmosphere on a mountain-top at Mauna Loa, Hawaii. NOAA reported in June 12, 2019 that the monthly average of this measurable tell-tale of climate change had reached an alarming 414.42 ppm of carbon in the atmosphere.

Research shows that multiple factors cause global warming which is now such that many species and ecosystems are failing to adapt fast enough. Isotherms (see glossary) are moving faster leaving species behind. (Spratt & Sutton, 2008, p. 62) Climate change is resulting in the collapse of whole systems with populations dependent on the conditions

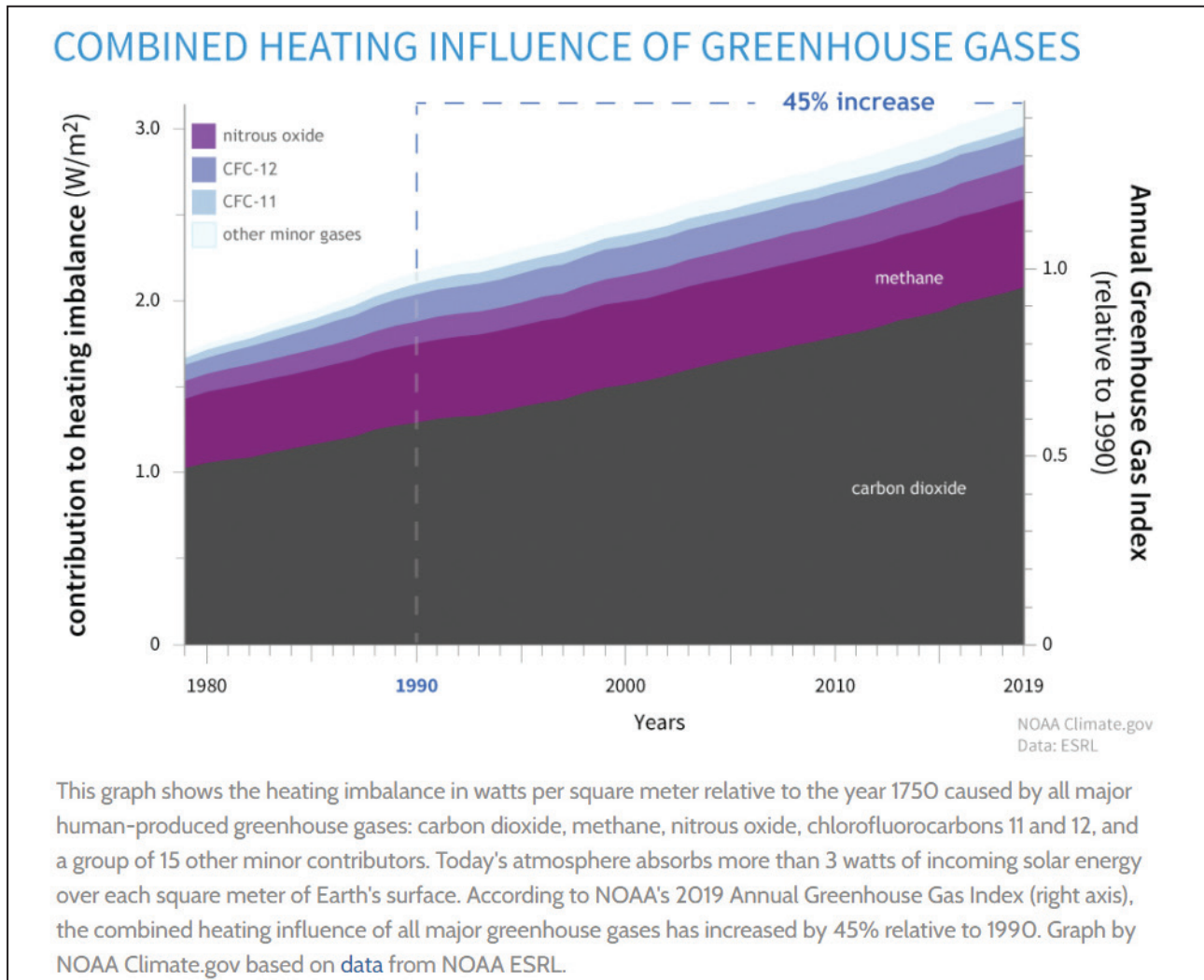


Fig. 13 *Combines Heating Influence of Greenhouse Gases 1980 – 2019.*

Graph from National Oceanic and Atmospheric Administration (NOAA), United States. 2019

of the old biosphere, oceans, ice caps and glaciers being part of that failing (Holthaus, 2017).

The 48th Session of the IPCC Report, Global Warming of 1.5°C, was released in 2018. Chapter 3 details specific impacts of this level of warming and higher on natural and human systems (Hoegh-Guldberg, et al, 2018, pps.183 to 251). Species extinctions and losses to climate-change exacerbated and intensified events like floods, fires, typhoons and other storms have become more frequent and extreme. Sea level rise, temperature rise and a raft of flow-on effects including water scarcity, food security issues, civil unrest, mass migrations, global security implications and pandemics threaten the future of the biosphere, in effect, our only life-support system (Hoegh-Guldberg, et al, 2018).

If global warming and temperatures were to increase from the current 1°C of warming to, say, 6°C of warming, billions of humans would suffer and die as a result and a high percentage of species would be extinguished along the way (Hoegh-Guldberg, et al, 2018). Mark Lynas (2007) said his

description of a future on a planet with 6°C of warming had to be developed without the help of climate models: “*almost all (models) stop short of simulating six degrees of warming by 2100*”. (p. 233) Instead, he looked to the past, when the Earth’s temperature was last 6°C warmer during the Cretaceous Period, 144 to 65 million years ago. At that time, sea levels were 200 metres higher than today, oceans much hotter (the Atlantic may have reached as high as 42°C) and hurricanes were ferocious (p. 235).

Considering the biosphere and climate in its ‘normal’ state, it is instructive to imagine in some detail what life would be like for humans living around the equator in a climate 6 degrees hotter. This is what is necessary to understand fully the severity of the predicament we have created. A world that has heated by 6°C would be uninhabitable for humans and most species across huge parts of the planet. Geological evidence tells us that 6°C warming above the pre-industrial benchmark would translate into a *very hot and very stormy world*: “... *a broad humid belt would have seen the heaviest rains and most ferocious storms – but supported few coral reefs and almost no rainforests*” (Lynas, 2007, p. 236). Between the Tropics of Cancer and Capricorn, the world resembles hell: “*The higher mid-latitudes were warm and humid, but subject to frequent intense burning... In the Polar Regions, a humid and temperate climate supported forests in both hemispheres – Siberia had luxuriant growth as did the Antarctic Peninsula .... At the North Pole, ocean temperatures may have reached a balmy 20°C*” (p. 237). The rest of the world would not be balmy at all.

I suggest that some of the species loss we’re experiencing can be associated with the 6th mass extinction already underway. However, the last paragraph of the section entitled ‘*Perfect storms*’ of ‘*Has the Earth’s sixth mass extinction already arrived?*’, (Barnosky 2011), describes human-induced climate change as contributing to a *perfect storm*, adding to the rapid collapse of species and ecosystems:

*It may be of particular concern that this extinction trajectory would play out under conditions that resemble the ‘perfect storm’ that coincided with past mass extinctions: multiple, atypical high-intensity ecological stressors, including rapid, unusual climate change and highly elevated atmospheric CO<sub>2</sub>. The huge difference between where we are now, and where we could easily be within a few generations, reveals the urgency of relieving the pressures that are pushing today’s species towards extinction. (Barnosky, et al, 2011, p.56)*

These human pressures include the ever-expanding human biomass, pollution, practices of co-opting resources, overfishing and overhunting, fragmenting habitats, introducing non-native species, spreading invasive species and pathogens, killing species directly, continually increasing CO<sub>2</sub>

---

levels and changing global climate. These are “*all more extreme ecological stressors than most living species have previously experienced. Without concerted mitigation efforts, such stressors will accelerate in the future and thus intensify extinction*” (Barnosky et al. 2011).

Oceanographers, marine biologists, atmospheric and coral scientists concur that the oceans too are under enormous pressure. Charlie Veron and Ove Hoegh-Gulberg speaking in ‘Ocean Acidification’ ([www.youtube.com/watch?v=iI7f94v8o1k](http://www.youtube.com/watch?v=iI7f94v8o1k), 2014, Mar 3) and Ken Caldeira writing in his Foreword to Climate Code Red (Spratt & Sutton 2008) describe the extremely serious ramifications of ocean acidification to the viability of the oceans and hence the planet. Caldeira warns, “*We will either learn to live with the world, or wreck it—and in wrecking the world, we will lose.*” (Spratt & Sutton, 2008, p. xiv) As ‘carbon sinks’ the oceans are fast becoming saturated with carbon dioxide absorbed from the atmosphere which, when dissolved, becomes carbonic acid acidifying the oceans. Other human activity and pollutants also contribute to the alarmingly rapid global increase of oxygen-depleted (hypoxic) dead zones (see glossary) (Carrington, 2018)

Scientists and ecologists tell us that climate change consequences are dire and human society must act urgently to prevent them from becoming catastrophic. Kevin Anderson, Professor of energy and climate change, interviewed by me in 2015 said, “*We have to adopt statist approaches that are very interventionist and I don’t think there’s a way around that. You leave it that late you have to intervene.*” (Anderson, 2015, transcript, p.5) Even with 414 ppm of atmospheric carbon causing ‘*only*’ a little more than 1°C of warming, the climate has changed and is already becoming dangerous for life systems. If the rate continues to rise on the current trajectory, even without the impact of a ‘fat-tail’ event, it will become catastrophic (Lynas, 2007). The term fat-tail indicates a probability distribution whose outcomes are represented as thick ends of ‘tails’ that form towards the edges of a distribution curve, indicating an irregularly high likelihood of a catastrophic event; in other words, low probability but very high impact if it does occur which therefore should not be discounted from the current trajectory expectations.



## 2.3 Why the world is not doing enough

---

Critically what is less well-known is the ‘lag’ factor. The presence of CO<sub>2</sub> in the atmosphere has a ‘lag factor’. It can take anywhere between 20 and 200 years for between 65% and 80% of CO<sub>2</sub> released into the air to dissolve into the ocean. (Clark, 2012) A further percentage can remain in the atmosphere for up to a few hundred years further exacerbating the seriousness of the situation. If this is not taken into consideration, the implications of *current* polluting cannot be fully appreciated. The *present* effects being witnessed are reflecting the pollution that has occurred years ago.

Interviewing Mark Jacobson, Professor of Civil and Environmental engineering and Director of Atmosphere and Energy Program at Stanford University, gave me a greater appreciation of another not widely understood effect – that of the blanket of greenhouse gasses including particulates and aerosols that causes a phenomenon called ‘*global dimming*’. There are both cooling (shading) and heating (trapping heat) implications, but cooling of around 0.5°C especially over cities, creates the artificial sense that things are a lot less bad than they actually are. “The particles that cause dimming are the same ones that kill four to seven million people worldwide. About 20% are warming particles - black carbon, brown carbon. .... about now half of global warming is being masked by pollution” (Jacobsen, 2015, transcript, p.3). At the time of the interview (28 June 2015) warming was at 0.8 of a degree above normal. Jacobsen said, “You’d have 1.6 right now if you cleaned up all the pollution” Such misperceptions increase the likelihood and potential degree of ‘*overshoot*’; similar to the delayed effect of skin cancer resulting from too much sun exposure decades earlier, impacts of climate change are far from immediate. In other words, the global emergency indicated by dangerous weather events unfolding now has been established decades ago. The consequences of what is being established now are set to be experienced decades into the future.

Another important aspect is that the current trajectory of predicted ‘*overshoot*’ (going beyond what is intended and acceptable) moves the Earth’s potential warming not just beyond what was once ‘normal’ and beyond 1.5°C or 2°C, but to 3°C or 4°C above ‘normal’. Scientists generally are guided by the conservatism of the scientific method

as they interpret their data and hence careful about predictions yet even higher, more extreme possibilities are now being entertained.

According to a major study by some 100 of the top researchers in the field in France released by France's National Centre for Scientific Research CNRS, the atomic energy commission CEA and weather office Meteo-France. "*In the worst-case scenario, average global temperatures may rise 6 degrees to 7 degrees Celsius by 2100.*" (Ruitenber, 2019, para 2)

Nature itself has been giving clear indications pointing to climate change impacts and scientists have been raising the alarm and being heard for decades up until the mid-1990s, when the public and political environment had turned openly hostile about climate change. (Taylor, 2014) Scientists were attacked and castigated, some boldly intimidated (Oreskes & Conway, 2010). They were accused of lacking sufficient evidence to posit degrees of certainty about global warming. Earlier, faith in government action on climate change had seemed justified and whilst research into global warming had been going on for years it was still early days and most projections had cast it far into the future. It had been considered avoidable. After all, the world had witnessed the international cooperation culminating in the Montreal Protocol (1987) that successfully tackled the hole in the ozone layer.

Maria Taylor's research (2014) indicates that in the late-1980s, under the leadership of scientists:

*We were ready to act in 1990 and called 'best informed' in the world (p. xii)... Early public awareness probably reached its apex as the CSIRO, along with the federal government's Commission for the Future, developed two national greenhouse conferences featuring Australian climate change science of international standing. The conferences garnered widespread media and community attention. (Taylor, 2014, p. 29)*

As George Monbiot points out, market fundamentalism '*widely known in Europe as neo-liberalism,*' was only just becoming the dominant narrative and setting out to '*colonise the world*' (Monbiot, 2016, p. 15). The first Intergovernmental Panel on Climate Change (IPCC) in 1990 spoke about the urgency and Australian scientists were well represented on it, but by 1996 the tone started to change: "*Risk messages were being reframed into a hazy scientific debate, particularly about human agency, that confused the public and helped those who blocked action.*" (Taylor, 2014, p. 2)

Contributing to the unseemly mildness of the global response was the unfortunate problem that the IPCC reports were inevitably out of date by the time they were released. This was partly because the effects of climate change were escalating faster than had been predicted and partly because of the need to reach scientific consensus between all the political appointees which was a drawn-out and



difficult process. These factors meant that new observations might not even make it into the reports due to the time required to do the research, present it, get consensus in time to make the publishing deadline. So even as evidence of faster-than-expected melting of polar ice was scrutinised, the reports being published either didn't mention it or, by virtue of the process to achieve consensus, diminished the urgency.

Sutton and Spratt (2008, p.172) point out, "*Any problem that remains partly unsolved will simply be amplified as the economy grows. So the more committed a society is to economic development, the more it must be committed to fully solving environmental problems in an anticipatory way.*" They go on to cite an astounding example of the effectiveness of politics aimed at diminishing urgency.

*The mantra of the former Australian prime minister John Howard was that he would do nothing on climate change that would harm the economy .... He seemed not to understand that a failure to act would cook the planet. Asked about the impact of rising temperatures, Howard told an ABC interviewer that an increase of 4-6 degrees would be 'less comfortable for some than it is now'. This is a remarkable way of talking about catastrophic climate change. (Spratt & Sutton, 2008, pps. 176-177)*

In 2005, all 19 IPCC models predicting sea-ice retreat differed from one-another and all were wrong (Spratt, 2008) and wrong in the 'wrong way': very conservative against the startling satellite imagery; they indicated slower melting, more time, less urgency. Available for the first time, photos showed an unambiguous and far more serious situation than the collected, already 'stale' data had previously revealed. Melting was accelerating faster than predicted indicating less time to transition and greater urgency.

Notwithstanding the fact that scientists and science communicators are clearly telling us now that the biosphere is under intense pressure, the world is still not doing enough. The previously referred to time series produced by NOAA and the Earth System Research Laboratories (ESRL) at Mauna Loa clearly shows that the levels of carbon in the atmosphere continue to rise. The dangerous weather and '*natural disaster*' events we are witnessing, becoming more dangerous as planetary boundaries are pushed past safe zones, will become more radical, extreme and violent. As mentioned, intensity and frequency of events are escalating and have now reached the point of a global emergency.

While this is what scientists are saying, the loudest voices heard by the general public in Australia remain those of politicians and media spreading a different perspective which is not reflecting scientific evidence nor the urgency of action; as in many other parts of the world, while such misinformation continues, Australia will not be doing enough.

## 2.4 What is happening and what's wrong with it

---

So, in my view, we humans, particularly Australians, keep unearthing and burning fossil fuels out of habit, convenience, complacency, comfort or profit as if there were nothing to worry about. We continue to pollute with abandon releasing more and more greenhouse gasses adding to the existing overload of carbon dioxide in the atmosphere now blanketing and overheating the Earth. At the same time more CO<sub>2</sub> and methane is also being released from nature due to climate impacts.

Those paying attention to this situation currently and receiving their information from mainstream outlets, mainly the Murdoch press and other commercial outlets, experience this as bad news after bad news or no news at all. The more reliable information that comes to light bring with them ever-shortening time frames in which to act; alarmingly, adjustments to past predictions often seem to start apologetically with “*We didn't think it would happen this fast ...*”

In the 1980s and 1990s, scientists, policy advisors, science communicators and others with access to the information were raising the alarm in unmistakable language; however, the expectation that this would continue and that appropriate action would be taken by government at the appropriate time when evasive action was still possible, was misplaced.

*... as the 1990s progressed, this changed. Gradually the early good understanding was overtaken by a huge case of uncertainty, doubt or ignorance, which was closely linked to a changed daily narrative for public consumption that was crafted by political leaders and the mass media. (Taylor, 2014 p.2)*

Scientists did try to publicise the data and indicate the consequences of inaction, stating the need for immediate action, but many experienced a strengthening backlash including being threatened with funding cuts, the previously mentioned ‘*John Mercer effect*’. One outcome is to silence these voices. Naomi Oreskes and Erik Conway (2011) discussed their research on this topic in their book, and subsequent film, *Merchants of Doubt*. In an interview with Guardian journalist Zoë Corbyn (2019, Nov 3), Oreskes explores the other

side of the coin explaining why science is trust-worthy. Her most recent book (2019) is titled *Why Trust Science*. In her interview (2019) Oreskes points out the rigorous process science goes through for vetting claims including peer review of papers, discussions at conference and workshops and the crucial factor of consensus amongst experts. She is quoted as saying, “*Consensus is key to when a scientific matter has been settled, and therefore when knowledge can be trustworthy.*” (Oreskes cited by Corbyn, 2019, para 6) Trust in the scientists can also be increased with scientists talking about their values and opening up room for common ground. “*A scientist’s biodiversity might be a religious believer’s Creation, but they are cherishing the same thing.*” (Oreskes cited by Corbyn, 2019, para 10)

Politicians trying to move more decisively on climate change were trapped in a political situation fraught and inadequate for the task. Having prevaricated and lost valuable time, having set targets many expected to blow out rather than establishing firm caps or limits, it now appears our leaders are unclear how to proceed. Kevin Anderson told me (2015, transcript, p.13) that he speaks to many scientists who are saying it’s now too late; for incremental change, anyway. The reality is that most of our world’s political systems and the prevalent short-termism through which most governments operate are based on a model that is not up to the task. If it’s not a recognisable military-style ‘war’ being faced, it is hard to see how it can be treated as an emergency, much less an existential threat to vast numbers of species and to human civilisation.

To speak about reversing global warming can feel like a high-risk exercise. In the early days, it was extremely difficult to find public speakers willing to dig deeply into this topic; not just open to up the direness of the situation but canvas solutions related to the concept of safe climate restoration. It is still difficult even now to find speakers, women in particular, equipped to talk about actually reversing global warming. To help raise the alarm requires a good, basic knowledge of the science of global warming. To contend with obscure and tricky questions from vested interests, deniers, sceptics and just genuinely confused people, or to publish on this topic, one must be sure of their facts and have confidence to speak up with reliable science; even more so if hoping to plausibly present an optimistic and hopeful way forward.

Contributing important perspectives to this discourse have been forums and conferences including the Victorian Convergence on the Global Sustainability Emergency reported in the AGE (McGrail, 2007), the international climate conference Four Degrees or more, Australia in a hot world run by Melbourne University in 2011 and the series of Breakthrough Forums since 2014 run by the National Centre for Climate Restoration during the ensuing years.

Access to trustworthy sources is crucial. In addition to the plethora of peer-reviewed scientific publications, there are the websites, books and essays of Climate Code Red, (Spratt & Sutton, 2008), Melbourne Sustainable Society Institute (MSSI) Four degrees of Global Warming–Australia in a hot world (Du Pont, 2014) and others.

## 2.5 The Precautionary Principle

---

Johan Rockström and 28 co-authors contributed to the scientific evidence by establishing the safe operating levels for humans on Earth, known as ‘planetary boundaries’.

Rockström explains,

*Our scientific understanding of Earth systems has advanced tremendously over the past 30 years, but we still don't know exactly where the critical boundaries are for these systems. So we apply a precautionary approach. We identify safe zones and high-risk zones. Between them, uncertainty ranges, within which we don't know what might happen. We place the planetary boundary at the lower levels of the uncertainty ranges. (Pearce, 2019, p. 40)*

The precautionary approach applied by Rockström and his colleagues aims to reduce risk. The Precautionary Principle goes further. It contends that those claiming ‘no risk’ cannot demand proof beyond the shadow of a doubt from those saying that there *is a risk*. It puts the responsibility and burden of proof on those deciding the action or inaction, the policy or program; they must show that the impact of their decision will not cause public or environmental harm. The *precautionary principle* should be a central plank in decision-making, putting the onus of proof on the person or institution claiming that there is *no risk*.

Yet, during the last few decades in the area of climate science the reverse has happened; conservatives in the UK see the Precautionary Principle as an unbalanced approach.

*Conservatives believe that their innate caution makes them more “reasonable” and less likely to interfere. “We do not want rule upon rule and ban upon ban on the basis of a newspaper article,” comments one centre-right MEP. Another CR MEP says “greens always go on about the precautionary principle. But this can sometimes be completely wrong. It needs to be set against the proportionate principle. The risk is then re-balanced.” (Marshall, 2015, p.16)*

The UK NGO, Climate Outreach, has been researching a new conversation with the centre-right about climate change from which it appears that Conservatives believe that their innate caution and approach to risk via the Proportionate Principle makes them more *reasonable* and less likely to interfere. The European Court of Justice provided some clarity on this stating “... *that a cost-benefit analysis should be seen as a particular expression of the principle of proportionality in cases involving risk management*” (Fisher, Jones & Von Schomberg, 2006, p. 27)

While the Proportionate Principle can be reasonably applied to the *implementation* of the Precautionary Principle, an existential crisis also calls for the most conscientious approach possible: “*An emergency response is not alarmism. It is a rational precautionary “due care and diligence” response to an existential risk crisis.*” (Dunlop & Spratt, 2017, p.21)

In 2008, the new understanding of climate sensitivity added further weight to this:

*The observed impacts of climate change suggest that the climate is more sensitive than thought. The higher the sensitivity is, the lower the targets we need to set to meet a particular temperature rise. This should suggest that we set lower targets as a very basic precautionary principle. If climate sensitivity is higher we may already be past the atmospheric concentration which will ultimately deliver 2°C of temperature rise. (Hawkins, Hunt, Holmes & Heweg-Larsen, 2008, p.2)*

In 1988, the British Prime Minister was keen to see her Conservative Party influence the course the world would take on climate change. In her speech to the Conservative Party conference, Margaret Thatcher (Thatcher, 1988, pps. 11, 12) spoke inspiringly of her party’s role in tackling climate change as a “*duty... The more we master our environment, the more we must learn to serve it. That is the Conservative approach*”.

*Madam President, there is nothing new or unusual about the Tory commitment to protect the environment. The last thing we want is to leave environmental debts for our children to clear up—slag, grime, acid rain and pollution. .... In the last century or so, we have seen an unprecedented increase in the pace of change. Quite unprecedented—the growth in population—the spread of industry—the dramatically increased use of oil, gas and coal—the cutting down of forests .... And these have created new and daunting problems. You know them:—acid rain—the greenhouse effect—a kind of global heat trap and its consequences for the world’s climate. In the past, science has solved many problems which at the time seemed quite insuperable. It can do so again .... Madam President, pride in these islands—our countryside, our seas and rivers—runs like a thread through our history and literature .... It’s we Conservatives who are not merely friends of the Earth—we are its guardians and trustees for*

*generations to come. The core of Tory philosophy and the case for protecting the environment are the same. (Thatcher, 1988, Oct. pps. 11, 12)*

History shows that she and many other ‘leaders’ dropped or modified this commitment and, 30 years later, we witness escalating warming and its terrible consequences and prospects.

When viewed in the context of the melting polar caps and retreating icebergs, the methane emitting clathrates in the Arctic Circle, the intensification of dangerous weather events and defrosting of the permafrost, these events all point to Earth’s planetary systems. According to the Gaia theory, these systems work with or without humans and often in big shifts to keep the planet’s cycles working together in the interests of maintaining the homeostasis of life on a healthy planet (Lovelock & Margulis, 1974).



Fig. 14 *Methane clathrate*. 7 x 7cm Photograph. [www.zo.utexas.edu/courses/THOC/methane.html](http://www.zo.utexas.edu/courses/THOC/methane.html)



---

When the ancient forests of western Tasmania, precious, irreplaceable vestiges of long-ago Gondwanaland, ignited unexpectedly in February 2016, it sent shock waves of recognition through the movement realising the significance of what was happening. These are exactly the events predicted to occur on a rapidly heating planet on which lands and forests become increasingly desiccated, the atmosphere increasingly carbon-saturated and thus highly energised and the oceans continuing to warm. Making the news in the Guardian, May 2017, the Global Seed Vault, buried in a mountain in Norway and designed to be impregnable against any global disaster, was breached. Astoundingly, it was caused by melt water brought about by climate change. This assumed fortress, barely a few years old, had been specifically built to protect food seeds and ensure humanity's food supply forever. (Carrington, 2017)

If only the Precautionary Principle had been applied. Even now however, no matter what is being achieved anywhere, the response to the shared existential threat to our civilisation is *still* so inadequate that Earth's temperature continues to rise and greenhouse gas (GHG) emissions soar alarmingly. Knowing this and seeing these events and many other telling indications in the same frame, it is not hard to understand why many feel overwhelmed and fear efforts to reverse global warming have been left too late (Dodgen, 2016; Van Susteren, 2018; Hansen, 2013; Hayes, 2018).



## 2.6 Address the Mess

---

The Whitlam government (1972 to 1975) established many new departments including Australia's first Federal Environment Department with Moss Cass as its Minister in 1972 (Museum of Australian Democracy, 2018). 1972 was also the year in which the '*Limits to Growth*' report by Donella Meadows and her co-authors was written for the Club of Rome. (Meadows, 1972) The Club of Rome, founded 1972, was the "think-tank of scientists, economists, businesspeople, international civil servants, and politicians from five continents" that commissioned *Limits to Growth*. (<http://www.abc.net.au/science/slab/rome/default.htm>) Then, in 1983, Gro Harlem Brundtland, at the time Prime Minister of Norway, was commissioned by the UN to reflect and report on her understanding of what came to be defined as sustainable development. "*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*" (Brundtland, 1987, para 2)

With 'The Natural Step,' Swedish scientist Karl-Henrik Robert ([https://en.wikipedia.org/wiki/karl-henrik\\_robert](https://en.wikipedia.org/wiki/karl-henrik_robert)) commenced laying a framework for this understanding in 1989 (Robèrt, 1997) and in 1992, the *Rio Declaration*, made at the World Summit on Sustainable Development, Rio de Janeiro, Brazil, applied the *Precautionary Principle* to protect the global life support system in an economic context. At that conference, one of the most powerful speeches ever made to the United Nations was made by a 12-year old girl, the daughter of well-known environmentalist David Suzuki. Severn Suzuki was one of three 12 and 13 year olds who self-funded to attend and speak to the United Nations, Rio 1992. She spoke passionately pleading for the grown-ups to take action, "*I am fighting for my future.*" "*If you don't know how to fix it please stop breaking it*". "*You grown-ups say you love us. But I challenge you. Please make your actions reflect your words.*" (Suzuki, 1992)

In 1999 Keith Suter, interviewed for The ABC's *The Slab*, produced *Fair Warning, the Club of Rome Revisited* looking at whether the 1972 *Limits to Growth* was fair or false warning and whether or not the lack of confidence that "the market or technology could function as a way of solving environmental problems" had been borne out. (<http://www.abc.net.au/science/slab/rome/default.htm>)

Severn spoke powerfully again at the Rio+20 Earth Summit in 2012 and since then the world has seen a significant growth in awareness represented by such things as the CoP21 Paris Agreement (2015), the citizen uprisings of Climate Emergency Declarations (2017), Greta Thunberg, the School Strikers and Extinction Rebellion (2018) and the American proposal for a New Green Deal (2019).

Throughout this whole period since 1992 science has continued to investigate the boundaries of ecological survival, the consequences of ignoring them, what they specifically are and how they operate; as previously mentioned, in 2009, Johan Rockström, Will Steffen and a host of colleagues published *A Safe Operating Space for Humanity*, identifying and quantifying planetary boundaries

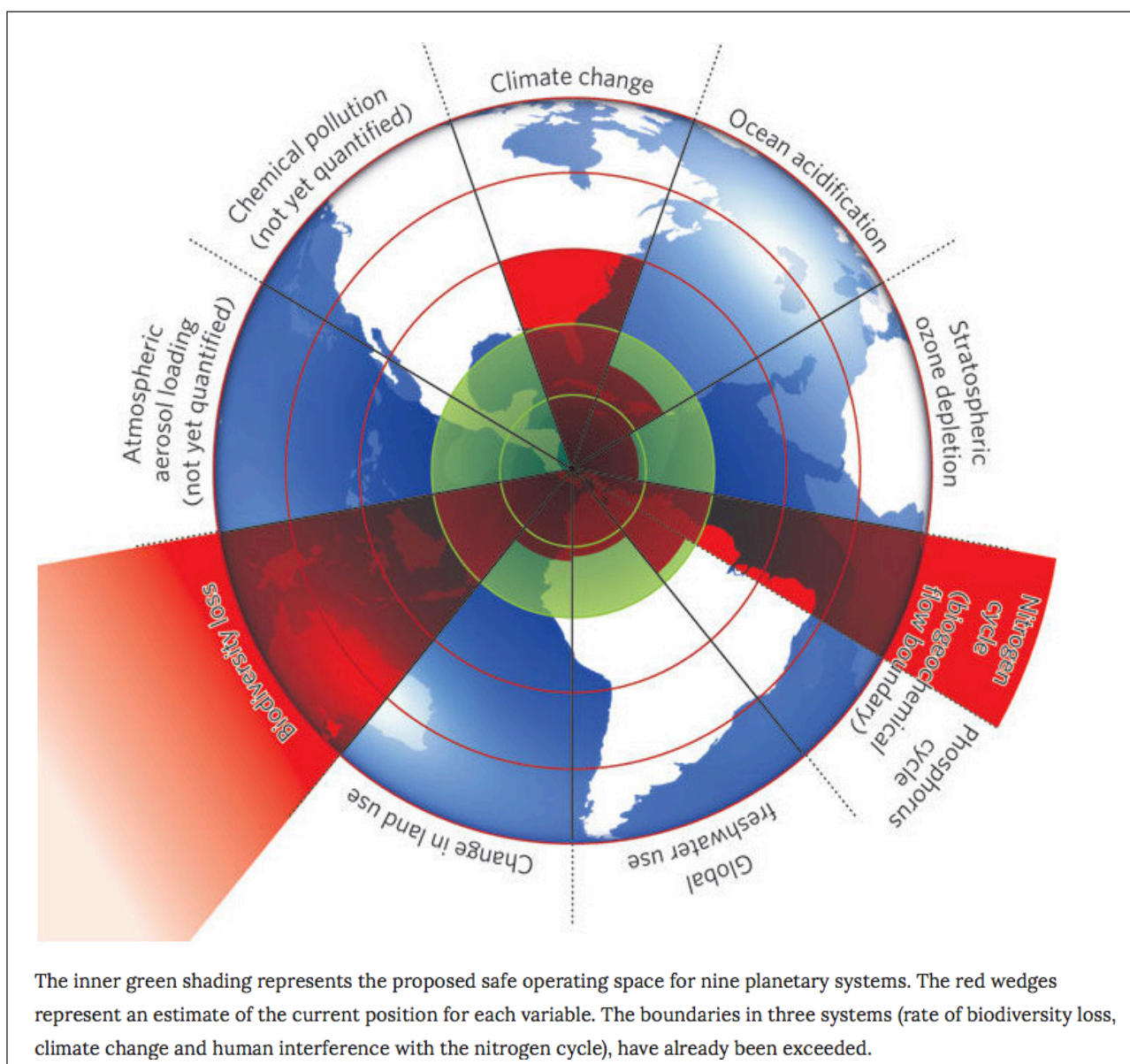


Fig. 15 *A safe operating space for humanity*. Diagram. Rockström et al. 2009, p.472 – 476.

not to be crossed and developing Fig. 15 (previous page) to illustrate their concerns (Rockström, Steffan, et al., 2009).

The work is under constant review. Fig. 16 indicates adjustments made since 2009. (Steffen et al, 2015 cited by Pearce, 2019, p. 40) Rockström points out (2019), “When we talk about keeping within a safe operating space. We mean safe for the planet as a whole, not for every human or every ecosystem. Even so apparently local problems can go global, especially if they occur widely.” (Pearce, 2019, p. 40)

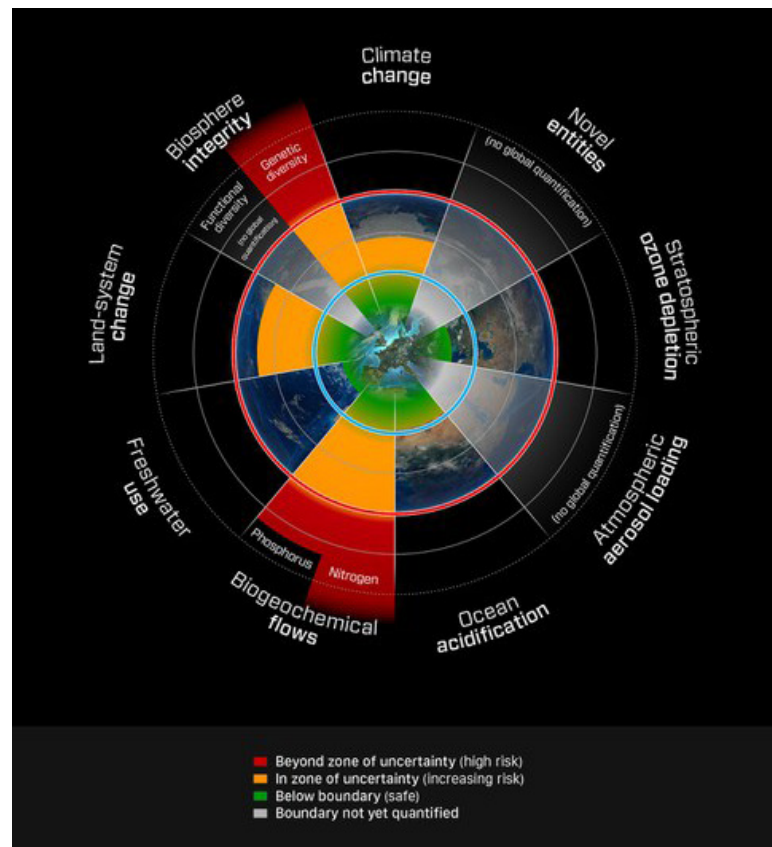


Fig. 16 Planetary boundaries guiding human development on a changing planet. Diagram. Steffen et al, 2015

This Science update, ‘Planetary Boundaries Guiding human development on a changing planet’, locates more precisely where we are. (Steffen et al, 2015). I.e.

Still within the outer boundary of the safe zone

1. *Freshwater use*
2. *Stratospheric ozone* and
3. *Ocean acidification* is heading towards the uncertain zone

Classified in the uncertainty / increasing risk range

4. *Climate change* and
5. *Land system change* (previously *Change in land use*)

Beyond the start of the high risk zone or with boundaries to be determined

6. *Biochemical flows* links ‘*phosphorus and nitrogen cycles*’ showing nitrogen now joins phosphorus in high risk zone.

7. *Biosphere integrity* (previously *Biodiversity loss*) comprising *genetic diversity* (high risk) and *functional diversity* (\*not yet quantified)
8. *Atmosphere aerosol loading* is still \*not yet quantified
9. *Novel entities* (previously called *chemical pollution*) These are alien things that don't naturally exist including nuclear waste, gender-bending chemicals, pesticides or even artificial intelligence and is looking to include micro-plastics and is also \*not yet quantified

Sarah Cornell, of the Stockholm Resilience Centre, explains the social foundations for Planetary Boundaries in a short video (2019) used in her open online course on Planetary Boundaries and Human Opportunities (<https://www.stockholmresilience.org/research/research-news/2019-11-06-a-scientific-story-that-matters.html>). At the Rio+20 conference in 2012 Oxfam, a campaigning group for relieving the problems of poverty, proposed the Oxfam 'Doughnut' recognising the importance of the planetary boundaries as setting out the environmental ceiling for the safe operating space for humanity and that for a fair and just world the social foundations also have to be recognised. (Cornell, 2019)

Kate Raworth crafted the Oxfam Doughnut below into a highly relevant representation linking the understanding of that ecological ceiling with an acute awareness of the need for humanity to live and sustain viable, healthy and just lives. '*Exploring Doughnut Economics*', overlaid with the current economic practices and their consequences, shows where the change must occur to the social foundation if we are to avoid disaster. (Raworth, 2017)

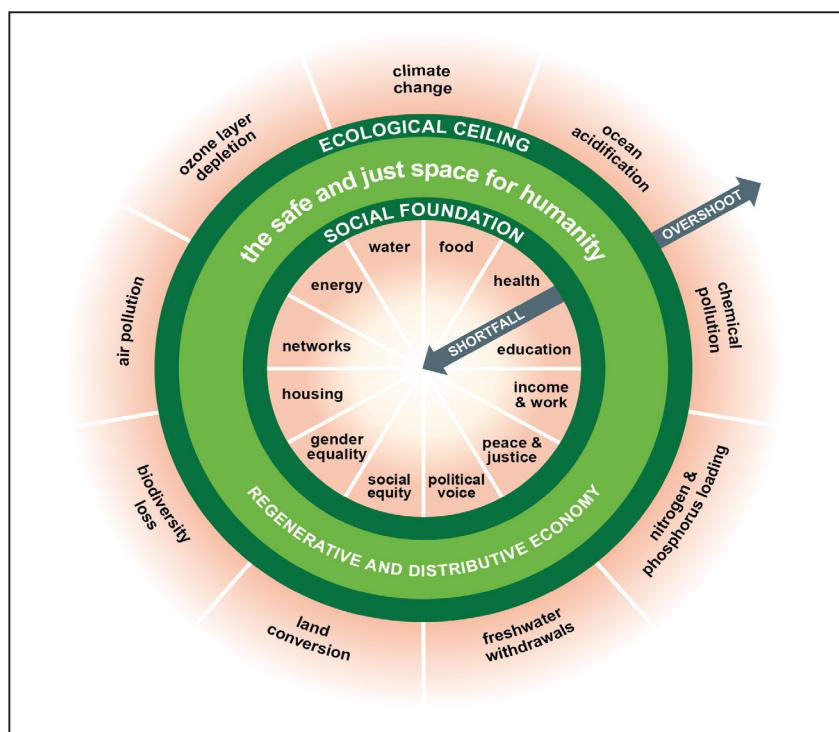


Fig. 17  
The Oxfam Doughnut. Economic model. Diagram. Raworth, 2017



Yet, in spite of all the knowledge, insights and warnings, the rate of emissions is still rising and we are leaving it very late to transform this calamity; mechanisms for reversing climate change need to be rapidly scaled up and widely implemented. The authors of a safe operating space for humanity have declared that as-yet unpredicted feedback processes mean that even the restoration of the Holocene's stable climate conditions may not guarantee the prevention of destructive climate change that is still potentially exponential (Steffen et al, 2018). To make matters even more challenging, our collective confusion and failure to agree and co-operate, due in part to our cognitive dissonance (Festinger, 1962) our misperceptions and, no doubt, our *shadow side*, is losing precious time. This is happening even as species extinction blows out and the precious biosphere takes imminent mortal blows.

This thesis locates climate change action in a landscape comprising an existential paradigm, a physical and social phenomenon. It explicates and interrogates how systems thinking, sentient connections and the fractals of transformative change can build a bridge to a timely sustainability renaissance. I have started to describe the complexity of the '*mess*' and will link this with the complexity of active '*bridge building*' work as part of the broader climate change movement.

The '*phenomenon*' – climate change associated global warming – is complex, messy and destructive; I believe it is connected with the '*paradigm*' underlying rampant consumerism and the pursuit of infinite economic growth on a planet with finite resources whilst simultaneously its devastating consequences are only now being better understood. Meanwhile the constructive responses towards *transformative change* heralding a *sustainability renaissance* are picking up pace but, as yet, are not changing the trajectory of greenhouse gas emissions. It is in this landscape that this thesis dwells: teasing apart the problems contributing to the mess and looking for breakthrough solutions to '*fix it.*'

While the realisation gains traction that the situation is indeed already extremely grave and will impact on all, it is not yet perceived at the same level of threat as 'war' and the idea that we need a response akin to a 'war-footing' is still a 'fringe' idea. Indeed, there exists a range of responses. For instance, the Munich *Re Group*, observed the insurance ramifications of climate change as a great business opportunity, rather than a 'war' we need to fight. Torsten Jeworrek, Chairman of the Reinsurance Committee of the Munich Re insurance group, in a March 2018 article titled *A Stormy Year – Natural catastrophes 2017 Analyses, assessments, positions* – speaks of the facts and figures highlighting "*the business opportunities available to insurers*". (Jeworrek, 2018) Whilst there is no clear 'external enemy' in the fight for ecological and civilisation's survival, the crisis we face is nevertheless truly existential.

This brings us to the kind of social and environment movement and leadership the world and Australia need at this time and where to find it. Prevalent behaviour indicates that those whose job it is to be our leaders and representatives, simply don't seem to be able to act effectively. Examining the Australian governments' responses to the emergency offers only stultifying inaction and rather ridiculous political posturing. Indeed, it has been private households, the various non-government organisations and movements, and the few far-sighted businesses that have carried the largest burden in holding in check the factors that lead to increases in global warming.

The wider climate movement in Melbourne, Sydney and elsewhere is increasingly using terms such a '*climate emergency*' and '*safe climate*' and there is now more general support for the call for '*zero emissions*' as more people recognise that there is no carbon '*budget*' left to burn. The meaning of '*drawdown*' is beginning to be better understood; from many submissions received, Paul Hawken and a large team of scientists and other experts selected 100 best examples of drawing excess carbon dioxide out of the carbon-saturated atmosphere. (Hawken, 2017, p. 222) The most effective solutions include Refrigeration Management (ps. 164, 165), Wind Turbines – onshore (ps. 2, 3), Reduced Food Waste (ps. 42, 43), Plant Rich Diet (ps. 38, 39), Tropical Forests (ps. 114, 115), Educating Girls (ps. 80, 81), Family Planning (ps. 78, 79), Solar Farms (ps. 8, 9), Silvopasture (ps. 50, 51), Rooftop Solar (ps. 10, 11), and Regenerative Agriculture (ps. 54, 55).

Even so, the shortness of the timeframe to avoid catastrophic climate change appears to be not well-understood. Too often proposed goals and targets are inconsistent with the science and indications of urgency, instead stubbornly clinging to incremental change and pragmatic politics, suggesting either a lack of awareness or a deliberate 'scepticism' about the scientific explanations and resultant predictions and suggestions. Terms such as emergency, urgency, existential, rapid, safe climate are themselves in danger of being diluted and support for complex ideas is still lacking. Meanwhile some scientists and activists believe that the window for action may already have closed.

## 2.7 Common responses and some underlying assumptions

---

The landscape of responses to global warming and the need for action is very broad. My experience is that, when asked, most people have one or two clear ideas of what inaction can be attributed to. Some people hold failure-based apocalyptic or dystopian predictions and assumptions, some see political totalitarian scenarios and some look to human evolution and the beliefs and practices of transcendence. Leaving these aside the rest of the most common responses fall into categories which Philip Sutton described in his interview as coming from four overarching assumptions:

- ***Adaptation***. This approach when considered as our only option, has, in fact, fuelled the *normalising of overshoot* that has seen the goal posts continuously move as adequate action on climate change has failed to occur.
- ***Ecological collapse***. This belief is that a certain *moderate* level is needed to propel crucial action, that might include breaking the political business-as-usual paradigm, fostering the emergence of a perhaps still complex sustainable society, including green technology solutions or, for some, justifying the *voluntary simplicity, back to the Earth, self-supporting communities* approach. Whether ecological collapse can be ‘managed’ or limited to ‘moderate’ is doubtful and, either way, high levels of damage are implied for many, perhaps most, people and most species.
- ***Major political change driven by revolt*** is the only thing that can deliver the physical change in scale and speed. Some believe this simply can’t happen in time so a revolt isn’t warranted, others believe a degree of revolt is needed to make this happen in the timeframe available.
- ***Major economic/political paradigm shift*** driven by the high level existential threat of ecological breakdown will catalyse the *significant majority* mobilisation needed to bring about the bipartisan majority support for the national, whole system changes needed.



Beyond the movement(s) and considering climate science-related work, in the commercial sphere, industry, institutions (including governments) and the wider world there is not yet much work being done in terms of solutions that satisfy the speed and scale of the transformation necessary nor the need to protect species from the deadly temperature spikes likely to occur as atmospheric particulates and aerosols are removed as emissions decline and carbon drawdown occurs.

## 2.8 The Climate Emergency Approach

---

There are a number of elements that combine to make *The Climate Emergency* approach unique. Its starting point is looking at the *values* underpinning what we care for and about. Aiming at *maximum protection* of human and other-than-human life as the movement's goal, the scale and implications of the problem are *honestly* evaluated as an *existential threat to civilisation* and the risks being faced are not ignored. (Cardilini and Sutton, 2020) The most rational risk-management approach in this context is reversing global warming to restore safe climate conditions, the solutions lying in a *rapid response* towards transforming society starting with a full economic transition within a decade, requiring a bipartisan, national mobilisation that has the capability to *make the seemingly impossible possible*. In a nutshell, the Climate Emergency approach is a package containing the threat, the solutions and a plan.

The safe climate restoration work focussed on reversing global warming is being undertaken by a few. This research identified *Beyond Zero Emissions* ([bze.org.au](https://bze.org.au)), the *Breakthrough National Centre of Climate Restoration*, (<https://www.breakthroughonline.org.au>) Mark Jacobson's *Solutions Project* (<https://thesolutionproject.org>) and other pockets of research. Research on drawdown methods occurs at *Australian National University* (<https://www.anu.edu.au>) and some fragments of solar reflection methods research, called there *Solar Radiation Management*, can be found in the US as can *The Climate Mobilisation* calling for an emergency response. These will be expanded upon further in this chapter and chapter 4. It appears beyond that, few initiatives exist, most remaining isolated and small.

Over the years, this obvious lack of enthusiasm to work on actual solutions has had a bad effect on morale, making the work of those doing it even harder. The hardest thing is getting the information and the urgency for action and rapid transformative change out into the world. Of those who do understand many don't know what is being done about it or what is and is not happening. Most governments have not been prepared to talk about the climate emergency much less about reversing global warming and neither have most of the media.

The climate restoration movement has held the role of shining a spotlight on the work underway, the breakthroughs as they occur and the most promising developments as they emerge – socially, behaviourally and technologically. It actively works on multi-organisational collaboration to encourage all to work from their strengths by sharing communication knowledge, memes and research. The movement espousing the ‘*emergency mode*’ paradigm thus continues to help build the intensity, pace and magnetism of a groundswell in organisations and institutions into a shared plan that can cover a wide action-base and has the potential to swing governments into high level emergency mode action.

The climate emergency movement works relentlessly to raise awareness and encourage formal acknowledgement of the emergency and the adoption of an appropriate mode of transformation. Local governments and other institutions have begun to make climate emergency declarations and a way forward at the local level is emerging and going global, as I will discuss in chapters 4 and 7.

## 2.9 Groups, in Melbourne and beyond, have worked tirelessly for years

---

Initially, the ground for the local Melbourne-based eco-system of groups was laid with some key climate science reports, organisations and initiatives providing some sense of how fast everything had to move. The emergence of the civil society response can be seen in the list below. The focus here is primarily on the nucleus that formed concentrating very specifically on how to avoid catastrophic climate disruption and, indeed, to reverse global warming. It has also included some other groups from the wider Climate Emergency Movement as well but does not claim to be exhaustive.

The work of Green Innovations founded by Philip Sutton in 1991 played an important role in circulating information on some of these key topics. In 2005 Sutton founded the Greenleap Strategic Institute (GSI) (<http://www.green-innovations.asn.au/#intro>) in response to the rapidly growing awareness of the seriousness of the climate change issue. Then president of the Sustainable Living Foundation (SLF) ([www.slf.org.au](http://www.slf.org.au)) (founded in 1999), Sutton had successfully launched the *Race to Sustainability* at the February SLF Festival 2004.

Around that time Sutton connected with other early climate emergency activists Adrian Whitehead and Matthew Wright who together were setting up the *Zero Emission Network* (ZEN) located with a hot-desk in the SLF offices.

ZEN quickly evolved to become Beyond Zero Emissions in 2006 (BZE) (<https://bze.org.au>) which went on to develop a series of world-class reports effectively heralding Australia's version of a *Green New Deal*. BZE developed volunteer engagement techniques that work astoundingly well. As well as teaching public speaking skills they trained volunteers in the delivery of the key information they wish to disseminate (See Appendix Seven).

Lighter Footprints <https://lighterfootprints.org/> established in 2006 to influence decision makers and community in getting the climate urgency message across from their local

Booroondara Melbourne Eastern Suburbs base. They work on reaching the higher echelons of the political sphere by visiting, targeting and seeking to educate their local Federal member, currently Liberal M.P. Treasurer Josh Frydenburg, on the urgency for action.

The Victorian Emergency Convergence Feb 2007 was run by SLF and FOE as part of the Sustainable Living Festival. McGrail's article (2007) "Urgency turns into emergency" article (<https://www.theage.com.au/business/urgency-turns-into-emergency-20070219-ge496f.html>); (para 1) says, "*Now, you may dismiss these advocates as loonies, but the Victorian Convergence on the Global Sustainability Emergency provides insight into what the future might hold — to those willing to pay close attention.*" He later (2007, para 6) goes on to say, "*as ... Joseph Voros said, if you want to view the future outside 'business as usual' you need to pay attention to dissenters. Voros encourages people to ask 'who are the Bedouins at the gate?' and rather than suggest they're out of their minds, explore what it is they want and why.*"

David Spratt and Philip Sutton both work as climate change researchers, science writers and journalists sometimes co-authoring. The Big Melt - Lessons for the Arctic summer of 2007 was written by David Spratt (2007) with Philip Sutton's input. They co-authored the seminal book Climate Code Red published in 2008 (<http://www.green-innovations.asn.au/CCR.html>) generating a strong response and a flurry of new activity.

A cluster of organisations existed between 2008 and 2012 including The Climate Emergency Network CEN (2008), Safe Climate Australia SCA (De Blas, 2009) and The Transition Decade Alliance T10 (2010).

Research and Strategy for Transition Initiation Inc. RSTI (2011), was established by Sutton is a non-profit sustainability think-tank dedicated to driving urgent action to resolve the sustainability emergency. The Greenleap Strategic Institute is an operating arm of RSTI's engine room for research and strategy development for the implementation of the transition to a safe climate economy. The Manager of RSTI, Philip Sutton, guides the work and consults to local government and others interested in committing to a rapid transition to safe climate restoration. RSTI produces outstanding work, especially in the area of Climate Emergency Declarations and the local government sphere.

Also in 2011 was the international climate conference "Four Degrees or more? Australia in a hot world" (<https://blog.csiro.au/four-degrees-of-global-warming-australia-in-a-hot-world/>) run by Melbourne University's Melbourne Sustainable Society Institute (MSSI) and the subsequent publication of *Four Degrees of Global Warming: Australia in a hot world* (Christoff, 2014).

The Climate Guardians, (2014) the founding act of ClimActs (<https://climacts.org.au/home/>), devise carefully curated events with savvy, often humorous messages and awesome photo opportunities of angels to be reckoned with defending the Earth. Other performances include The Coal Diggers, the Flat Earth Institute, the Frackers Guild and the Hackers Guild—“a proud subsidiary of the Aussie based global Billionaires United Mining Services (BUMS) conglomerate”. These acts are cleverly satirical and humorous to such a degree that many politicians and other targets often simply cannot resist the laughter and the entertaining parody that they are central to. Creative Resistance (<http://creativeresistance.org/about/>) engages many artists in resistance art; including in Paris (<http://creativeresistance.org/painted-massive-sun-on-paris-streets-demands-renewable-energy-policy/>) CoP 21.

Also in 2014, the first Breakthrough forum was held leading to the establishment of the Breakthrough, National Centre for Climate Restoration and the publication of its Breakthrough online publications. (<https://www.breakthroughonline.org.au/about-1>) The Breakthrough forums and publications have become increasingly significant and galvanising.

Inspiration flows internationally from country to country now, as news travels and knowledge of the impacts of climate change increases and deepens. The kyactivists and bridge climbers of Portland, Oregon, ([https://booklyn.org/archive/index.php/Detail/Object/Show/object\\_id/1863](https://booklyn.org/archive/index.php/Detail/Object/Show/object_id/1863) US (2015)) were echoed in Newcastle NSW, with Australia’s kyactivists blocking the coalships in 2016. As of January 20th 2020 over 1,315 cities world-wide, with over eight hundred and ten and a half million



Fig. 18  
*Kyactivists block coal port in Newcastle, New South Wales.*  
 Four photographs.  
 Unknown, 2016



people, have declared a Climate Emergency, a steadily growing number; the first council to step up (2017) was Darebin in Melbourne.

In 2016 Groundswell of Sustainability in Banyule – Mapping the Groundswell of Sustainability Initiatives (<http://sustainabilityinbanyule.com/node/1551>) started attracting new attention at the local level and building momentum through connecting the many disparate people across the municipality of Banyule interested in workshopping ways and gathering to *deepen the practice* (<http://sustainabilityinbanyule.com/gallery>) of sustainability in a context of great urgency.

Breakthrough's launch (2016) of the movie – *Age of Consequences. Climate, Change, Conflict* (Scott, 2016) (<https://www.youtube.com/watch?v=Ltjua10RFy4>) – based on the *Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change* report (Campbell 2007 November 5th) along with the Sydney, Canberra, Melbourne tour with Sherri Goodman, former US Defence Secretary, was quickly followed by a Senate inquiry asking why Australia was not factoring climate change into its Defence planning.

*The Age of Consequences* has now been book-ended and made locally relevant by Luke Taylor's *Home Front Part One: Existential Gamble* (Taylor, 2019) a 16-minute preview of a soon-to-be-produced, full-length documentary outlining the national security implications of climate change to Australia. Homefront went on to win an Australian Academy of Cinema and Television Arts (AACTA) award for Best Short Documentary.

The Australian National University is also involved in key research on reversing global warming.

The *Save Our Planet* party is raising its profile and rattling the cages of other parties and organisations encouraging them to be less timid. (<https://www.voteplanet.net/>)

Community Action for the Climate Emergency (CACE) (<https://www.caceonline.org/>) is galvanising and strategising at the local level bringing change through Local Councils, as is Climate Emergency Declaration and Mobilisation (CEDAMIA) ([www.cedamia.org/](http://www.cedamia.org/)) Darebin CAN, "[www.darebincan.org.au](http://www.darebincan.org.au)" and others made good initial headway at the local level, supporting into council strong candidates understanding the timeframe. This work helped spearhead Australia's first Climate Emergency Declaration leading to further work to secure the ground gained and help council staff stand tall to progress the strong commitments.

Many other organisations (for these URLs go to Websites in Appendices) have been responding to the climate emergency over these years by demanding an end to mining, fracking, drilling,



transporting, processing, investing in, building infrastructure for and burning fossil fuels (especially coal and gas). This has generated a burgeoning groundswell of determined and defiant groups. These include – Quit Coal, the Climate Action Groups (CAGs), the Climate and Health Alliance (CAHA), Healthy Futures, Lock the Gate, Friends of the Earth (FOE), Climate Action Network Australia (CANA) and the members of other CAN groups including VCAN (Victoria), DCAN (Darebin), YCAN (Yarra), BCAN (Banyule), The Wilderness Society, Australian Youth Climate Coalition (AYCC), 350.org, Stop Adani and all the anti-Adani groups, Rising Tide and so many more.

Established organisations like Environment Victoria, Australian Marine Conservation Society (AMCS), The Australian Conservation Foundation (ACF) and Greenpeace add their weight to the collective and, as the need for multi-organisational collaboration becomes more evident, the prospect of a collaborative mega-strategy grows more tangible.

Two new global movements have gained traction here in recent years.

The marching School Strikers 4 Climate arrived in Australia (Aug 2018), originating from Sweden where teenager, Greta Thunberg, sparked the now global campaign helped by Mik Aidt’s enthusiastic August 2018 podcast on The Sustainable Hour (Aidt 2018) and ongoing publicity efforts. Greta’s inspiration led to an international day of strike action in March 2019. Network Ten’s report on ‘The Project’ (Friday 15th March 2019) stated there were 1.5 million strikers in 2000+ strikes in over 100 countries including 150,000 students across Australia. Greta continues to inspire growing support. (see glossary)

Another recent international movement emerging under the banner of Extinction Rebellion – non-violent direct action, has taken off from the UK and has arrived in Australia. A media report documented how Extinction rebellion protests block London bridges and 85 were arrested on Rebellion Day. (BBC, 2018, Nov 17) The Guardian reported, their “*tactics are working*” (Todd, 2019).

## 2.10 The climate mess, this thesis and some hurdles identified

---

As previously mentioned, I am engaged in this groundswell-building and at the same time I am curious how the movement can become more effective, more successful, how it can keep its people together and how it can deal with the traumatic set of circumstances we have to face. This thesis is an investigation reflecting deeply into what I and others do, what is being achieved and what more or else needs to be done. My own journey is predicated on a belief in the societal and individual benefits and empowerment engendered by life-long *experiential learning* (Kolb, 1984) and *the learning society* (Schön, 1983) and by trusting that these approaches can awaken enough people to step up to surmount the seemingly insurmountable.

What I'm really interested in is the *validation of the theory and practice of movements to change the world* as one who galvanises and supports, at times leading from behind and occasionally as a leader up-front, encouraging others to become active.

As a 'reflective practitioner', a persistent thread for me has been the importance of *experiential learning*. First as a student teacher learning about the work of Jean Piaget and others, and then in 1982 with the Queensland University's Centre for Applied Behavioural Science learning about change strategies and techniques (Dick, 1892) and Manager and Organisational Development and in 1998 studying Kolb's Learning Cycle for Post-Graduate studies in Leadership and Change. My life-time commitment is reflected in all of this and most recently (2013) as part of the participatory and deeply-reflective writing of this thesis. My lasting interest has been the quest to 'get people moving', to look back at what have we done, to consider what has worked but also what we have to do differently, to understand why some things went wrong or were not enough. This is what Schön (1983) describes as *theory-in-use* discussed in the next chapter.

It has become evident that everything we humans have at our disposal needs to be assembled now, so we can be as well-equipped as possible to deal with the many hurdles we face – many of which we put in our own way. Active discouragement of *climate emergency* conversations and even the use of terms such as climate change,

amounting to actual censorship in the US, is one example of a massive block still in the way of achieving the scale and pace needed to start tackling the problems we face. Sustained reflection on our experiences in this regard will increase our chances of success.

While efforts to clean up the ‘mess’ are growing apace, even the best-case scenario for climate change reversal is unlikely to avoid terrible trouble. Whatever happens, circumstances for millions of humans and countless species are set to get far worse even in the short term. The moral imperative remains how to *manage risk*?

It should not surprise if the response appears to be ‘*all over the place*.’ On the one hand, we need to be doing so many things at once prioritising becomes extremely difficult; and the scattergun, ‘*knee jerk*’ response is also consistent with the initial reaction to emergency. On the other hand the reactive stage must quickly give way to something more strategic where priorities can be set and met (Example: COVID 19).

There are many reasons elaborated on in this thesis that indicate that not enough is being done to address the dire threat that is playing out as greenhouse gas emissions and Earth’s temperature continue to climb. The effort to generate willingness and the demand to change track is daunting, yet movements are growing and while it’s true that not a lot is coming from the official side of things, a lot is happening and now noticeably picking up pace. One way to galvanise community action is via local, relevant groups; joining and supporting existing authentic ‘safe climate’ initiatives, creating the authentic and unequivocal voice conveying a distinctly electoral message politicians tend to heed. The actions at the local level are also effective in introducing sustainable change, connecting people and enabling the transfer of ideas and greater awareness and conveying a ‘can-do’ message with inspiration and ‘progress’ attached.

In her chairperson’s foreword to Our Common Future report, Gro Harlem Brundtland wrote, “*In the final analysis, this is what it amounts to: furthering the common understanding and common spirit of responsibility so clearly needed in a divided world.*” (Brundtland, 1987, p. 9)

*"To this end, we appeal to “citizens” groups, to nongovernmental organizations, to educational institutions, and to the scientific community. They have all played indispensable roles in the creation of public awareness and political change in the past. They will play a crucial part in putting the world onto sustainable development paths, in laying the groundwork for Our Common Future. (Brundtland, 1987, p. 9)*

The up side is that the movement, building on the work of previous generations, standing on the shoulders of history's advocates for justice and a safer and healthier world, is (re)awakening now to improve lives and the health of the biosphere globally. It may contain the potential to do just that.

*To manage change is to manage the future. To manage the future is to create a future that is different from what it would otherwise be. It is to do now those things that will bring about a better future. (Dick, 1982a, p. 2)*

*Controlling the future is not easy. It requires changing the behaviour of other people, in other places, at other times. To do so, we have to build links from here and now to those other people and places and times. (Dick, 1982a, p. 2)*

# SECTION 2

---

## CHAPTER 3

### RESEARCH PROCESS & METHODOLOGICAL REFLECTIONS

---

## 3.1 Introduction

---

In this chapter I explore the values and ethical motivation that inspired and guided this research; the parameters of the participatory paradigm within which it was pursued; a detailed and partly experiential account of the methodologies – the reasons for the choice of the investigative paths I took - and the methods I used to collect and generate the information and data. I let these speak into the overall argument of the thesis.

## 3.2 The normative-ethical foundations underlying the research and its approach

---

At its core, the values which have led to this enquiry and continue to sustain my work can be summarised as follows:

- As a species, humans are existentially and ontologically *relational* as well as *relationally connected* to the multi-species that together with us inhabit the material and non-material world; this relational reality needs to be thought of and lived reciprocally, aiming for mutual benefit and generativity;
- Therefore, humans must act against the thoughtless desecration and destruction of the planet, exhausting its capacities to sustain itself and us, and strive for the flourishing of the planet for its own sake;
- There are many ways of knowing, stretching from our cognitive to our sensory abilities and including those attributable to non-human persons and things. By engaging in and utilising multiple, dialogical and complementary ways of knowing, we can arrive at a more fulsome understanding of why, who/what, how and where we are – including our cosmological place in the multiverse;
- Our lived relational experience is the foundational basis for our different ways of knowing.

I carry a deep unrest about how we are damaging the very things that sustain us. I am alarmed and indignant that our beautiful, irreplaceable planet is being so abused. As I have been born in this place, into this life, at this time and under these circumstances, morally and ethically I also bear responsibility for nurturing the world in which I live. In this inquiry I identify the personal challenges I have experienced as a climate change and global heating activist, the threat overarching everyone and everything on this fragile planet. We are in the midst of an existential threat to the viability of planetary systems and civilisation's survival that feeds my desire to find solutions which, in turn, gives rise to a myriad of questions and a deep need to understand why action is so hesitantly and rarely taken. Everything, I believe, is to be scrutinised through the lens of transformative change and re-generative living to restore safe climate conditions.



Earlier, at the commencement of my candidature, I shared the axiological and ontological basis grounding this research:

*The global sustainability emergency requires a rapid transformation encompassing the whole of society if a safe climate future is to be restored. Everyone everywhere, future generations and a planet-full of species are involved. The opportunity to avert a worldwide climate disaster of epic proportions and to instead usher in a sustainability renaissance, exists and with it the moral imperative to give it our best shot. This entails mobilising whole communities to change from a 'business-as-usual' to a 'safe-climate' economy, a sustainable way of living and to undertake now to change the economy from carbon-dependent to 100% renewable energy.*

(Wilkinson, 2011)

This remains the axiological impetus throughout, with all the implications it brings with it. The moral impetus as summarised before often jars with the need for acceptance, especially acceptance of thoughts and behaviours that we know are damaging for people and for the multispecies that co-inhabit Earth and for Earth herself. On the other hand, as Marcuse and others already argued in the mid-1960s (Marcuse, 1965), 'total' tolerance or acceptance needs to be critically approached and that certainly applies to tolerance for the destructive ways in which we treat Earth. Lamia, in Algerian author Boualem Sansal's novel *Harraga* (Sansal, 2014), reacts strongly to those who think that '*we are not in a position to judge*'... when we see evil and injustice and exploitation right in front of our eyes. She declares:

*... it's precisely because we refused to judge that we are in the mess we are in today... we judge not like judges or policemen, but like human beings who do not understand yet recognise those things that hurt, that kill, that demean. Judging is like breathing... that we must not give up, it is the very essence of our humanity, it must not be sub-contracted or scattered ... To hell with tolerance when it goes hand in hand with cowardice!*

(Sansal, 2014, p. 265-266)

Such relational commitment includes what Kenneth Gergen calls *relational responsibility in action*...

*To be responsible to relationships is, above all, to sustain the process of co-creating meaning. In relational responsibility we avoid the narcissism implicit in ethical calls for 'care of the self'. We avoid the self/other split resulting from the imperative to 'care for the other'. In being responsible for relationships we step outside the individualist tradition; care for the relationship becomes primary.*

(Gergen, 2009, p. 364)

Hence, acceptance should be matched with mutual expectations linked to survival, transformative action addressing the climate crisis and other audacious, more ambitious goals. So the expectations one harbours in relation to needed and hoped-for action and understanding are an important part of the mobilisation work this thesis is about.

At the same time, a “*deep exploration of relationship*” and exploring the theory (or epistemology) of *presence* can lead to ‘love’ as is borne out by De Quincey: “*the ultimate ideal of intersubjective knowledge is relationship – and dare I say it, love.*” (De Quincey, 2000, p. 153; cited in Allen & Rumbold, Figure 12, 2004) This links the work intrinsically to a *participatory action research* epistemology, a paradigm which infuses the research approach in this thesis significantly.

Informing epistemology, methodology and method, therefore, includes the axiological and ontologically grounded expectations to be able to restore safe climate conditions for human survival to be possible; to encounter obstacles and to find ways to overcome them; to endure amounts of now unavoidable and terrible disruptions along the way; to play a bigger part in co-creating the future we want; to join in and cooperate.... Most importantly, to expect and experience all these things while traveling as fast as we can and still keeping time-lines loose... and to not be surprised if we experience something altogether different and survive when not achieving the set aims and expectations....

## 3.3 From Axiology to Ontology/Epistemology

---

It is not easy to accept the uncertainty of our times, to be fully aware of the pain underway, the tragedies on the near horizon, the catastrophe not much further on if we stay on our self-destructive path and to simultaneously recognise the speed at which we have to act to avert disaster. With increasing alarm over the years involved in this research, I have realised that many of our traditional ways of thinking, acting, relating and philosophising are not adequate to the task. Holding together the problematic relationship between what we are seeing, feeling and knowing (however uncertainly) is made even more challenging when having to deal – and often live - with people unwilling to consider different scenarios.

Even though science has more recently widened its focus to include the holistic and the relational – ‘the spaces in-between’ – it has historically contributed to the fragmentation and divisions in which our society is so inculcated, isolating the parts from each other, increasingly unable to see the wood for the trees. Science’s traditional predilection for binary thinking joins our aversion to complexity, our desire (and sometimes need) to oversimplify and we can perceive how this adds to an inability to address the conundrum we are facing, especially having left it so late to deal with the climate change phenomena both theoretically and practically.

As mentioned before, it is how we *relate* to others, to each other, to the wider world and the sentient beings and other life forms we share it with that appears to throw up one of the biggest challenges of them all. Atmospheric scientist Graeme Pearman realised this:

*“For almost 40 years, I had the naive view that if we simply obtain more physical understanding of the issue, we could provide ‘the’ answers and responses would be rational. I now see that there is absolutely no guarantee of this. It is ourselves we do not understand.”*

(Pearman, 2009 cited by Taylor, 2014, p. 15)

Having decided to engage in doctoral studies and aware of the impact I could make given the body of facts and information I had already collected, I had been warned of the hard work and the need for great discipline, care and responsibility as I uncovered, collected and analysed the evidence. (Frick, 1990; cited by Moustakas, 1990, p. 14) Apprehensive and not sure if I had it in me, I had also wondered about the effect my convictions and my own participation were having on the information I had gathered and wanted to use in this work:

*“if we really gather data, do we collect it, catch it like fish, or is it constructed, at least in part by us, and each time we touch these ‘things’ we call data, they change, maybe even die if we take them out of context? So perhaps data cannot be captured, at least within a constructivist/ionist and participatory paradigm (Lincoln & Guba, 2000) but can only be partially described through its ongoing transformations.”*

(Allen & Rumbold, Figure 6, 2004)

Being drawn to 'facts and data' for their relevance in transformative change-making and as elements in the co-creation, the alchemy, of a preferred future, it seemed highly likely that many 'facts' or 'data' would be wrapped in their own transformative process and that I was part of their process as much as they were part of mine.... That realisation means that in showing to others what I've found, it matters a great deal to include myself in the picture by communicating my own experience and reflecting my own worldview. I realised with Willis that *“the life world is what is there all the time,”* so that however I experienced it, it was still only the part of the world that I knew and that my imagination could stretch to. (Willis, 2001, p. 7)

As science explores fields of possibility, of consciousness, of the multiverse, the interrelatedness of all things and beings with the physics, the quantum field and the dynamics of whole systems; and as social science – including psychology – explores the core attributes of human eco-systems, community and the dynamics of change in human populations, I wonder what might be about to emerge. If the multiverse exists, it has been there all the time too. Humans certainly haven't 'created' it (even if since their emergence they have contributed to its ongoing co-creation) nor do they generally have innate knowing of it. Some do have the capacity to follow their imagination, propose a theory and then risk its exposure for it to be validated and even extended.

Placing myself in this wider context relieved some of the anxiety I experienced as a change agent facing an emergency, a relief that merged with the succour experienced when being introduced to one of the increasingly re-appreciated 'Indigenous' understandings of life and the world. The Kanyini philosophy, (described in chapter 1), having evolved from tens of thousands of years of

living in a not-always-generous central Australian environment, illuminated the connection to each other, to the sentient world, to the many-faceted self within, to the natural world and the cosmos. In traditional Pitjantjatjara land in Australia's centre and in rivers and forests and mountains on the coastal fringes, east coast, west coast, north and south, I immersed myself experiencing stillness and a deeper sense of connection, encountering numerous sentient beings, following leads of enquiry seeking specific conversations with wise elders, reading, reflecting, writing poetry and recording observations and insights.

*Kanyini – the principle of being*

*Kanyini – every living thing is family*

*Kanyini – we're all responsible for each other*

*The teaching is passed on through story, song, dance and art*

*Kanyini – unconditional love with responsibility*

*"It's so easy," Uncle Bob laughs*

(Wilkinson, 2009)

Emerging understandings in post-modern science start to overlap with this philosophy; Daniel Goleman's *Social Intelligence* (2006) examines the blurred boundaries where I end and you begin, as revealed through neuro-science and experiments using MRI machines. The brains of two people engaged in deep conversation will be firing up in the same areas, connecting and looping, forming a functional link, "*a feedback loop that crosses the skin-and-skull barriers between bodies.*" In systems terms, during this linkup, brains "*couple ... forming what amounts to an interbrain circuit,*" (Goleman, p. 39) in effect, appearing to establish a third entity, 'us', reinforcing the sense that the 'we' is primary and 'me' an exaggerated idea of separation, or, as Thomas Metzinger (2009) calls it, an *Ego Tunnel*.

*“A scientific lens can reveal what the naked eye can’t detect: the way that, as each friend speaks, the other’s breath subtly falls into a complementary rhythm. ... the listener’s breathing roughly mirroring that of the speaker by inhaling as the partner exhaled, or matching by breathing together. This respiratory synchrony heightens as the moment to switch speakers approaches. And during those frequent moments of levity when close friends talk, the matchup strengthens further: both begin laughing at virtually the same moment, and during laughter the rhythm of their breathing aligns remarkably.”*

(Goleman, 2006, p.31)

In *The Spell of the Sensuous* (2012), David Abram goes further into the understanding of sentience, extending the understanding of the interpenetration of the ‘I’ and the ‘we’ to include the non-human, a realisation meanwhile confirmed by much research. (For an overview, see Boulet (2018), *The ‘new naturalists’: what humans (and humanists) can learn from them*). This greater awareness changed the way I saw things, beginning to see that whilst narcissism and perceptions of individualistic entitlement are on the rise, so too is that the ‘we’ is inclusive of the ‘I’. It is the ‘we’ – human solidarity – that has enabled humans to survive and the regeneration of ‘we’ consciousness – a moral sense of responsibility rather than ‘enlightened self-interest’ – will probably help us through the current predicament rather more so than any technological cure.

I also found philosophical support for the need to link my and others’ lived experiences and my making sense of them in Skolimovski (1994, p.75):

*“Although science and the scientific world-view seem to consider ontology (the structure of the real world) and epistemology (the right ways of exploring it) as independent of each other, the two are dexterously tied together, feed on each other, and elicit from each other what they assume in each other. They are mirror images of each other. Epistemology brings about and illumines what ontology assumes. On the other hand, ontology contains exactly as much as can be ascertained through our scientific epistemologies.”*

In his *Hymn To Participation*, Skolimovski (1994, pps.158-161) describes my experiences as an authentic participant, at times observer, researcher, recorder and analyst, a change agent inside a change experiment, interrogating myself – actions, motives, tactics and perceptions – without mercy, observing and recording the effect this community-creating example as well as my relentless campaigning had on me and on others.



Within this participatory context, the hope that we can at some stage be free of conflict, ambiguity and unfinished business requires the qualities and meaning Sufis aspire to as '*boundless heart space*.' (Allen & Rumbold, Figure 13, 2004) Allen and Rumbold talk about the *challenge to be coherent, the 'substantial effort'* involved in trying to impose a new sense of order in the prevailing insanity of the world and how '*Reality is 'not' an all but a set of eaches*' (Allen & Rumbold, Figure 14, 2004).

The urgency to find something 'coherent' is a catalysing drive that can help to hold back the '*gradual decline into disorder*'. As already discussed, ontologically/ epistemologically we can only know so much and there are many ways of knowing; there is a way to "*connect us through a felt sense in the body to what is not yet known intellectually.*" (Allen & Rumbold, Figure 14, 2004) Ancient knowledge remains a repository to embrace and investigate; questions begging for answers and as yet unformed questions leave openings for things to be possible, things that warrant hope, a stubborn trust that the in-between spaces in reality's '*set of eaches*' are not all empty, that gaps will be filled and the necessary '*bridges built*' in time to avoid disaster.

Allen writes about '*not knowing*' being generally unacceptable and therefore '*left out*' and about false starts, confusion, chaos and disconnected findings, of stumbling and being overwhelmed. (Allen & Rumbold, Figure 14, 2004) Art, however, has the ability to create the conditions for interpretation – another ingredient altogether and a version of the truth for the interpreter, almost certainly different from that of the artist. It is helpful to let go of the responsibility for the interpretation whilst remaining with the responsibility to provide as much evidence and be as transparent and diligent as possible in getting our points communicated, our questions raised and our insights – such as they are – clearly conveyed. It is reassuring that "*knowing*" rather than "*knowledge*" is validated (Willis, 2001, p. 10) and that life experience can be valued; as Abraham Maslow said: "*There is no substitute for experience, none at all.*" (Moustakas, 1990, p. 17, cited Maslow, 1966, pp. 45-46)

## 3.4 Paradigmatic orientation: participation-writ-large

---

The above expressed value base from which this work springs and the dexterous and productive ‘conflation’ of ontology and epistemology resonate clearly with the underlying epistemology and associated methodologies described by Heron and Reason (1997) as the *participatory paradigm*. The interconnectedness and relationality of all beings and things lie at the heart (and mind) of this inquiry and underpin the methodological approaches which evolved as I lived and breathed this research. Indeed, methodologies seemed to grow out of my lived experience and made sense as I was immersed in being a reflective activist, usually in the company of others engaged alongside me.

As mentioned, helping create and live in an intentional community became a living part of my researching. After the years of preparation, building and the search for members, the arrival of the 20 new households who established the community coincided with the start of this research. Contributing to a social innovation, merging the cooperative housing model with that of co-housing, promoting the sustainability renaissance and taking some serious strides in behaviour change enabled the demonstration of something important about rapid transformational change in our personal and private lives that could help fix the ‘mess’ and restore safe climate conditions. As time went, I became more conscious of its value as *an experiential laboratory* with myself – together with others - as primary data sources.

## 3.5 Methodology: choices and contexts

---

Within the overall paradigmatic *participatory* and *relational* approach circumscribed above, I employed two methodologies and their associated methods, *heuristic inquiry* that seemed most pertinent when documenting my experience of living in the intentional community and some of my sentiments when dealing with the excitements and disappointments of environmental activism; and *auto-ethnography* urging me to tell my long-term activist story as a way of interweaving with and illuminating issues that – so I believe – have widespread significance.

In the following section I endeavour to tease out these approaches and how they mutually complement one-another, at times harmoniously, at times more gratefully.

Starting from the premise that we have to mobilise ourselves as fearlessly as possible in the context of the global crisis and borrowing from Daniel Wahl's approach in *Designing Regenerative Cultures* (Wahl, 2016), this approach is based on and undergirded by four sets of generative questions that also framed the empirical part of the research and thus permeate the structure of Section 3 What I Found, What I Now Know.

Given the nature and intention of this research, these questions are also posed with the added intention to examine what it would take to create the significant majority-mobilisation needed to achieve positive change, what the hurdles are that are preventing it and what Change-Knowledge Makers (CKM) need to acquire to be successful:

1. Why it is important to take action; why is it our job and why is it so hard? Why is mobilising whole communities located in civil society and why does it encounter so many hurdles?
2. What must be fully understood, what is the plan of action and what are the hurdles it will encounter? What is needed to fully understand the threat, task, barriers, blocks and self-blocks; what do activists need by way of criteria, attributes, training and skills? When mobilising others into emergency mode, activists need to describe what climate change means for social disruption, global instability, threats to peace and

what mass-mobilisation and the activity involved in rapid transformative change look like.

3. When do restorative steps need to happen to avoid climate catastrophe? Are there distinctions to be made about urgency and priorities or certain strategic sequences which demand certain things to happen first? Running so late with what needs to happen, are certain actions determined by appropriate timing?
4. How do we do all of this, especially since our approaches need to align and integrate social and environmental sustainability/regenerativity and the social and technical innovations necessary to generate the required scale and pace of transformative change? As they are interrelated, how are these elements to be built and how are they to be dealt with and resolved simultaneously? How can this work be shaped into a set of useful tools relevant to the task and the times and as part of a (later developed) Educative Activist Framework?

### 3.5.1 Living inquiry – Heuristic research and creativity

Heuristic research provides a meaningful framework to comprehend and communicate the sentient connection referred to above (3.4) and for my desire and urge to bring people into the sense of the good life that can be lived through safe climate restoration and regenerative living. Moustakas' 'authentic encounter' offers a philosophical base and operational device useful to depict, share, help build trust and engage people in the positive frame I was exploring. The heuristic research process allowed me to let go, to trust and to 'swim in an unknown current.' (Roads, 1987; as cited in Moustakas, 1990, p. 13) In heuristic research:

*"I may challenge, confront, or even doubt my understanding of a human concern or issue: but when I persist in a disciplined and devoted way, I ultimately deepen my knowledge... I am personally involved... I may be entranced by visions, images and dreams that connect me to my quest. I may come into touch with new regions of myself, and discover revealing connections with others"* (Moustakas, 1990, p. 11)

The heuristic investigation was an intersubjective, self-reflective, interrogation of myself, of my story and even interviews became conversational parts of my lived experience.

*"The heuristic process is congruent with Schopenhauer's (1966) reference to lyric poetry: the depicted is "also at the same time the depicter" requiring vivid perception, description, and illustration of the experience."* (Moustakas, 1990, p. 39, cited Schopenhauer, 1966, p. 248).

I wrote Moustakas a long letter; he is no longer with us but I wanted to thank him for his guidance with the heuristic framework of this research as it validated and helped me understand the value of my and others' lived experience. The heuristic process strengthened my confidence that the frequent moments of feeling out of my depth would help my resilience and develop greater capabilities for the work ahead. I wrote:

*This aching 'passion' comes from the love I experience when I have become so connected to this planet. I have – in the moment – felt myself become 'the Blue Pearl'. The impulses for life affirming, cherishing, co-operation with reciprocity and for mutuality beyond stewardship come from this sense of connection and the willingness to go deeper (Wilkinson, 2015, journal entry).*

I then, quoting Henson (2013, p.522) added:

*"I had wanted "to feel the bruise"" (Henson, 2013m p. 522).*

In 'speaking' to Moustakas, I reflected words he used in his work:

*Clark, I also have 'undergone the experience in a vital, intense and full way.' This has demanded from me a genuine effort as a researcher to the best of my emerging ability. In my strong 'desire to know' I have committed to 'endless hours of sustained immersion and focused concentration on (my) one central question', I have risked 'the opening of wounds and passionate concerns' and I have undergone 'the personal transformation that exists as a possibility in every heuristic journey'. This has truly been 'central to my experience'.*

Moustakas describes the phases of heuristic inquiry as beginning with *initial engagement*. The task is to discover an intense interest '*a passionate concern that calls out to the researcher*' (p.27). During this phase, the researcher confronts herself, reaching inward to explore emotions, feelings, sensations, reflects on past experiences and what is felt to be known. This phase I believe has occurred - without my realising it in these terms - as part of my life since I left teaching in the 1970s.

The *initial engagement* phase merges into and is followed by *immersion* in the focus of the inquiry; this began in earnest when deciding to undertake doctoral studies. Moustakas (1990) suggests that "*the researcher is alert to all possibilities for meaning and enters fully into life with others;*" in my experience, *immersion* has always been present – during the early stages and still in finalising this document. No immediate finish or 'resolution' is anticipated – no fundamental theses or

essential(ist) statements are aimed for, but small incremental and hopefully positive steps and changes that will make a difference to the health of our planet.

The sense of ‘not knowing’, the ‘lived experience’ and the long periods of full concentration, reflection and analysis laid layer upon layer of tacit knowledge across the years of the inquiry. During this extended period of immersion, I remained my own witness – conscious, curious, intentional, persistent and patient – caught in the web of the experience observing myself as a specimen pinned to a board in a state of full awareness. Every single thing seemed relevant, grist to the mill, identified by feelings of heightened awareness, of thrills, laughter and a sense of discovery.

The next phase is one of *incubation*; the researcher retreats and is no longer fully and practically absorbed in the research focus; this occurred from time to time throughout the inquiry, as I stepped back, not with the intention of “*giving birth to a new understanding or perspective that reveals additional qualities of the phenomenon, or a vision of its unity*” (Moustakas, 1990, p.11), but always as an authentic participant. The move into the incubation stage occurred almost unwittingly; I explored the unspoken, the suggested, the inferred, my tacit understandings of ‘me’, my values and where all this sat in my worldview. I came to see and deplore the gap in the conversation, the ‘survival’ conversation, its absence truly intriguing. Still looking impatiently under every rock and pebble for a breakthrough or an “*illumination*”, I had to stay with this for a while; incubating, deliberating... at times it was agonising.... The experiences of Victoria’s *Black Saturday* fires, Brazil’s Iguacu waterfalls, the old forests on the Erinunderra Plateau, the inner wisdom of ancient Uluru left me sad, grieving and marvelling at the same time.

Whilst the experience of love and connection became more exquisite, the sense of my own limitations, people’s reluctance to rise in active awareness, my need to see evidence of real change, all became more excruciating and heart-breaking.... yet Moustakas urged me to dive into the unknown (Moustakas, 1990, p. 13); referring to my impatience and frustration with my own slow process, he suggested that I should not expect to hurry the clock or work to the calendar. Instead be willing to give it whatever it demands with the ‘*total presence, honesty, maturity, and integrity of a researcher.*’ (Moustakas, 1990, p. 14) This deep immersion remains most rewarding and extremely challenging; inspiration, motivation and determination merge to keep one moving across one’s own landscape like a painter on a large canvas giving some attention here... and then there, something catching the eye, standing back, diving in, adjust, change, define, keep going.

Being a ‘sometimes artist’, writing poetry, painting and participating in cooperative arts-inspired activities, the arts can contribute to the struggle to understand and actively change and transform the precarious situation we find ourselves in. With McNiff, I ask “*how art-based research might further*



---

*focus and guard against obfuscation without being constrained by standardised and formulaic research procedures from other disciplines and conceptual frameworks?”* (McNiff, 2012, p. 6) and hence contribute to the immersion and, by extension, to the transformative change.

I hope that what is created with this work, its images and depictions, can “... *with unwavering attention and interest... throw a beginning light onto a critical human experience...*” (Moustakas, 1990, p. 11) – specifically the climate crisis – and this light, with my message, may help catalyse action well beyond me, here and now. Searching “*introspectively, meditatively and reflectively into its nature and meaning*” (Moustakas, 1990, p.11) suddenly, everything in my life became “*raw material for immersion*” (Moustakas, 1990, p. 28) and relevant to my research. Inspired by Moustakas, encouraging and assisting in my search to know, I captured my experience poetically:

## *The Search To Know*

*The search to know*

*As if knowledge and introspection would save me from my own angst;*

*The premise being that understanding would lead somewhere useful.*

*From the landscape of perplexity to the landscape of clarity*

*Where destinations are visible and directions are clear.*

*The search to know*

*Required my deep immersion into my own experience of my world.*

*To be the scientist investigating the deep and promising problem*

*It took me down a long and winding road of creative and reasoned discovery*

*And through a rigorous process with multiple methods, that nearly killed me.*

*Finding facts, seeing signs, unwrapping my own tacit understandings,*

*Divining, sensing, sniffing out, unearthing, pursuing – I became a huntress*

*Persevering, collecting, and then mulling the meanings of my discoveries;*

*I was self-reflective to the core again and again and again.*

*The search to know*

*Drew me in arcs far and wide – it seemed there were no boundaries*

*As deeper meanings of the existential threat seeped from my very marrow.*

*Yet my aching heart stubbornly clung to hopeful belief in my and our capabilities*

*Amassing on the way, a trove of shiny reasons for joy and proof beyond doubt.*

*It led me blindly feeling my puzzled way through the jigsaw experience,  
Piece by piece, qualitatively confident in the fragments but unsure of the picture,  
Aware of the backdrop of terrible trends yet sure positive possibilities persisted.  
I engaged in all sorts of debates on philosophy, values and theories.*

*It was thus exhausting; hard to maintain that unwavering focus – to concentrate,  
To return relentlessly and to be patient – But how else to find meaning  
How else to distil from the meaning the central and inexhaustible essence?  
Transforming my stress from distress to eustress. Excitement kept me going.*

*The search to know  
Is evidenced in my many notebooks, poems, journals and memos to self,  
In field notes, recordings, photos, artwork, in many books read & conversations had.  
Finding through solitude, creative ways to make possible knowing and sharing  
My introspection dug as deep as I dared until I realised; I am the sane one.*

*The search to know  
Showed me my world through my eyes with me alone in it and both changing  
My unique life experienced through senses, emotions and responses all shared  
I felt myself merge with a shared consciousness: I Am that, that thou Art  
Simultaneously the shower of human brilliance became facets I could see.*

(Wilkinson, 2016)

### 3.5.2 Auto-ethnography

The description of auto-ethnography as “*a form that listens to the heart*” made my own heart sing; (Davis & Ellis 2008, p. 109) telling me the heart still has much to learn; it seeks interaction, response and opens up a conversation. It demands that the work be “*beautiful and intense*”, “*intoxicating, interpretive, raw and real – like communication and life*,” representing my viewpoints and own “*internal conflicts*.” Being aware that “*all representations are both partisan and partial*” (Davis & Ellis 2008, p. 115) I heeded the warning to look out for *verisimilitude* (the only apparently true), (Davis & Ellis 2008, p. 114) to “*pay attention to feelings of intensity*” and to work from “*trust*”(Davis & Ellis 2008, p. 113) in relational veracity. This sounded like an appropriate methodological companion to Heuristic research as explored before.

Initially relating to the research as an activist and artist rather than as a scientist, Bochner’s description of “*alternative ethnographic and qualitative inquiry*” indicated that I was also engaged in “*poetic social science*.” (Bochner, 2000, p. 269) He suggests that “*the narrative of self extracts meaning from experience*” (Bochner, 2000, p. 269) and “[a]lternative ethnography is actually *alterative, transformational and iterative*” (Bochner, 2000, p.267). It can help open up possibilities of meaning and give life imaginative and poetic qualities which help the audience to understand. Joining the two paradigms of artistic and scientific enquiry – whilst initially for me associated with different values and hence problematic – are confirmed by McNiff as “*complementary opposites with regard to processes [as they] share many features (systematic and disciplined practice, close observation, imaginative speculation)*” (McNiff, 2013, p. 8)

The circumstances of the world urgently require a ‘criteria review’; they need to be based far more on survival, resilience, innovation and accessing pure creativity, even genius, for the common good. (Bochner, 2000, p. 269) In his opportunities and challenges in art-based research, Shaun McNiff explores “*how artistic knowing can complement scientific analysis that may not fit all human situations and especially complex problems*.” (McNiff, 2012, p. 6) Many in the applied arts professions “*do not yet see the links between artistic enquiry and formal research... How can structure, planning and systematic functions of research be adapted to support the individual, infinitely variable, spontaneous and sometimes even chaotic nature of artistic experimentation?*” (McNiff, 2012, p. 6) As Fritjof Capra (2007), referring to Leonardo da Vinci, suggests, creative immersion frees the reflective part of the brain to explore, penetrate and awaken awareness.

Whether at times being an artist, activist or scientist or something in between, I came to understand the degree to which the goals I hold, the choices I make and the criteria I set are self-limiting. (Willis, 2001) This is determined by my values and shared appreciation of qualities (in both art and

science) and my acknowledgement of subjectivities. (Bochner, 2000, p. 266) Indeed, overlaying these approaches to understanding and explicating with an added element of determination - choosing to set goals and criteria that are transformative - opens up a whole different set of possibilities, now limited only by imagination. In that spirit, I focused on what could be done in my own life's context, gleaning from day-to-day life, recording everything thought, researching others, interviewing.

Heeding Phillips' statement that "*the truth is, all authors fall short of truth as truth is a constructed and subjective entity,*" (2013, p. 458) I posit that *understanding is relational* and may move, transformed in the evolving relations we engage in. In this, stories of individuals have great impact. Willis (p. 7) reassures me that "*alternative approaches have been sought to admit forms of human subjectivity into academic writing and to portray the personal as political and socially relevant.*" In this sense, the thesis is my story told with my voice but informed by many other voices.

While worrying about how the work will be received by others – especially given its auto-ethnographic hence possibly indulgent character – appears a quite normal sentiment, more important is whether it is "*useful, insightful or meaningful*" (Bochner, 2000, p. 267) to further the cause I am writing it for. In this, achieving *authenticity* is critical if the work is to have traction, especially where addressing the climate crisis is infused by corruption and ennui and blocked by socially constructed silences and collective cognitive dissonance. My life practice of recording my emotional response to experiences through art, poetry and writing lent itself to auto-ethnography. Poetry gave me permission to let my emotions and imagination take flight, a form freeing me to dive into imagination, playfulness and poetic ways to express meanings. As I expressed it in a poem - *The Modern Archaeologist* (Wilkinson, 2016): "*I've been stumbling around for years finding clues. I am now venturing forth with trepidation. I must cross over to uncover what I have sensed. I hope for great treasure.*"

Transformation at a personal level and through living in an intentional community unlocked a growing understanding of '*presence*' as more than mere '*presentness*'; the latter is described as being in the '*now moment*' rather than in the future or the past, (Senge, Scharmer, Jaworski & Flowers, 2005) whilst '*presence*' explores sentience and prescience:

*"We've come to believe that the core capacity needed to access the field of the future is presence. We first thought of presence as being fully conscious and aware of the present moment. Then we began to appreciate presence as deep listening, of being open beyond one's pre-conceptions and historical ways of making sense. We came to see the importance of letting go of old identities and the need to control and, as Salk*

*said, making choices to serve the evolution of life. Ultimately we came to see all these aspects of presence as leading to a state of 'letting come', of consciously participating in a larger field of change. When this happens, the field changes, and the forces shaping a situation can move from re-creating the past to manifesting or realizing an emerging future." (Senge et al, 2004, p. 14)*

## 3.6 Making sense and generating data

---

Together with heuristic research (Moustakas, 1990, p. 38) and arts-based research (Mc Niff, 2012), the threads of my lived experience revealed through auto-ethnography required teasing out along with the results of interviews and observations, documents from the media and reports, scientific and other, and my meanderings through and along my own and others' artistic efforts, weaving all together as a "*bricolage*" (Denzin & Lincoln, 2005, pp. 4-5) hopefully making sense as to the subject matter of the climate emergence and our necessary efforts to deal with it.

Learning how to quarantine and resolve or make some of the feelings of anger and despair less powerful gradually enabled "*a much needed note of objectivity into our discussion of human reality*". (Crotty, 1996, p. 6) As the phenomenological epistemology underlying qualitative research demands, to bring causes and possibilities into focus I had to bracket my biases and let the clamour of my mind and heart relent – at least some of the time. Bracketing – to the extent I could manage – allowed me to move beyond emotions to more objectively inquire into influences creating the lack of action I observed. (Tufford & Newman, 2010, pp. 1-17) We have to "*peer over the edge and regenerate our vision,*" (Willis, 2001, p. 11), taking a deep breath, quieting our inner dialogue and seeking the eagle's view of '*me, us and the big picture*'.

While emotions have a significant role to play and have to be accepted, heard, welcomed and utilised as a rich and potentially liberating way to create engagement, they need to be somewhat 'tamed.' Responses to rapid transformative change are complex and not necessarily black and white; they include "*Knowing Stances – proactive and reactive*" (Willis, 2001). When the context represents an existential threat, it is impossible to excise the subjective from the response, rendering things "*somewhat objective, somewhat subjective*". (Willis, 2001, p.7) According to Giorgio, "*Reflection is at the heart of auto-ethnography... We tell stories of trouble and in need of understanding.*" If truth "*exists between the story teller and the reader*" (Giorgio, 2014, p. 26) and if our relationship can bear the truth, we can be enabled to understand the internal challenges; in other words,



to communicate more effectively we have to reach what resides on the inside – in the shared space between the teller and the receiver.

Reflection and reverie can be doorways to emotions too; “*Reverie is not simply an activity of the mind but an embodied experience that transports us into extended space so that nature resides on the inside,*” (Allen & Rumbold, 2004) a space that may also resemble the “*receptive, contemplative stance.*” As Willis confirms, the “*Imaginal... the psyche turns presences brought inchoately into consciousness through experience into images, through the creative role of primary imagination in perceiving the world as a whole.*” (Willis, 2001, p. 5, citing Heron, 1992) They are invoked in knowing actions such as ‘*intuitive grasp*’ or ‘*metaphorical insight,*’ (Willis, 2001, p. 6) evidence, I think, of the power and value of the imagination.

I have found my own experience of ‘reverie’ to be an essential relief from the weightiness of our shared predicament; flights into imagination can be fun, reverie a pleasant, day-dreamy space where sometimes the genius of the imagination can be found reclining on a sofa waiting for an opportunity to be noticed. (Gilbert, 2016) This poem was written to an archetypal friend, as I realised again that visions are not always easily shared and the feeling or fear of not being understood still haunts... and then still further... the need to make all of this plausible to a wider audience.

## *The Reverie*

*We sit on the bank enjoying the reflections  
I see my own reflection and yours next to me  
The sparkles at the rippled surface unite us  
We are alike you and me, alive with hope*

*But do we see the same things?  
We strain to see into the deep beneath  
Where questions sit like enormous rocks far below  
Begging us to dive in, to know*

*Now immersed in the watery anguish  
Light beams carry flickers of hope  
Illuminating answers, capabilities, solutions*

*We follow into gloomy depths  
I'm recording. It's risky.  
With strengthening currents of existential threat  
We have to help each other swim here*

*Perhaps to die artfully  
At least to live and strive, artfully  
Wholesome, holistic and undiminished  
In spite of, because of, the daunting task*

*There is a goal worth fighting for  
And this is our time.*

*We sit together  
At the archetypal wellspring  
Universal experience connects past and future  
Long threads braid our lives together*

(Wilkinson, 2016)

As the research progressed, maintaining familiarity with and holding the big picture together with the fine detail, allowing the full spectrum to shape-shift, assemble and develop, allowing the clarity to come, to go and to come again, required a different form of holding my gaze. I would revisit my own work from different angles, stumble across parts of it, seek, collect, collate and immerse myself in it, with repetition, sitting with it, in silence - indwelling. (Moustakas, 1990, p. 24) This enabled shapes to begin to form unassembled until the end, the final synthesis, which was often replete with frustration. My expectation that a cogent argument, a clear and compelling solution could be described co-existed with and was validated and enhanced by the emergence I saw occurring on two fronts:

1. I saw emerging the unwanted and increasingly devastating impacts of global warming as we continued to smoke our fossil fuels, pouring still more carbon into the atmosphere and still refusing to take responsibility and the necessary action; and
2. the emerging mobilisation responding to the rising anxiety about the need for an Emergency Mode ('war footing'), enabling the actions we have to urgently take.

Rumbold's panic (Allen & Rumbold, Figure 23, 2004) - and my own - about the lack of time dissolved with the idea of the methodology being *emergent*; the methodological path taken itself was emergent and consisted of layers of successive challenges, the first being to face-up to the climate change implications, local and global and on a personal level. Then there's the work, whatever that might be, for each of us, which is equally emergent and there's no room for panic. (Allen & Rumbold, Figure 23, 2004) This research similarly occasioned layers of challenge, methodology being just one; Grace Giorgio suggests that we can together "*face up to life's challenges*" (Giorgio, 2014, p. 26) if we can share the story; togetherness forms a bridge that helps us cope with the ups and downs and, in the case of the global warming challenge, is a necessary element of success.

We can't ignore the reality that "*Different people participating in an event in their lives may give it radically different meanings.*" (Willis, 2001, p. 8) Yet seeing the world and being immersed in it, holistically, slowing down to feel and experience my own presence there, opened me more to the inner life, my own and others' - whether they shared this challenge with me or not. I was immersed in the animated experience and resonated with Sadler's idea of "*emergence of as yet undiscovered significance*", (Crotty, 1996, p. 5 citing Sadler, 1969, p. 20) but my lived experience had been so often tumultuous and emotional at times it was hard to access the Beginners Mind of Zen let alone the necessary intellectual prowess to formulate and hold the argument of a thesis of a few hundred pages.

Deciding on gathering information through interviews, I selected people whom I anticipated could show me work or processes that would help close the gap I perceived in climate emergency work, hoping they could assist in providing relevant answers, offer credible direction and create a body of work that would contribute meaningfully to the discourse around transformative and restorative change.

As partly described earlier, I had contributed in a number of organisations – especially through the Sustainable Living Foundation – employing catalysing techniques, using and creating opportunities to build momentum and create the much-anticipated tipping point for collective action. At all times did I keep careful notes, write down experiences, thoughts, reflections, collect relevant documents, observing and taking notes, and – as summarised in the previous chapter – learning from scientific reports, conferences and congresses, workshops, conversations, all leading to the crystallisation of themes, questions, bits and bytes of information all ‘waiting’ to be integrated and translated into arguments and motivations for the necessary collective and personal changes.

The more systematic attempts at collecting data useful to help with answers to the questions inspiring this research followed after the commencement of the doctoral research; obviously, the more formal questions posed to interviewees were themselves a condensation of the more informal information gathering referred to before. Similarly, in the course of the several years of pursuing the interviews, participating in local, national and international events related to climate change and the efforts to deal with that emergence, these questions became conversational themes I carried with me everywhere; all this then culminated and gained strong confirmation in the existential experiences of the 2015 Paris Climate Summit, fully elaborated in Chapter Six.

The analysis of all the collected information – interviews, observational data, artful expression, participatory notes, newspaper articles and from other media – happened in several subsequent iterations in conversations with supervisors and others interested in the climate emergency ‘faction’ of the climate change movement. Truly in Denzin’s & Lincoln’s ‘bricolage’ mode, these iterations gradually, eventually, became the structure around which this dissertation has been constructed, the so ordered material inserted into the argumentative structure of the following chapters, detailing the various aspects of a ‘mobilisation strategy’ and culminating in an outline of a proposed Educative Activist Framework, the next stage from here, and the practical or operational outcome and intention of this entire work – and of much of my activist life (see *The Quilt*, Ch. 7).

## 3.7 The data

The Ethics application for the proposed research was submitted in November 2011, approved; the interviews proposed to enquire into:

- leadership, actions, movements and subsequently also grief and personal transformative healing;
- respondents' sense of confidence, responsibility and potential;
- ineffectual work and worrying distractions not leading to transformational change.
- the need for a meta-strategy of social change and, within that, an educative activist framework to achieve maximum engagement, the intention being to unpack the theories underpinning their practice and discuss what most interested them.

The data underpinning this research fell into seven categories (see 4.1); the compilation of the key points of scientific consensus as drawn from reports and other public information has been offered in the previous chapter.

Other ways of offering this information consist of items collected in the course of my own journey and interests, depicted through personal journals, poetry, artwork, photography and short videos found scattered throughout this thesis. In addition to the newspaper articles referenced in the text, I produced an installation of four years of newspaper cuttings from the Guardian Weekly, presenting news about global warming, climate change and pollution; this installation can be seen in the YouTube called Global Warming: Guardian. (<https://youtu.be/155rR9VMtIg>)



Fig. 19 *Climate Change: Guardian / Our Dirty Laundry*. YouTube. G Wilkinson, 2019

The 10 interviews, using 7 sets of questions (see Appendix 1) and prompts, were transcribed and through the analytic and catalytic process described before, distilled into the major themes carried in this investigation and they are reflected in the structure of the thesis itself.

The interviews were designed to create face-to-face discussions – 5 in Australia and 5 international (one being an activists’ meeting) with me playing the role of an engaged interviewer and participant. Invited were persons working in the “*safe climate wing*” of the movement discussed previously, that is those working to rapidly transform Australia through “*whole system change*” to a sustainable, zero emissions and safe climate economy and society. A key criterion for selection thus included the potential participants’ acknowledgement of dangerous climate change and the consequences of 2°C warming and their recognising the need for a maximum effort, globally, locally, personally and on all levels, to achieve to the greatest extent possible the restoration of safe climate conditions, accepting this goal as plausible.

Participants here and overseas were drawn from the quite small pool of those working mostly full-time and single-mindedly on the transition to restore safe climate conditions and rapid transformative change. They were selected from existing networks and from recommendations. Most were known to me and accessible and were followed up by direct phone contact and letter.

The interviews took place between 2012 and 2015; inviting the participants, initially offering background context and a few introductory broad ‘then and now’ prompts to create an historical and more dynamic feel to our conversations:

1. Then

What worked? What didn’t work; thoughts about why; thoughts about the particular personal attributes and conditions needed to create a successful outcome in engagement and mobilisation of individuals and communities;

2. Now

What major blocks and difficulties being experienced currently? What are your thoughts about what is needed to secure a breakthrough and the meta-strategies being developed appropriate to the task of delivering rapid whole system transformational change

The invitation to participate in the interview explained the work as focussing on *mobilising whole communities* to live in a way that will restore the conditions necessary for a ‘safe environment,’ based on:

- Values-based behaviour change (what do we want to sustain and why?);

- Identifying the most effective models and elements relevant to the global sustainability emergency and, within that, the climate emergency; and
- Avoiding ineffective or inappropriate alternatives, e.g. “new”, tweaked, business-as-usual or ineffective crisis mode.

Continuing along the heuristic research path outlined by Moustakas (1990) brought me to the ‘*explication*’ phase. I created a detailed spreadsheet in hard copy that enabled me to capture the big picture and home in on the key nuggets to include and also any gaps that had to be addressed.

Transcribing most tapes myself re-immersed me in my inner and outer dialogue. When each transcription was complete, extraneous information was eliminated, reducing the data to the segments responding to the interview prompts or in some way useful for the research and its intentions.

As suggested above, the analysis of the interview data was thematic, based on the intentions of the research and the subthemes included in the questions (see Appendix 1). The reading and re-reading of the transcripts, looking for correspondences with my own experiences as detailed in my heuristic process and the notes of my observations and personal reflections and as expressed in my artistic endeavours already included in previous chapters, occurred over a long period of time.

Tight summaries of their respective transcripts were sent to the interviewees, inviting them to suggest corrections or additions but none were offered, giving me confidence that my ‘sense-making’ of their responses was not off the mark. That then allowed me to extract content across the interviews, using the themes that had gradually emerged and merged with the themes expressed in the questions. Saturation of thematic content was reached and then – as mentioned before – integrated with material gathered from the other investigative modalities, heuristic research, art, observations and reflections.

The people interviewed gave generously of their time and they all had much to contribute on this topic; they are introduced chronologically and briefly here. More detail can be found in Appendix 2 Request for an Interview + Consent and Release Forms and Appendix 3: The Interview Schedule.



	Introduction	Personal Intro and Positioning	The Mess and the urgency	Research Process & Methodological Reflections	What must be fully understood	High Level How	Breakthrough and Mobilise	From Emergency to Safety	Other Bits, Appendices
<b>DATA</b>									
<b>Purpose of Doctorate</b>	•	•	•	•	•	•	•	•	
<b>The 10 Principles</b>	•	•	•	•	•	•	•	•	
<b>Lived Experience</b>	•	•	•	•	•	•	•	•	•
<b>Climate Emergency</b>	•	•	•	•	•	•	•	•	•
<b>Murundaka Community</b>	•	•	•	•	•		•	•	
<b>Art: Visual, written, performed &amp; encountered</b>	•	•	•	•	•			•	•
<b>Interviews</b>	•	•		•	•				•
<b>Insights, learnings, conclusions</b>		•	•	•	•			•	•
<b>Transformative change</b>			•	•	•		•	•	•
<b>Values based action</b>			•	•	•		•	•	•
<b>Sustainability Renaissance. Positive vision of future</b>			•	•	•	•	•	•	•
<b>Educative Activist Framework</b>			•		•	•	•	•	•
<b>Silence and Voice</b>			•		•	•		•	•
<b>Whole Systems Change</b>					•		•		•

Fig. 20 Content analysis chart

## 3.8 The interviews

---

**Piers Verstegen** executive director of the Conservation Council of Western Australia; his academic research indicated that the industrial ecology model is inappropriate, counterproductive and makes matters worse not better. He pointed to the need for whole systems change.

**Philip Sutton** founded Research and Strategy for Transition Implementation (RSTI), catalysing urgent initiation of full-scale transition to a sustainable economy. He focuses predominantly on a very rapid emergence of the necessary social and political commitment to make this possible.

**Luke Taylor** stepped in as director of the National Sustainable Living Festival with extraordinary vision and values in 2001. As a filmmaker experienced in advertising and with a deep love of nature, Luke's skills have been central to SLF, the Breakthrough Forums and, more recently, his own film, Home Front.

**Professor Frank Fisher** was well known as an activist, 'greenie', prolific writer, sustainability advocate, academic and social change agent. He was also a guide and benefactor of SLF. Although he died before signing the interview 'release' form, my conversation with him was genuine and insightful (Appendix 9).

**Chris Jordan** is a Seattle-based artist depicting mind-boggling statistics with beauty that supports us to comprehend such horrifying enormity. Creator of the movie, Albatross, his message is that personal energetic transformative change is internal and "the one thing in the world that we do have control over" (Appendix 10).

**Adrian Whitehead**, a frontline, military-trained forest campaigner, he realised early that the lag-time due to atmospheric CO<sub>2</sub>'s longevity implied the need for Beyond Zero Emissions, active drawdown. His initial research (2015) revealed there to be, insufficient suitable land available to meet the global need.

---

**Professor Kevin Anderson**, from UK's leading academic climate change research centre, Tyndall, well-known, forthright and often blunt and respected worldwide. While overshooting 2° C is 'inevitable,' he crucially adds that he is "not saying that the possibility of not overshooting it doesn't exist."

**Dr. Margaret Klein Salamon**, psychologist, activist, single-minded community organiser mobilising to avert the climate disaster, co-founded The Climate Mobilisation (TCM), broadcasting the truth about the climate emergency. "If climate change is not successfully addressed, all other causes will be moot."

**Professor Mark Jacobsen** initiated the Solutions Project, educating on science-based, 100% clean, all-purpose renewable energy for 100% of people and developed individual wind, water, sun energy 'roadmaps' to transition 50 US States and 139 countries; his mantra: "Stop Burning Things".

**The Portland Climate Coalition** (Oregon, USA) candidly shared their misgivings, overwhelm and trepidation yet demonstrated the very qualities needed while employing savvy strategies. With creative flair, empathy and determination, hell-bent on out-manoeuvring the fossil fuel industry of Pacific Northwest, they achieve a certain success – internationally notable were their Kyactivists.

# SECTION 3

WHAT I FOUND,  
WHAT I NOW  
KNOW

---

# CHAPTER 4

WHAT MUST  
BE [FULLY]  
UNDERSTOOD

## 4.1 Introduction

---

As outlined in Chapter 3, the research data fell into two main categories. The interviews comprise one major segment; heuristic participatory research another.

Heuristic research includes:

- my own journey and interests
- personal journals,
- poetry,
- artwork,
- photography
- short videos
- an installation ‘Global Warming: Guardian.’

The interviews cover:

- key points of scientific consensus - see Chapter 2
- the taped interviews,
- the 7 sets of questions,
- how they were developed,
- the interview transcripts,
- the process from the interviews to findings;
- analysis, synthesis, the final question.

THEMES NB. The dots indicate the topics covered by each interviewee.	HEURISTIC RESEARCH	INTERVIEWS NB. Frank Fisher’s interview & that with Portland activists had other specific foci							
	Giselle Wilkinson	Kevin Anderson	Chris Jordan	Mark Jacobsen	Margaret Klein Salamon	Philip Sutton	Luke Taylor	Piers Verstegann	Adrian Whitehead
Values based living			•	•	•	•	•	•	•
Scale and momentum				•	•	•	•	•	
People power			•	•	•	•	•		•
Change knowledge		•		•		•	•		
Meta Strategies		•	•	•	•	•	•	•	
New leadership		•		•	•		•		•
Effective Breakthrough		•		•	•	•	•	•	•

Fig. 21 Interview schedule and spread of topics covered. Table. G Wilkinson 2020

The 8 (+2) interviews delve deeper into the overall ecological and political situation in which Chapter Four continues to dwell, given the obtuse and sluggish response from those to whom we look for governance, and brings us to the realisation that there must be much more that needs to be fully understood, beyond the science. And so we look at values, ideologies, self-imposed obstacles and our shadow-side. Then, in the light of the deeper knowledge discovered through this research, we consider our options. This learning has come directly from within my own actions, from what people have been telling me and from little bits I’ve been picking up from here, there and everywhere. It has thrown a spotlight on what we have to learn as organisations, as a movement, as a collection of activists and some of what is available there.

Notwithstanding things happening in the space I’m in, the world is not doing enough and another one in the mountain of boulders in our way is revealed: the *illusion of understanding*. Far too many people believe they ‘know enough’ and don’t want to know any more. So, for all sorts of reasons,

light-weight in the context of the existential crisis, priorities cease to change. This is to an extent due to the absence of a plan and the phalanx of constructed silences surrounding that yawning vulnerability.

Understanding what has to be done and why, when and where is the start for a constructive discussion to restore safe climate conditions. To understand *how* it can be done, we must look closely at the plethora of obstructions. Notwithstanding plutocrats, politicians and perplexing situations, many hurdles are of our own making and can, with personal and collective will power, be resolved.

Chapter One introduced the problem and showed my reaction to what happened around me, what I did and how that relates to what I'm doing now. Having discovered self-reflection and a sense of a deeper connection as a source of awareness and power to help protect Gaia from human pollution and destruction, I came to understand *people power* and identify with the Cultural Creatives movement that helped my sense of planetary consciousness evolve. Sustainability, deep ecology, awakening to other-than-human beings prepared me to better comprehend the existential threat. Community groups, cooperatives, activists and organisations set up to help maintain philosophy and spirit were central to my life, underscoring the focus on building rapid transformational change, resulting in SLF, Earth Co-op, Murundaka and the accompanying networks and encounters. Immersive experiences over many years taught and shaped me as I grew to understand the threat of global warming, the climate emergency it represented, the parallel and co-related threat to the biosphere -seeing some of what was needed and what could potentially be contributed.

Needing to distance myself somewhat from my personal experience, I looked at what could be done about dealing with the problem at the global climate, whole systems scale; Chapter Two introduced science and other literature and sources with information about the Earth's increasing temperature and other details generated by climate science. The chapter examined the unfolding and looming consequences of global warming and its compounding effect on the 6th mass extinction - also being attributed to human activities (Carrington & Watts, 2018). It identified some lesser known information – the CO<sub>2</sub> lag factor, global dimming, overshoot, market fundamentalism, and how these raise the level of alarm and further validate the need for an urgent response. It also looked at why this is all happening and identified some of the responses emerging during the last 25 years – the IPCC, Brundtland, Rio+20 (building on the UN 2012 'Earth Summit' which was the third international conference on Sustainable Development aimed at reconciling the global community's economic and environmental goals), Doughnut Economics (Raworth, 2017) - as well as some developments making it harder – Australia's neo-conservative political stance, unhelpful assumptions, difficulty finding speakers and others.



There was also an initial look at the vision and action responses from parts of the climate movement – the Precautionary Principle, Climate Code Red, war-footing, drawdown, bridge-building, transformative change, advocating a climate crisis response; undertaking steps towards safe climate restoration; the need for scale and pace and breakthroughs and managing major risks; and the personal efforts to find ways to deal with the problem in the action frame, including positive localised economic alternatives.

These responses multiplied as the level of understanding grew and activists realised that from the mid-1990s government attitude moved from proactive to inactive to counteractive. For a long while I had thought that our role would entail reinforcing and complementing the large structural changes on sourcing energy, curtailing emissions, reducing other pollution and transforming the economy (to fossil-free) and that these would be supported and funded appropriately. Eventually, the realisation sank in that in Australia, that was not to be the case.

We must have a full understanding of what is going on, what is at stake, what is and isn't happening at government level and why it's now our job; the technological, economic and legislative changes required to happen in a time frame science and observations indicate are necessary, transformative change has to urge government from its *Business As Usual* into a high level *Response Mode*.

Notwithstanding all the gloomy evidence presented and while it is already too late to avoid many impacts, worse is still to be avoided and good work necessary; it is vital work that can make a great difference, potentially changing the trajectory of global emissions and reversing global warming. Even now we can still hold plausible optimism but it goes together with a coherent, credible and hopeful alternative. In Chapter Four, it becomes clear that this alternative demands a sound coalition and broad cultural consent – both signs of positive transformative change.

Hence, the reader is now invited to follow me to a place that clearly shows the arguments for a strategic mobilisation that must and can occur, optimising our chances of success. Based on the series of integrated methodologies I discussed in Chapter Three, this chapter adds the perspectives of those I interviewed to my own, describing the nature of the issue and what is holding us back. The chapter will describe what I have done, learnt and lived through as a researcher/activist and what I have gathered – especially through the 10 interviews and my reading, participation and other experiences – inevitably returning to the problem by particularly relying on my informants' views. The material has been ordered and structured with various fragments combining to establish the case for a '*mobilisation strategy*' to be explicated in Chapter Five.

## 4.2 Tackling the why, what, how, when of getting through and out of the mess

---

This chapter intends to illuminate how humanity could work through the ‘mess’ and prepares the basis for a practical framework for the next emerging wave of activism to address the climate emergency. Drawing together the findings of my inquiry, synthesising the diverse threads into a cohesive argument, I needed to distance myself from the lived experience of it all. Only then could I begin to weave them together with the descriptions and explorations I shared in previous chapters, to form a picture that covers the *why*, *what*, *how* and *when* of understanding and preventing ever-more problematic climate change and to make a compelling argument.

Fixing the problem of climate change is, indeed, about the science and technology, the theories and innovations and the political will, the finance and the effects of market fundamentalism; but for our species to be able to be effective in taking this on, we have to identify our reticence, our shadow side; to *own* and deal with the concept of ‘the other’; grasp the nettle of painful complexity and see with newly focused eyes the myriad of hurdles we have put in our own way. The need for clarity about these issues became a key element of the research, the starting point and also the place of greatest *agency* to make a difference from within the nexuses and orbits of ordinary and daily lives; it requires mobilising ourselves as fearlessly as possible in the context of the global crisis.

Activist, writer, author of ‘The Great Disruption’, Paul Gilding presented at the Breakthrough National Centre for Climate Restoration forum in 2016 on his paper - *War: What is it Good for? WW2 Economic Mobilisation: An Analogy for Climate Action*. Whilst Paul announces, ‘*It’s bigger than World War-II,*’ Andrew Wilford eloquently sums up the vexing question underpinning this work, clarifying previously that the 2011 *National Summit on Whole Systems Change* (Communiqué Appendix 4) was asking: “*How do we mobilise courageous, resilient and generative servant leadership for a powerful and immediate response to the planetary emergency ... and sustain this for the long-haul?*” That statement clearly morphs with the question, standing at the origin of my work: “*what is going on that more Australians don’t respond to the emergency in the way I do?*”

The entire lot of vaguely collected rationalisations and (ir-)rationalities creates a muddy, inchoate sense of a mountain of *'things that are in the way'*, the feeling of *'impossibility'* associated with problems often described as *'wicked'*. George Marshall, founder of Climate Outreach, author of *Don't Even Think About It: Why our brains are wired to ignore climate change*, speaking to a Creative Factory workshop in Paris (2015) contests the use of this word as not accurate. The use of it implies complex to an extreme and, by default, too difficult. Framing a problem that desperately needs solving in this way is at best unhelpful and at worst, creates (yet another) deterrent to action. Many are left with a sense of overwhelm where even the use of words like *overwhelm* and *intractable* becomes yet another *reason to give up*. Words can create other blurry hurdles to overcome, so the more explicit the view of the hurdles, the stronger the resolve to engage and the less the vulnerability to the unknown.

Using interviewees' responses, personal experiential and theoretical understandings and literature already presented, this chapter meanders through the many things that get in the way of engaging in the necessary transformative actions and explores how these hurdles could be resolved or removed. Obviously, certain aspects defy a comprehensive approach as the knowledge hasn't evolved enough or we don't yet know whether what we do know will 'work'. Notwithstanding the existing knowledge gaps, the chapter illustrates some of the breadth and depth of the responses to the questions surrounding our quest *'How we can fix this problem?'* The first section of this chapter will somewhat further elaborate the above questions, focusing more of the *why*, whilst the second section, titled *'Fragments of the emergence'*, presents the many aspects which - taken together - are essential to grasp if we want to have a chance to turn the emergence into a positive direction.

\*\*\*

In addition to the multitude of more 'objective' obstacles enshrined in structures and processes of the global political-economy, *'why'* we humans so readily seem to create a myriad of ways to procrastinate, self-delude, self-sabotage and hence disempower ourselves is also partly answered by the fact that we are a highly creative species. First, we need to recognise differences: some humans are to be held *more* responsible for the mess as can be correlated with the *resource use ratio*, whereby the *'WEIRD'* portion of the human race uses more resources than the rest by a factor of more than ten. The other 90% of humans, whether too poor or too moral, do not generally inflict such costs and wreak such havoc, as suggested by Anderson (2015, transcript, p.14) and others.

I interviewed Professor Anderson and briefly met Alice Bows-Larkin in Manchester (UK) in 2015. Anderson, former Deputy Director of the Tyndall Centre for Climate Change Research holding a joint chair in Energy and Climate Change at the School of Mechanical, Aerospace and

---

Civil Engineering at the University of Manchester and School of Environmental Sciences at the University of East Anglia, and honorary lecturer in Environmental Management at the Manchester Business School, is (as of 2009) an adviser to the British Government on climate change. ([http://en.wikipedia.org/wiki/kevin\\_anderson\\_\(scientist\)#cite\\_note\\_anderson\\_tyn\\_entry-1](http://en.wikipedia.org/wiki/kevin_anderson_(scientist)#cite_note_anderson_tyn_entry-1))

As growing numbers are trying to balance their awareness of the dramatic global ecological realities with their daily 'micro' life choices, '*understanding the psycho-social implications of climate change is also an important starting point for informed action to prevent dangerous climate change at individual, community and societal levels.*' (Fritze, Blashki, Burke & Wiseman, 2008, p. 13) It is critical for as many ordinary citizens as possible to *understand fully* that without transformation across the spectrum of our economies, behaviours and priorities, climate change will reach a level that is catastrophic for humans.

Nick Breeze's 2018 interview with Sir David King reinforces that citizens of countries making relevant and powerful decisions can still now choose to avoid further damage and proactively restore safe conditions, notwithstanding the many blockages impeding action. (Breeze, April, 2018)

The corresponding responsibility for cause and impacts and their further consequences is what renders this the shared moral imperative it is. Whilst humans are not responsible for the impacts of naturally occurring events like meteorite hits or volcanic eruptions which emit large amounts of carbon, these account for less than 3% of carbon parts per million (ppm) in the global atmosphere; fossil-fuelled civilisation, however, is largely responsible for the rest, of the pollution, the overload, the damage.

The easiest way out of discomfort is to duck the issue completely and, in one way or another, not engage in the conversation at all; common avoidance techniques are to affix 'blinkers' or frame the issue as *theoretical, too big to solve or someone else's fault*, 'China' often being singled out by using statistical obfuscation. The recent release of evidence of policy discussions in the context of the Kyoto Global warming agreements from 1996-7 by the Howard coalition government illustrates abundantly the deliberate attempts to avoid making the necessary steps to reduce emissions. This had also been the attitude of the preceding Hawke/Keating Labor governments. (Guardian Australia & The Age 01/01/2019). Adding one's voice to the discussion - in other words, *engaging* - is a form of *investment* in and *commitment* to a process and an outcome; silence may *feel* less challenging. For some, disconnection from nature can be a way of avoiding feelings of love and awe and the accompanying *burdensome* responsibility... perhaps an unconscious yet welcome way of blinkering and creating separation.

Many of us, consciously and unconsciously, create a smokescreen to hide the truth of our addiction to fossil-fuel-generated wealth (and subsistence), to prevent change and try to stay well out of our responsibilities; but as knowledge circulates and anxiety increases, this addiction comes with growing doses of shame. Anderson (2015, transcript, pp. 7-8) describes in shattering terms what he sees as our species' shared shame. Not only is our species impacting the world like a virtual meteorite "*with devastating impacts and repercussions for millennia*"— we, unlike a meteorite, are "*conscious and deliberate*". Not only will "*probably millions of generally poor, generally black people die as a consequence of climate change*" the enormous losses in terms of species extinctions and damage to the ecosystems represent a terrible catastrophe to the biosphere and therefore to humans. To make matters more shameful for those living in the northern hemisphere, the people whose lives will be lost in such appalling numbers are painfully described by Kevin as being conveniently a long way from Britain and having no "*military or political power.*" The UK gives 3% or less of GDP to foreign aid! . . . . "*We don't give a damn!*" (2015, transcript, p.14) He says, "*If it were happening to us we would go to war over it!*" (2015, transcript, p.8)

Choosing to ignore responsibility for pollution, to ignore the consequences of complicity of willful ignorance, ignoring the knowledge that climate change will amplify what has already begun, becoming ever more clearly responsible for amplifying tensions everywhere, causing and contributing to suicides, pandemics, floods, fires, famines, drought, disease, forcing migrations, unleashing wars and feeding the growing death toll, certainly adds to that 'shame'. Thus seeking to escape the feeling of being 'trapped' into taking action, reprioritising or making changes, we neglect a situation some perceive as a mass-suicide whilst others look at it as the 6th mass extinction, the species-side of the animal and vegetable worlds.

Still looking at the *why* of the many hurdles in the way of change, those active in the small ecosystem of '*climate change*' groups experience the political landscape in which they operate as riddled with decision-making silos, specialisation, hierarchies, defensive territories, entrenchments and demarcations. The virulent 'anti'-campaigns, for many years waged by corporations as outlined in various documentaries such as "The Corporation and Merchants of Doubt" — as well as by global obligarchs, (Monbiot, 2016, p. 2) — was successful spreading misinformation, creating widespread doubt, scepticism, cynicism and mistrust, making the job of those trying to raise the alarm much harder. The combined result was the prevalence of misjudgements and dismissiveness and the consequential erosion of trust and credibility to a level so low as to be inadequate for the task. Science educators and others in the field were frequently threatened with the 'John Mercer' effect and, in Queensland, saw their worst fears realised with the 2013 advent of the Newman LNP government, meting out savage cuts to education, climate science, the environment and the

community in general. Many actions of the Queensland Government under Premier Campbell Newman defunded environmental supports, science and education. The list compiled by Independent Australia (2013) includes the closure of the Office of Climate Change; the Environment Defenders Office (EDO) and 245 other cuts to public and community services during Newman's first 12 months. Organisations and departments, fearing punishment and retribution through funding cuts, found yet another compelling 'reason' to dilute the message.

Hindsight confirms anti-campaigns can have serious long-term impact; Tim Flannery reminds us of the anti-campaign attacking Darwin's evolution theories, noting "*Lovelock's hypothesis is at least as controversial today as Darwin's theory of evolution was 150 years ago*" (Flannery, 2011, p. 38). Lovelock's hypothesis poses a threat to our current 'free' market approach to the exploitation and abuse of the natural world, "*the deep interconnectedness central to the Gaia hypothesis presents a profound challenge to our economic model*" as it "*explains that there are both limits to growth, and no 'away' to throw anything to.*" (Flannery, 2011, p. 39)

The Gaia Hypothesis, was developed by Dr James Lovelock with the first mention occurring in a paper co-authored by Lovelock, J.E. and Giffin, C.E. (1969). "Planetary Atmospheres: Compositional and other changes associated with the presence of Life". It was further developed over the next few years, including by microbiologist, Dr Lynn Margulis, in 1971. Calling it after the Greek goddess drew support from many non-scientists causing some scientists to dismiss it as being too unscientific and too "New Age" and attracted the criticisms of Dawkins, Doolittle and Gould himself – which according to Flannery (2011, pp. 38 - 39) blocked it. This effectively held back the momentum that would have enabled society to understand and get on top of pollution a long time ago. Instead, we have a litany of environmental failures in a pattern of industrialised, corporatised and politicised instantiations of self-interest.

Vested interests and conservative governments continue to squash discussion, construct silences, create and foster divisiveness, dismissiveness and nefariously undermine credibility, leaving scientists, activists and others concerned about climate change few sensible options: deal with it head-on, get on with the work in spite of it, or both. Playing into the hands of the blockers was the almost institutional reluctance to tell the truth, ostensibly for fear of throwing people into despair and overwhelm. Ten years ago, most governments and environmental organisations had adopted a "*don't scare the horses*" approach, (mentioned in chapter 1.8 "*don't frighten the herd*"), fearing that exposing people to the full scientific predictions might immobilise them. Yet simultaneously the realisation was growing, with climate scientists stressing the need for extremely urgent action and spelling out the more catastrophic impacts of inadequate action, that this *seemed to be a dangerous approach to take.* (Hamilton & Kasser, 2009, p. 8)



Yet, if inadequate action and ‘don't scare the horses’ was considered dangerous in 2009, it has become even more perilous now and the odds *against* success continue to rise as Australian governments continue to refuse to come to grips with the reality, or worse, actively undermine truth-telling. Numbers of disingenuous or perhaps simply pragmatic politicians, including even in the Greens Party, know what needs to be done yet don't say it and fail to be scrupulously honest about climate change.

Frustrated by the Greens, Adrian Whitehead (transcript p.7) believes “*they should be telling the truth;*” instead they are actually working against us “*using artfully vague marketing language designed to be effectively meaningless.*” (transcript p.7) Really needed are well-crafted words saying it as it is, i.e. communicating the urgency for strong action now to avoid consequences that will mean death to vast numbers of humans. Instead, 100,000s of advertising dollars create messaging cleverly designed to have the reader insert the information. If the Greens were making honest statements now, they could be assured that worsening climate change would at some point turn people to them. Adrian explores possibilities to ram this message home and, half-jokingly, suggests a potential action: “*Sue the Greens in court for failing their charter, for not advocating for negative emissions as fast as possible.*”

Whilst one should not really name this a ‘conspiracy’, one certainly can look at the current situation and identify a process of ‘*systemic collusion*’, a concept suggested by Jacques Boulet in his lecture series – at the OASES Graduate School (2010 – 2015).

While in certain areas of social need governments intentionally, genuinely and responsibly commit public funds at a scale meaningful for the common good, that is not (yet) the case with climate restoration or biosphere protection. The leadership vacuum and absence of action in this area are too easily portrayed and interpreted as *evidence* for action being *unnecessary*. That the existential crisis we collectively face has lacked proactive and positive involvement by those who have the power to throw big switches – ‘*Off*’ for fossil fuels and ‘*On*’ for renewables - still amazes many.

WHY the lack of action at government/corporate level? Three main reasons stand out: *short-termism, reductionism and self-interest*.

**Short-termism** is assumed to be ‘human nature’, a genetic trait of humans. My sense was that to only respond to immediate threats and only make short-term commitments was more of a cultural characteristic linked with self-interested economic rationales. Northern European and Scandinavian countries, for instance, appear more able to make longer-term commitments, use taxation for the common good and work to create generational benefits



well beyond their own lifespans. Such long-term capabilities seem to be embedded in their social culture, holding pride in civil society and enthusiastic willingness to engage for the long term. Anderson, (2015, transcript, p.1) comparing them with the UK and Australia, agreed: “*We struggle with it more;*” but it is a blockage that can be challenged and leadership can play a large part in this.

Explaining *reductionism*, Anderson (2015, transcript, p.1) says the problem with cultures assigning a monetary value to everything is that “*Once everything’s valued and you can substitute between them, you can substitute bee pollination for the number of car parks. And if the number of car parks has a greater value than bee pollination, they must be worth having more of them than bee pollination .... What we’ve got is a reductionist way of viewing the world, a reductionist way of analysing things and developing policy and we now try to apply that to a set of issues which are systemic ... actually, they’re inappropriate.*” What might once have been a successful political approach in the 1950s Anglo-Saxon world “*is not good at looking at systems issues; is not good at dealing with the sorts of issues we now face*” (Anderson, 2015, transcript, p.2).

The contest between *self-interest* and the common good represents a false dichotomy; indeed, attention for the common good is in the *enlightened* interest of all persons – including non-human ‘persons’ or other species reciprocally interdependent with humans - and is, as it always was - critical to the survival of our species. Perhaps *self-indulgence* and *selfishness* are better notions to name the problem. Those who know the devastating implications of their behaviour – whatever it is called – and go on regardless are culpable of atrocious consequences involving loss of life on an unimaginable scale. Pursuing self-serving goals and remaining deaf to the pleas for action resemble those commandeering the Titanic life-boats for their own use - in this case also duped into believing they and theirs will survive unscathed. Those who are fully awake to the threat are rightly terrified of this situation.

\*\*\*

In summary, the challenge of addressing climate change appears to be about *mass mobilising to avoid a catastrophe, urgently transforming our political-economic processes, becoming clearer about our values and getting more in tune with each other, our selves and the living environment.* Win or lose, it is the opportunity of a lifetime, for us and for our species and, as fate would have it, for the myriad of sentient ‘*brothers and sisters*’ for whom *we humans are now their* existential threat.

The great urgency to heal our ailing Earth comes with the need to bring people here and around the world to desire and demand positive change as rapidly as sensibly possible and to pick up pace consistent with a *threat on a massive scale*. That the task of mobilising whole communities exists and is largely located in civil society has been suggested earlier; it is summed up in the title of Maria Taylor's (2014) *What Australia Knew and Buried and Reframed into a New Reality for the Public*, in which the examination of government inaction also identifies the impact of market fundamentalism on the work of scientists.

Government inaction, lost time and increased urgency mean that the job of mobilising the whole community is with 'us' and 'now;' the transformation must reach everyone in the end, but to start with, it is linking those already active with the sub-communities and groups that can be easily reached and are not yet engaged. Not everyone has the fortitude to look into fearful futures; it has fallen back squarely onto a handful of experts and 'The People' to create a new and a deeper understanding of leadership. This leadership must aim to go beyond the 'pragmatic' or minimalist reducing of the impact, instead becoming capable of acting on multiple levels and aiming to reverse global warming in spite of the prevailing silences and in response to the many jarringly inappropriate decisions – and non-decisions - being presently made. Work to be done includes debunking mistaken beliefs and illusions, contending with sociopathic attitudes amongst the 'WEIRD' and exploding myths suggesting that we really can adapt. It also includes meeting some big challenges such as providing safe drinking water and enough food for 7 or 8 billion people much less the humane managing of potentially hundreds of millions of climate refugees.

'Urgency' is described as a combination of thoughts, feelings and actual behaviour. Referring to urgency in the business world, Harvard's John Kotter, interviewed by Paul Michelman of the Harvard Business Digital Review (2008) links it to great opportunities and great hazards and describes it as '*gut-level determination that we're going to do something now, we're going to win. ... the behaviour is this hyper-alertness to what's going on. It's a sense of coming to work each and every day with a commitment to making something happen that's on the important issues.*'

Without the feeling that the work is shared and important and that winning is likely, hyper-alertness can become exhausting; without the ability to act decisively it is likely to become frantic with anxiety about losing; a stressful and emotional experience of frustration – and in the case of climate change – with a terrible fear of failure, which itself becomes a self-defeating, self-fulfilling prophecy. Courage is needed but on its own, is a finite resource; it needs support. When the courage to squarely look at the implications of climate change finally arrives, "*the reality is it is so incredibly psychologically hard to prepare for ... how bad it actually (is).*" (Whitehead, transcript p.6)

There are *cooperative survival values* to revive; whilst money *cannot* buy us out of trouble when the entire biosphere is jeopardised, it could fund the transformative change to avoid that scenario. The next generation *does* matter; in fact, the continuing evolution of humans depends on it. So now is *not the time* to maximise profit ‘*before it all goes bad*’ – it is time to redirect profit to steer a course to a positive future.

*“We’ve built a new Eearth. It’s not as nice as the old one; it’s the greatest mistake humans have ever made, one that we will pay literally forever. We live on a new planet. But we have to live on it. So we better start understanding what is going on. (McKibben, 2010)*

McKibben writes ‘Eearth’ with a double ‘a’ to denote that the impacts of climate change have commenced; ‘*forever*’ he says, speaking at the Patti Smith *Pathways to Paris* concert (Dec 5, 2015), but even at this late stage, while “*we started late, we are starting to win.*” He believes that the movement has already won the argument but now must win the fight and the job now is to build the movement and go straight at the fossil fuel companies. “*Exxon Mobil knew everything there was to know about climate change 25 years ago and lied about it. ... They spend millions of dollars building the architecture of denial and deception. So our watch-word going forward is ‘Exxon knew’.*” (McKibben 2015) As outlined in BZE’s 2010 *Stationary Energy Report*, McKibben sees the possibility that safe climate conditions may be restored, allowing us to – somehow – recover from our ‘*mistake*’.

## 4.3 The Fragments of our collective Emergence – in seven ‘*baskets*’

---

Having tackled the intricate entanglement of getting through and out of the mess by looking more closely at the ‘*why*,’ exploring reasons that make mass-mobilisation problematic and really hard work, I now turn to the combined responses to the *what/how/when* questions. The interviewees *shared with me some of what – in their experience - did work, at least to some extent*. Of the great diversity of actions, reactions, responses seeking meaningful and rapid transformative change in the context of global warming and climate change, some activities are more useful than others. The following is a collection of fragments ... overlapping, interrelated, together exponentially making it more difficult to apply a logical analysis let alone a simple solution-oriented strategy. Yet this is the challenge; these fragments are based on the information gleaned from the interviews with my respondents and their voices will resonate strongly throughout, as will references to literature and my own experiences. As described in Chapter Three, the analysis of the interview data extracted from the transcripts was thematic, based on the intentions of the research and the original seven questions sets (with the sixty-six subthemes) covering Restorative Living, Scale and Momentum, People Power, Change Knowledge, Meta-Strategies, The New Leadership and Effective Breakthrough. The synthesising of this with all the other data and the threads that emerged including the Ten Principles, the lived experience, the roles of Art, Systems Thinking, Values and Behaviour and fractals of transformative change was extensive and painstakingly thorough. Given that they ended up in the following seven ‘*baskets*’ is not coincidental.

4.3.1 The Nature of our Response

4.3.2 Our Capabilities

4.3.3 Our Resilience

4.3.4 Our Change Knowledge

4.3.5 Our Awareness

4.3.6 Our Big Picture

4.3.7 Our Planning

### 4.3.1 The Nature Of Our Response

Developing a powerful and immediate response to the planetary emergency means to avoid pitfalls and diversion, fully understand the problem, accept extreme urgency, to encourage groups, individuals, each other to engage, envisage the transition, link the personal, collective and political, support greater resilience, use foresight, hindsight, classic campaigning, galvanise the next wave and mobilise whole communities.

The harder it is to take something on board, the easier to be diverted from it – or so it seems. As already touched upon, *diversion* happens in many guises - distraction, delusion, being duped, tranquilised and psychologically manipulated. Consideration given to what might be contributing to Australia's high level of passive compliance quickly produced a list of life aspects and resulting pressures and diversions I've called: Weapons Against the Intellect.

- Television – the opiate of the masses;
- Virtual life – TV shows, movies, Facebook, etc.;
- Gutter Press – Murdoch papers, fake news, etc.;
- Medication – Prozac, Anti-depressants, Alcohol, Drugs, – self-medication;
- Consumerism – Retail therapy; Bargains and discounts
- the “free gift” – Tax “breaks”, drops in interest rates, amnesties;
- Novelty –the ‘wow’ factor, glossy anything, the ‘savvy’ sell;
- Technology – new gizmos;
- Progress – new freeways, bigger buildings;
- Illusions – promises, security, confidentiality, permanence;
- the “Sell” – the ‘line’ we’re given, the hooks, his story/her story, the narrative of the dominant paradigm, the hard sell;
- Set-ups – “Threat” & “Safety”, “Fear” & “Rescue”, “Punishment” & “Reward”;
- Distraction – Beat-ups, our own exhaustion, the merry-go-round, the ‘treadmill’, the trap;
- Backlash – discouragement of questioning, over-reaction to challenge, de-sparking the spirit, the Walnut and the Sledgehammer;
- Addiction – to comfort, “Ignorance is Bliss”, procrastination, denial, rationalised distancing, abdication of responsibility;
- Confusion – duplicity, weasel words, Don’t think of an Elephant, psychology in marketing, clichés, generalisations, misinformation campaigns.

In my view, to consciously avoid these and other pitfalls requires skills and awareness to anticipate, recognise and name the potential, an ability to stay focused, make savvy judgement calls and step

back to see the Big Picture and make the commitment stick.

An example of diversion occurred 2 or 3 years after the book *Climate Code Red* was first published, when interest reached a peak and then completely dropped away; few people kept up the information or the advocacy contained in it and it just dwindled. Luke Taylor (Transcript, 2012, p. 2) suggests this happened because the people and effort needed to campaign and help people fully understand the immensity of the predicament ‘got a little side-tracked,’ the focus moving from the details of the climate emergency itself to the easier topics of ‘*How do you campaign on the climate emergency?*’ To alert people to the message, the thinking was that it had to be *attractive* and so it moved to *sustainability solutions*, ‘*clean energy*’ and the *end of coal* in particular, rather than presenting *the full extent of the climate emergency*. Engaging with people around the complexity and enormity of global warming and its consequences and with the science which ‘proves’ it, is difficult, so these efforts lacked commitment, resources and, hence, dwindled (Taylor, 2012, transcript p. 2).

Piers Versteegen (Transcript, 2012, p. 6) finds it necessary to identify and avoid *false premises*; e.g., a widely-held opinion discouraging rational and effective change is that ‘*we’re just one small part in a whole complex system*’. Together with the assumptions that Business As Usual (BAU) governments have the power to change the economic system we operate in and that they are not doing things because they don’t want to, the path to a breakthrough appears blocked. It is critical to understand how such false premises undermine efforts reaching a breakthrough (Versteegen, 2012, transcript, pps. 10-11).

Monbiot’s ‘*infrastructure of persuasion*’ (2016) relates to the common saying about *Nero fiddling while Rome burns*; the pledges made at CoP 21 will never keep temperature increases within the range of 2°C above the long-term ‘normal’ (much less down to 1.5°C) and the current warming trajectory is more towards 3°C or even 4°C above normal. Acquiescing to persuasion that the (too weak) pledges would be equal to the (not strong enough) targets may or may not reflect political disingenuousness or corruption. Understanding our own and others’ cognitive dissonance is important; it can create apparent contradictions: was Nero’s fiddle-playing a way of coping, a display of cognitive dissonance because he was not coping or both? A key paradox implicit in the term was summed up in a short UK video discussion between Monbiot and Marshall (2015), revealing that almost all governments agree (on) minimising greenhouse gases and are, at the same time, attempting to maximise fossil fuel production. Ironically (although it’s hard to laugh...), the unresolved contradiction in UK Government policy sees its relevant department named the *Department of Infrastructure and Climate Change*, legally tasked with *implementing both sets of policies*. The 2015 Infrastructure Act (nb. adopted the same year as the Paris Agreement) makes



---

it a legal duty of governments to maximise the economic recovery of petroleum from the UK's continental shelf at the same time as the Climate Change Act 2008 made it the legal duty to minimise the production of greenhouse gases.

As a guest on George Monbiot's video show, George Marshall explained it is also important to get an understanding of the nature of our own and others' biases and how he sees climate change is a 'shape shifting' issue moulded by those biases (Monbiot 2015). While acknowledging the subject of vested interests, Marshall also suggests that "*Very intelligent and thoughtful people keep these things in different compartments in their minds*" (Monbiot 2015). They may perhaps be disingenuous and hypocritical, but compartmentalising and shape-shifting mould climate change into whatever shape one wants it to be; apparently, one can simultaneously be concerned and not concerned about climate change based on this disconnect – which goes right down the middle – shaping and moulding the issues according to one's own biases. It is, therefore, imperative for us to learn how to interrogate our own psychological predisposition to self-sabotage and self-blocking.

The connection between Marshall's description of the issue as 'shape-shifting' and the *illusion* of understanding the problem is also worth exploring. Believing that one understands the scale of the problem is not actually the same as understanding it; not fully understanding it shows up in the thinking that '*we can deal with it*' whilst *fully* understanding it exposes this as a *myth*. Many only go so far into the detail of the emergency believing they *know enough* rather than grasping its full scale. Yet to catalyse meaningful and timely action, the situation has to be *fully* understood; as Anderson (2015, transcript, p. 8) suggests, we (somehow) still believe we have time for incremental change: "*The language of 2° C is a level we think we can deal with. .... We should be aiming much lower.*"

Owning our biases is thus an important element in coming to grips with and fully understanding the problem. George Marshall's "*split down the middle*" (Monbiot 2015) which enables knowledge, facts and figures to be compartmentalised by emotions, biases and habits feeds into an unhelpful separation which needs to be bridged: owning them, exploring, accepting or changing them, identifying the needs and fears behind them, how our shared biases link with our need for inclusivity and identification with others, all require a high level of self-awareness.

Whilst it's not over yet and knowing that people *are* stirring and waking up, the above is just one part of the complex backdrop needed to understand how to initiate and support the change that's needed. Guiding people and groups through this terrain to meaningful engagement using skills and tools to help them stay on track is the ongoing work of each emanating wave of activity building and preparing the groundswell for the full scale emergency response.



Exploring mobilisation strategies naturally involved researching the wealth of knowledge and experience around non-violent and often highly creative *direct action*, Gene Sharp (1928-2018) being renowned worldwide for his expertise in the vagaries of waging *non-violent revolution* (Sharp, 2005) was part of that research. With a long career authoring and editing a plethora of books, booklets, pamphlets and articles, he established the non-profit *Albert Einstein Institute* (1983), aiming to advance freedom through non-violent action. His work was translated into 50 languages.

Ironically, Sharp was sometimes referred to as the *Machiavelli of non-violent revolution*. Niccolò Machiavelli was historically known for promoting the tough, pragmatic use of power, unethically if need be, to maintain it for the already powerful and he uses the notion of the *Precautionary Principle* (see glossary) for this. Intrigued, I considered how Machiavelli's use of cunning and duplicity to achieve his goal of an *economy and politics of violence* could in some way be strategically deployed to ethically achieve the safe climate economy goal. Machiavelli's 'ferocious sacrifices' and 'blood flowing on the altars' of then could now be about modern slavery, corporate duplicity, child-labour and ecosystem destruction. In the current context exposé movies such as *The Corporation*, *Rain Man*, *Merchants of Doubt* and *The Age of Consequences* revealing hidden agendas and the machinations and scale of the unfolding disaster seemed to point in a similar direction. In which case his proposed strategies and mechanisms, relevant to what is at play now, could potentially help inform benevolent strategies for necessary change. Indeed, some of the tools developed by Machiavelli suggesting how to take and keep political control are practiced and current to this very day and analysing, turning them around could create actions to serve positive, life-affirming, safe climate restoration.

Taking inspiration from Machiavelli and using his words, bending it to serve positive, life-affirming, safe climate restoration resulted in these ten approaches, some in current use and some fresh

- Identify and overcome tranquillising and pacifying effects which make us easy to be tyrannised;
- Value this world and its glories;
- Identify the cruel and bloody rites of "now";
- Identify the ferocious sacrifices of today's world;
- Use visually sublime messages to prepare people for sustainable living change;
- Change the subjective feelings and dispositions;
- Awake the energy of fellow citizens;

- Make ourselves free via passion - more alive, more ‘aggressively’/assertively free - not compliant;
- Identify and point to the ‘blood flowing on the altars’;
- Exhort pity for the perpetrator, pitilessness for the action and passion for the consequences, results and transformational change.

Even when some strategies and tactics feel counter-intuitive for non-violent social change, change knowledge practitioners are encouraged to look at everything and everyone, with an eye to co-option, adaptation, emulation or whatever it takes. As a depiction of ‘Emergency Mode,’ the untold story of the 1967 Manhattan Project is highly recommended reading for all transformative change agents. Looking from Gene Sharp to Machiavelli, from the activist movements of the late-60s to the present-day activist movements spreading and strengthening everywhere and from the 1948 Marshall Plan rebuilding Western European economies to 1970s Apollo 13 (covered in more detail below in 4.2.2) trawling for insights is useful. The Apollo Story gives a valuable account of ‘the behind-the-scenes story of one of humankind’s greatest achievements’ (and human capabilities) in which *failure was not an option*. In *Rules for Radicals*, (1971) Alinsky focused on ways the Have-Nots could re-appropriate some of that ‘Machiavellian’ power for a more equitable world. The level of transformative change needs to address the problem *and* move forward which may require a re-evaluation or redefinition of the concept of power itself, substituting *Power With* for the old paradigm’s *Power Over*. For planning to be optimally effective, participants in each campaign need to thoroughly understand the transition and vision they’re working towards too: “*Each campaign, each group, needs its own ten-year plan, walking the talk, immersing themselves in the transition.*” (Whitehead, 2014, transcript p. 13)

For change strategies to do the large and challenging work demanded by the threats and the ambitious goals for transformation and to assist in preventing people from getting lost and discouraged, change strategies need to be much focused.

This collection below, for example, represents some of the starts, suggestions and strategies that have evolved, been created, or could be adapted or proposed to either deal with the climate emergency or provide useful attributes and relevance to the circumstances this ‘campaign’ faces; the existential threat that it is.

Melbourne climate restoration – an unfolding movement;

Beyond Zero Emissions – a can-do vision;

Zombie Apocalypse – a horror model – a reality check;

Manhattan Project – attributes for Emergency Mode (EM) / Solution Seekers;

Virtual Houston – Open innovation / a brains trust concept;

Apollo 13 – an acute emergency / failure is not an option;

Marshall Plan – a post-war reconstruction plan;

South Africa – a civil rights revolution – consumer boycotts;

‘Albatross’ – one artist’s approach – connection and grief;

Twenty Mile March – a business change model;

Milosevic Out – a single-focus campaign.

We can surely draw on the COVID19 pandemic to learn about appropriate (and inappropriate) responses to a serious global emergency.

Planning climate restoration campaigns require practitioners who are analytical and willing to look at other campaigns and with the benefit of hindsight, trial concepts, adopt tactics and replicate successes. A key element is to ensure that people fully understand it and *never dilute the message*, whilst developing ingenious ways to raise the volume, broaden the campaigns, running climate emergency messages at all times everywhere. Going door-to-door, putting stickers everywhere, campaigning in traditional and not-so-traditional ways, have graphs to communicate costs and, as Adrian Whitehead emphasises, ensuring that expectations of losses and major wins are well-managed so hearts aren’t broken so people will keep campaigning.

Until now, the fledgling *safe climate* wing of the movement has focused on getting the information out and building the groundswell to create the ‘action mode’ that enables the work of *climate restoration*. As it gets air under its wings, Philip Sutton (2012, transcript (i) pp. 10, 23, 26) suggests that necessary skills, knowledge and attitudes need to be identified; finding, inventing, developing and building them as necessary. The wider-spread the groundswell, the more self-reinforcing it becomes as people get positive feedback from others and organisations in their local ecosystem of groups.

If it’s also able to be *exploratory, reflective and able to evaluate its own success*, the movement may develop a truly self-sustaining culture, from which a growing and sustainable resource base can emerge, including change knowledge developers and implementers, mobilisers and field workers, all fully aware of the implications of the predicament faced and the things in the way of restoration and positive change. An example of this is what happened when DuPont learnt to put the safety of its workers first. As a gunpowder producer from 1801 they became very good at safety for various reasons and had a hundred years head-start on this culturally. Either inventing methods or being an earlier adopter and with two hundred years of best practice, their safety record is absolutely

astounding. The only way they could achieve a really safe working environment is by treating safety above profit and everything else. They made it their number one priority and found ways to weave it into their business success. This had to come from management and then spread through the whole organisation. It had to be something that day-to-day profit making was *not* allowed to interfere with. Successive CEOs of Du Pont discovered there was kind of a method in the madness and every CEO who's ever taken over has kept the culture going regardless of what they first thought (Klein 2008).

Impatience is growing to see some leadership and a plan of action come about that addresses the economic risks, offers a better future for our grandchildren, protects coastlines and snow-topped mountains, and that keeps the world's human population stable; add onto these the calls for changes in the energy sector, in public transport, for more stringent controls of the financial sector, for airport expansions to be halted and for coal mining to be banned; and add also the growing frustration with obfuscation, tardy responses and BAU compromises: and all this impatience and anger can be usefully harnessed. Politicians and other powerholders – especially in the business and media sectors - receptive to the topic of an emergency response, few though they are, need to be proactively, vocally urged to lead. They and others who really should by now know the gravity of the crisis, need to be made aware of the short timeframe to accomplish change and encouraged to take appropriate action using their positions and roles.

On the other side of the 'power continuum', rolling out the mobilisation effort to a next wave of active people will mean to move beyond the silo of the workplace into the personal space of home and community, because success ultimately depends on being able to reach, build and galvanise *whole communities*, eventually gaining support from almost everyone regardless of paid employment and position; it means harnessing the active support and useful contributions of entire populations. The most important role for activists is building momentum for rapid transformative change, spreading it in all 'corners' and layers of private and public life. It would go well beyond the scope of this thesis to detail possibilities.

Some of the most radical, 'get to the root of the problem' things people can be encouraged to do include to:

- Disengage from the banks and superannuation that invest in fossil fuels
- Reduce and eliminate personal debt;
- Work less – drop paid hours of work – 5 days to 4, 4 days to 3 to 2 – make time for activism;
- Stopping the shopping – Reject rampant consumption, reject consumption beyond real needs;
- Question everything – reject the dominant paradigm, reject the dominant media;

- Speak up and speak out, be heard, be seen, stand up and be counted, united we stand - divided we fall, *nil bastardi carborundum* (Don't Let the Bastards Grind You Down);
- Increase hours for self, health, family, friends, community and planetary citizenship;
- Minimise ownership, maximise sharing – share, lease, don't buy;
- Minimise waste, repurpose waste as resources, develop an abhorrence (an 'allergy') to single use plastic.
- Especially don't buy new; buy good quality (not necessarily cheap) second-hand;
- Free-up from addictions – physical and psychological – detach;
- Live in connected neighbourhoods; contribute to community; exercise the right to participate;
- Eat local and organic food, eat a lot less or no meat; less or no dairy;
- Develop alternatives – develop community insurance, income support and other models;
- Be active, activate others, get better informed;
- Don't stop the stepping up – to living a (socially and environmentally) sustainable life;
- Understand we're all in this together and we're not there til the last person is over the line.

### 4.3.2 Our Capabilities

Mobilising generative servant leadership involves encouraging personal transformative change by building confidence in our human capabilities to deal with ominous threats, learning the change knowledge needed, understanding disaster analogies and the 'war footing' response. As traditional leadership continues to be withheld and preparation for an appropriate response blocked, the stage is increasingly set for bold steps.

Within the climate emergency response is plenty of scope for individual, group, community and whole-of-society endeavours and, for many, whether as a starting step or at some point along way, it may unlock personal transformative change. This sometimes requires attention for long-held attitudes, past experiences or emotional pain that gets in the way of action and needs to be healed. As intimated before, human beings have an impressive array of ways to self-sabotage and develop habit-forming practice, limiting ourselves and making us leap to wrong conclusions. Still, we also have capabilities we only just start to (re-)discover and that only now are being verified, notably through neuro-science, which offers greater insight into the workings of human action, thinking and how past and present relational practice and habits influence both. In his interview, Philip Sutton (transcript-i, 2012) strongly emphasised the huge impact self-blocking has on climate change action. He says finding ways to calm anxiety, re-inspire hope, consolidate determination and know how to identify and prevent self-blocking is extremely relevant and important to this work.

Personal change and transformative healing are powerful parts of and steps towards ‘*changing the world*’ for several key reasons; drawing on his own experience, Chris Jordan (2014, transcript, p. 7) has found that personal energetic transformative change happens internally and is “*the one thing in the world that we do have control over*” (2014, transcript, p. 7); and it can be taught and supported. Jordan’s proposed overarching, multi-level strategy posits that some of the work we need to do is at the individual level, in our personal lives, which also becomes part of our collective work on behalf of all sentient beings - changing the world becomes *dust after the fact*.

Exploring our way in and finding the detail in the big picture with a clear, uncompromised focus and a long-range view requires our blinkers to be removed. The “*cloak of horror*” Jordan suggests we are all asleep in and that ‘protects’ us from the truth of the consequences of our own actions and inactions, needs shrugging-off; not comprehending that our mass consumption contributes to our *disconnect* from the world we live with and we all live in it. His work is about educating for a sustainability-generating culture and helping the world to understand; as we grasp the magnitude of the pollution we are complicit in creating, many will be exposed to the deeply uncomfortable emotions that realisation will elicit and supports must be at hand. The largest ocean garbage patch is three times the size of France. It contains 79,000 tons of waste. The loss of that connection and avoidance of the associated emotions is very evident at present and nowhere more than in the “*I’m all right, Jack. I’ll do stuff when everyone’s doing stuff*” (Whitehead, 2014, transcript, p.6) attitude.

Awakening to the magnitude of the unfolding disaster can be painful; telling their stories, many people help others work through their ‘eco-anxiety’ also giving others permission to use their own voices. The story of someone else’s struggle through conflicted feelings can be inspiring, liberating and empowering and Jordan’s woe to go tale, from soul-bruised lawyer to wide-awake artist portrays a humble man of wisdom now sharing his understanding of grief and love, compellingly told through his movie, *Albatross*. Psychological support and guidance (*e.g. by Psychologists for a Safe Climate*) assists in facing facts and fears, in grieving and, crucially, in staying connected.

Fearful overwhelm saps energy from the movement, distances people from the very sources of connection they need and blocks useful action. A form of despair, overwhelm can disable, immobilise and paralyse, but fear needs to be moved through courageously - burying it being more dangerous than facing it. As George Monbiot suggests: “*To be at peace with a troubled world: this is not a reasonable aim. It can be achieved only through a disavowal of what surrounds you. To be at peace with yourself within a troubled world: that by contrast, is an honourable aspiration.*” (Monbiot, 2016, p. 14)

Connection with nature - whether the scale of tragedy or agonising beauty of it - is a key ingredient needed to create vital action as Chris Jordan (2014, transcript, p. 1) discovered; “*When we feel*



*something we act*". By looking at horror and beauty together, we can grieve and feel love rather than despair. We can learn how to not live in fear of sadness; learn to understand grief.

Even the examination of self-blocking can be blocked; sincerity in the quest to uncover self-blocking requires facing the honest truth about how prevalent it is in our daily lives. The Jo-Hari window (see glossary) shows that everyone nurses blind spots about themselves at least some of the time, being unaware of their self-blocking. Whilst the little procrastinations can be harmless, when it comes to action in an emergency involving serious threats to life, positions held stating *'I'm not ready yet'*, *'I'm not up to this'* or *'I'll only act when everyone else does'* are harmful to the holders' own families and the world. *Normalising* self-blocking on a mass level in the face of an existential crisis has grave implications impacting on all – being simultaneously suicidal, genocidal and gaiacidal.

There are four analogies that are frequently used to illustrate the argument that we, humans, can rise courageously in the face of looming disaster. Some may feel counterintuitive because of the historical context in which they occurred.

1. *Apollo 13*, the story of a multi-module spacecraft with three astronauts launched in April, 1970. What happened when an explosion disabled the spacecraft led to a prime example of human capability of 'acting under distress,' solving extremely difficult problems never before encountered. The harrowing experience of the Apollo 13 crisis came with no simulations or precautions about this problem before it was encountered; as with human induced climate change, it was unprecedented. The amazing achievement involved in getting the crew safely back to Earth is an example of what humans can do under the most daunting of circumstances. NASA's now famous pronouncement, *'Failure is not an Option'*, became an antidote to self-blocking in the rescue mission. The commitment that ran throughout the NASA program was solid – an underlying moral imperative; from the start in 1961 and all through the Apollo program it was understood that no human life would be sacrificed for the sake of the space program or any other grand idea. The astronauts in the crippled ship and the phenomenal think-tank team of about 70 NASA experts – technological 'nerds' and spacecraft simulators – at their Houston desks set to work to deliver success against all odds, solving one problem after another. Without a manual to cover the situation, with bits and pieces of string and cardboard, ingenuity, pure luck and sheer genius, they surmounted the seemingly insurmountable utilising the gravitational force of the moon as the one-chance to slingshot back into Earth's atmosphere at exactly the right trajectory. Of course the only people who could actually *do* anything to get them back home were the astronauts themselves, as they were in charge of the spaceship. They were able to relay problems at the whole think-tank team back on Earth and a large network of experts trying to figure out solutions. Suggestions



sent up to the astronauts would have been received as optimally credible and so would have been fully considered by them based on their own first-hand knowledge right till it became evident that it would or wouldn't work. The faith and trust in the intelligence of their team and each other was based on the credibility of NASA's high technology and brainpower leaving no doubts, suspicions or credibility issues. (Murray & Bly Cox, 2004)

The 'Apollo 13' movie spread the knowledge of that experience far and wide but even without that background knowledge, Sutton (2012, transcript-x, p.1) finds that people *love* to hear that '*Failure is not an Option*'; "you can almost feel the cheer come out of them", he says, "a rallying call no-one wants to ignore, not while there is a chance, no matter how slim." Sutton (2012, transcript-x, p.2) suggests that we must begin to look at the *mechanisms* we need to employ to work through the challenges. Linking '*failure is not an option*' to the problem of self-blocking is a good idea; in the Apollo 13 experience and in the climate change crisis, losing valuable time by giving only half measures or worse is not an option; delaying the prioritising needed to actually solve the present problem will *ensure failure* ... which is not a good option to countenance!

It also illustrates the real psychological benefit of having a credible and trustworthy support team available; psychological support is a vital ingredient in a crisis and the mere existence of a "*support team*" can assist in breaking through impasses and reluctance. When a proposal meets resistance or falters for lack of time or resources, the mere mention of such a team or the offer of extra persons can unlock the block and assist in getting something over the line. Even when it turns out they weren't practically needed, Sutton (2012, transcript-xi, p.1-2) suggests, they may be psychologically needed, giving hope, a sense of momentum and that giving it a go is worthwhile.

Simulating and comparing can be useful in a range of ways; political approaches elsewhere that have been shown to work, even in a different context, and designing similar strategies for a political process that could work elsewhere may be useful. Step one of a '*Failure is Not an Option*' approach and attitude starts by looking at the self-blocking mechanisms; the Climate Mobilisation organisation in the US regards this as a vital step too. Margaret Klein Salamon (2015, transcript, p.2) suggests helping people identify their core values and then consider how their actions support or contradict them is part of the work of connecting with people, one by one or collectively, and Chris Jordan goes further, saying that people actually crave to face the issues (Jordan, 2014, transcript, p.3); they want to quit denying. C.Jordan (personal communication, February, 2014).

Relating this back to an underlying unifying ingredient – the *sense* of a moral imperative – this first vital step asks questions such as why this task exists and, as Luke Taylor (2012, transcript, p.1) identifies, helps people gain individual clarity on what it is they want to sustain and why. Then, oscillating between an individual, values-based perspective and a shared, strengthened sense of connection, conviction and of ‘we’ are important ingredients in creating courage and resilience to respond sensibly to new challenges as they arrive. (See Appendix 5: To achieve shared conviction) Current urgency is highlighted with each new climate-based disaster, as mounting problems following with ever-more intensive ferocity and heightened frequency provide wake-up calls. Yet, as George Marshall suggests, survivors with little choice but to rebuild in the same spot may have to and so can ignore climate change when looking to their futures (G Marshall personal communication at Breakthrough’s Melbourne Roundtable ‘Strengthening Support on the Right for Climate Action’, 2014). For others, it may be harder to *not* see what’s happening; for them, as rusted-on politics and the usual solutions look increasingly senseless, the search for something relevant will start to commence in earnest. Specifically focused change strategies can support some of them into their most useful or preferred form of activism.

2. Second – the Marshall Plan (see below). Although most of us were not alive during World War II, it is the most frequently used analogy the climate change movement can and does draw on. Known to many government decision-makers, corporates and elites in the 50+ age group, the Marshall Plan communicates well the scale of (re-)construction needed for the infrastructure of, for example, an economy based on renewable energy. For younger people, such comparisons need to be explained or better ones found, to illustrate how strategic optimism and justified hope underpin solution-oriented engagement.

It takes a certain type of courage to consider some of the frightening scenarios that could plausibly prevent action on climate change; fascism has been described as “capitalism plus murder” by Upton Sinclair (Brainy Quote) and Adrian Whitehead (2014, transcript, p.4) believes fascism to be the biggest threat to worthwhile, values based movements. Were it to prevail, all other ‘movements’ would be jeopardised or worse.

Anderson (2015, transcript, p.5) prefers the more positive and less complicated language of the post WWII Marshall Plan as a time of leaving war behind and of rebuilding; US Secretary of State, George Marshall, was the architect of the reconstruction plan named after him, a way to help European democracies and Japan to recover politically and economically with US money whilst complementing the Truman Doctrine of holding back communism.

3. The war-footing analogy. We are, however, in a global crisis not a ‘world war’ (not yet at least); indeed, *The Age of Consequences* movie provides entwined and compelling evidence of climate change as a ‘risk multiplier’ par excellence. Such movies can open up vibrant discussion exploring the gap between how moral we think we are and how our actions and inactions affect others. Viewers of this movie are typically shocked with the undiluted information and undeniable images. Few knew that India has built a razor-wire fence around Bangladesh. To convey the urgency the world needs to adopt to address the crisis, no better term than ‘war-footing’ has yet been found. However objectionable the war analogy may be for many, the crisis of climate change now being faced is one of equally epic proportions or worse and the luxury of shying away from the comparison with the spectre of terrible war is not available. The war analogy problematically suggests clear divisions with ‘sides’ and ‘enemies’ – whereas in the climate emergency case, all ‘sides’ have to come together onto a war-type footing if the problem is to be solved. Empathy is needed here but unfortunately and unsurprisingly, it seems that the higher the stress the lower the empathy. How much are we willing to do on behalf of others? Research shows stress raises cortisol levels in mice making them less empathetic to the pain of their fellow mice being tortured. Our self-interest and lack of empathy could be partly due to our modern stressors and the potentially higher cortisol levels in our blood streams. (Wohlleben, 2016, pp.133-8)

Not so long ago, the energy transition could have been easily managed by governments and the impacts of climate change might never have been felt and all this engagement and activation might have been avoidable. Sadly, having left it this late, few comparable examples of the level of threat beyond ‘war’ communicate the speed and scale of what’s needed now. Illustrating the relevance of the war analogy: in the early 1940s, the American economy switched from peacetime manufacturing of white goods and cars to wartime manufacturing of fighter planes and war machinery almost overnight, which is the speed and breadth of the change required now, having left it so late, to restore safe climate conditions.

The war analogy is, however, further problematic as the threat currently faced feels less ‘present’ than when bombers flew over the English Channel; as well, a defined ‘enemy’ galvanises action, whereas with climate change, the ‘enemy’ is every-day rampant consumption of ‘stuff’, essential and non-essential services dependent on fossil fuel energy, and those who profit from it. Given this, who isn’t in the frame and doesn’t have to change to be part of the solution? In war, sights and sounds catalyse action, whilst with climate change the impacts are cumulative and have been harder to detect, creating an illusion that action to avoid them they can be postponed. The full brunt of the carbon *already in the*

*atmosphere* is yet to be felt, making terrible climate disruptions now unavoidable, whatever happens.

The best-case scenario is ‘reversing out’ of the problem, reducing Earth’s temperature fast, enabling the climate to begin to restore and managing the now unavoidable impacts as well as possible. Hence, there’s need for an intense period to immediately set in place the necessary economic and technological mechanisms as well as evolving the necessary values and behaviours. Although technically not at war, we do have very real national security issues to face locally and globally – as compellingly outlined in *The Age of Consequences* video and Luke Taylor’s (2019) *Homefront* documentary – and oligarchs, plutocrats, corporations, governments and elites have to be brought around so they stop obstructing and start addressing the problem.

4. Fourth – the Manhattan Project; several years before the Marshall Plan was devised and instituted, another wartime episode occurred even more highly relevant for its urgency, audacity, enormous scale, weak starting point, its support modalities and how it played out. As the most controversial comparative example, the Manhattan Project was eventually successful. The consequences though, were devastating. Drawing on this example is useful, however, for the examination of human capabilities; when faced with the prospect of Hitler’s Nazi Germany developing the atomic bomb first, capabilities people never thought they had were uncovered – parenthetically and paradoxically accompanied by a now ever-present threat of global nuclear disaster.

*The Manhattan Project, The Untold Story of the Making of The Atomic Bomb*, as author Stephane Groueff (1967) documents “[t]he venture ... represents, in the opinion of most engineers, scientists and industrialists interviewed.... the greatest single achievement of organised human effort in history.” (Groueff, p. 12)

At its starting point, 16 scientific hypotheses for the splitting of the atom were being researched; by May 1942, “research on five different methods was considered far enough advanced to justify a large-scale production attempt.” (Groueff, p. 9) The order was given to move out of research and development mode and start building large-scale production facilities. (Groueff, p. 6) The urgency sunk in and scientists “abandoned their usual method of inquiry,” (Groueff, p. 11) proposing the project switch from looking for the *best* technology to finding the *fastest* technology. Approved by the military and quickly agreed by President Roosevelt, full attention would be given to the five most promising theories: “It was obvious that the chances of success, or rather the odds against each of

*the five processes, seemed essentially equal.*” (ibid, p. 11) For three intense years a colossal effort ensued, but on 6 August 1945, the first atomic bomb decimated Hiroshima, with a population in 1942 of 419,182 children, women and men... producing an horrific price for ‘success’...

A national Emergency Response needs leaders; transposing the learning from the Manhattan Project onto the climate response necessities of the present is helpful in exploring leadership and other roles necessary to bring about success. In Groueff’s (1967) account of the project, General Groves held a pivotal role in the context of the emergency response-in-action. A younger man in his mid-forties, Groves was a contemporary of General Marshall and employed in the military; the son of a minister and dedicated to serving his country, he was described as a cold, controlled, slightly aggressive go-getter who could get things moving and done. (Groueff, 1967, p. 7) He had great will power, appreciating that the country’s leaders were determined to go ahead no matter what the obstacles or risks.(Groueff, 1967, p. 12) Convinced of the urgency, he set to work even before his appointment became official, getting the project promoted to a top priority rating immediately reducing the large, cumbersome Military Policy Committee to only three to avoid delays and prevent it becoming a hindrance to the project; he was already operating in *Emergency Mode*.

When the pressure is on and preparation has been neglected, the steps left to take have to be bold; realising that a project to reverse global warming has yet to be comprehensively ventilated, that research on how to draw enough carbon from the atmosphere or to cause the ice to re-form at the poles has still a long way to go or has barely begun, and that there are no institutions specifically established to govern decisions and consequences of such projects and research, causes great dismay and frustration amongst safe climate restoration advocates in the movement. Similarly, when Groves realised that no theory was ready for production and that the whole project was in an embryonic state, he was bitter and alarmed. Demonstrating tremendous self-confidence and determination, he readied himself “*to take the tremendous risk of putting everything into high gear simultaneously, to gamble by taking bold steps without waiting for the previous step to succeed.*” (Groueff, 1967, p. 16)

Today, as we arrive at 2020 with ‘no theory’ for climate restoration developed and ‘ready’ to be tested much less applied, and in the absence of a Roosevelt, a top priority military project and any government coffers on offer to fund it, a bold new approach is needed – and the search for people and systems with the capacity to engage such approach should equally receive the highest priority.

### 4.3.3. Our Resilience

Sustaining motivation for the long haul means building our resilience. This includes contending with fears and excuses, filling knowledge gaps, accommodating multi-faceted campaigns and learning to ride the ups and downs.

The challenge requires a collective response on a political scale manifesting as *representative democracy* with all its faults. Piers Versteegen (2012, transcript, p.10) posits that we need to reclaim democracy from the power structures that have evolved around capitalism and the private sector:

*Even when there's a strong political will and people are elected with a strong intention to do things, the institution of government actually doesn't have the power ... to change the economic system they are working in. They have actually substantially, over time, relinquished that power to the private sector. (Versteegen, 2012 transcript, p.10)*

Governments need to be re-empowered and enabled to create the needed changes to the economic system which they lack currently. Political decisions and their outcomes are at present not made by rational individuals; rather, they occur as outflows of how the economy is organised and operates. On the other hand, enabling really important political change is a slow process, "*certainly not fast enough for the transformation that is required*"; even with high levels of political will to make a difference, it is made difficult by conservatism built into the system and its bureaucracies.

The culture of the public service is framed on a *retrospective view of risk*, fearful to take risks and to get the blame for unintended but always present consequences, the risks are not taken and change is blocked, which is why Versteegen favours operating at an institution to institutional level rather than between individual actors. Indeed, work on Climate Emergency issues is ruled by the need for great speed; the right reflexes will become more obvious when the appalling situation is fully understood and the approach to get out of trouble is finally adopted.

The Manhattan Project was a project of the US government and constrained by great secrecy; Australian governments, in contrast, often undermine the work of climate restoration as it is barely recognised as necessary and constrained by many silences.

Looking at the movement and activist side of the work, training mobilisers to be prepared to stay the course is essential. Many are resistant to getting involved at all; whilst elsewhere people can justifiably be fearful of violent reprisals. That still is not the case in Australia, although, as time progresses without much relevant climate action, consideration of actions which may incur police responses is growing. The present problems in this country, in my experience, is



people's apprehension to get involved as they don't want to be saddled with the ownership of and responsibilities for a project that may *take over* their lives.

My own experience and my research observations are validated in discussion with peers in this work. They may have direct experience or observe this in their work with others. Many people participating as volunteers find their creative input is under-resourced and it is left to them to build the momentum around. While this is easier to achieve with the colourful / fun / rewarding activities such as protests, stunts, posters and short campaigns the converse is true with other essential work. The background work, the 'grunt' work and the low profile less visible work are less enticing and these positions are harder to fill and keep filled for these reasons.

Engagement in voluntary work is about motivation, experience, skills networks, personal style and the ability to gain satisfaction from creative self-expression. Without a salary on offer, volunteers are drawn to developing and implementing their own ideas and restrict their commitment to part-time. The person initiating the idea often has to stay the course either as driver or mentor, working with people, helping them become and remain engaged. It's about seeding, watering, nurturing, doing grunt work, developing relationships, establishing credibility, communicating a sense of value and breathing life into the action until it builds its own momentum.

There clearly is a level of urgency with a time-awareness challenging 'mobilisers' and 'change knowledge implementers' to balance the stresses of their everyday lives with the demands of the circumstances, to learn how to 'hasten slowly', not waste precious time and to not 'act in haste; repent at leisure'. To be usefully contributing for the long-haul requires learning how to hold the space with a degree of equanimity, without being consumed by frustration or debilitated by eco-anxiety – a tall order. Developing a good *understanding of what's getting in the way*, the blockages and what can be done about them, can assist activists in managing for the long haul. Sutton (2012, transcript-xi, p.2) suggests that a logical cascade of currently existing '*why not*' blockages to change strategies need to consider the following:

1. Many people still don't know the problems; *so a Climate Science program is needed.*
2. Many think it's a problem but for the future; *so the How Fast work is needed.*
3. Many think it's a problem and urgent, but see no technical solution; *so the Technical Solutions are needed.*
4. Many think the technical solutions are there, but see no way an economy can be run like that; *so Education on Economy and how it can work is needed.*



5. Many know we need to do it fast and that we have technological solutions, it's economically doable but without the right sort of political culture, it's not possible; *so* work is needed on *Activating the New Political Culture*.
6. People think political culture is dependent on leadership; *so addressing Leadership and the lack thereof* becomes critical.

If answers are found to all those “*why not*” questions, the transformative change initiative is likely to advance; if the blockage is that “*politics can never deliver this*” and the prevailing political sphere works actively against change, the need to tackle the political culture is paramount. As this ‘*cascade of blockages*’ is located in *how people think*, it is essential to understand the psychology undergirding the problem, the rational argument, the negotiation issues of power and paradigm shifting and the politics and to give consideration to what can be done about those.

Melbourne-based *Beyond Zero Emissions* (BZE) is a case in point; evolving from a small ecology of groups with similar climate restoration visions and with many of the same people involved, “... *very positive, solutions-orientated and actually grounded in the real problem, so they had both the motivation of the positive and the motivation of the negative*” (Sutton, 2012, transcript, p.4) BZE is one of the few organisations that demonstrate that it fully understands the extent of the crisis (*the what*) and the fact that we know what has to happen to fix it (*the how*). It was originally ‘bootstrapped’ from within its own fledgling organisation and by the other groups focused on the same understanding until it reached critical mass and a level of robustness. A deeply-held attribute of humans is that they tend to not believe something until they see it; BZE’s addressed this by talking about technologies that already exist: “*the solution involves doing stuff that we know can work*”. It involved a process of reframing, collating, innovating, packaging and bringing in some new thinking, eventually arriving at a good formula for involving lots of people, hanging onto their core commitment without watering it down. A project management approach and giving people a role to play combined to create a good point of connection. They also had the technical genius of Matthew Wright, the organisational genius of Mark Ogge and the generous assistance of Climate Emergency Network (CEN) with privately donated money and, for a short but critical period, a bit of advice from Philip Sutton and Carol Ride..

In the US, Margaret Klein Salamon (2015, transcript, p.2) is keen to see *The Climate Mobilisation* (TCM) build greater momentum. Her story of activism is one of engaging initially through her blog, the Climate Psychologist. As she explored her own perplexity in the responses she was observing in her psychology practice, she also nurtured her own growing conviction that a strong emergency based campaign was needed. Along with Ezra Silk, she founded TCM on the premise that society’s

alternative to rapid transformative, sustainable-living change was, quite simply, to crash. The campaign invokes the story of Uncle Sam's call to patriotism to stir up the response she's looking for in as many people as possible. It won't appeal to everyone, at this stage it appears nothing will appeal to everyone, but it resonates with growing numbers and has the effect of drawing out the previously untapped activist in many of those reached (Klein Salamon, 2015, transcript p.2).

Salamon believes TCM's *Pledge to Mobilise* could very well go viral in Australia and elsewhere. Designed as an easy step between individuals and their most 'accessible' local people – friends, families, neighbours, church groups – it gets the national and international massive change underway and can build a strong sense of community and collective action. The Pledge and the TCM campaign also offer a simple practical Guide to Actions required, which sometimes have the effect of turning previously uncommitted people into seriously dedicated activists and “... *that is really... more than anything, what we need. We need lawyers, all sorts of people and skills. We need people to wake up in the morning thinking about this and thinking about engaging with it*”. With the creation of TCM, Salamon stepped into the 'big picture' and onto the US national stage catalysing political activism, one example of the emergence and development of an organisation and mega-strategies designed to deliver the rapid whole-system transformational change that my inquiry sought. Playing a pivotal role in their early framing of campaign goals and strategies, the strong international link Philip Sutton created between TCM and RSTI in Melbourne has been continuously reinforced. Appealing for urgency and a *war-footing*, the TCM message is designed to penetrate into people's every-day lives, to rattle routines, motivate and catalyse action, intending to revive a sense of engagement and of '*we're all in this together.*' (Klein Salamon, 2015, transcript p.2)

How to move into high gear is one of the lessons to be learnt from the Manhattan Project; Groves' idea of urgency was to *not* “*go along at a relaxed, academic pace*” (Groueff, 1967, p. 17); he expected everyone to be working “*harder than ever before in their lives*” and was “*dumbfounded to learn that the labs were closed on Sundays and holidays.*” Imagination has an important role to play. Transforming our entire society in 10 years seems a tall order, many saying it will take 30, but imagining the 'project' being run in 3 eight-hour shifts a day suddenly makes 10 years look achievable. The Manhattan Project started with sixteen hypotheses. Having narrowed it down to the five that showed the greatest technological promise, Groves had then to evaluate the feasibility of the five by looking also for common sense, a sense of urgency and “*harddriving*” leadership. On that basis he then jettisoned the weakest of the 5 and work began in earnest of the four all round strongest hypotheses that remained.

An essential ingredient for success is *receptivity* and even skilled campaigners may benefit from

good mentoring; for instance, when planning campaign steps, it is important to guard against vulnerabilities created by overextension. Business methodology indicates these are less apparent at the time of a boom but become very clear when the difficulties are struck. The challenge is to work out how to ramp up to get an adequate level of performance that is high but not at the level of over extension. (Moore, 1991) As Sutton proposes the building of skill sets for goal-setting, organising, strategising, non-violent creative action, building and maintaining momentum, empowering, supporting and managing expectations and the value of self-care has to be factored in. Determination and passion need to be supported to avoid losing valuable contributors through burn-out and overwhelm. The work is better served by courageous people who practice self-care and who are therefore more likely to be able to continue for the long-term.

A comprehensive list of things to do to protect against over extension, Sutton's 'Do' list of the steps that can be taken to avoid this vulnerability are as follows:

- 1. Do create an internal organisational definition (goals, objectives) enabling proactivity and ramping up of capacity in good and bad times;*
- 2. Do use constraint in good times as protection against the vulnerability of over-extending;*
- 3. Do manage growth rate to maintain high quality aspects of the culture;*
- 4. Do bring in more people without being swamped;*
- 5. Do protect the culture of the organisation by resisting massive recruitment growth that can bring in elements that undermine the original strengths;*
- 6. Do manage expansion, restricting debt that can create vulnerability in a financial downturn;*
- 7. Do maintain a certain amount of determined application through the highs and the lows.*
- 8. Do build resilience and capabilities to handle the bad times and*
- 9. Do ensure there's always something positive to be working on throughout the whole process so people don't get knocked-off course or lose hope chasing upsides or when suddenly things go bad.*

Mentioning the South African anti-apartheid struggle, Taylor (2012, transcript p.8) sees the alliance formed being between *anyone up for supporting the goals* as several streams including civil disobedience, the militant MK Spear of the Nation, the UDF and the ANC and the international Free Nelson Mandela campaign. He suggests that to be successful to the necessary degree, we need to have similar co-existing campaign streams, stressing he is not advocating a *militant* campaign; the Australian movement tends to understand itself as a *civil* campaign, but realistic action is needed and different streams for mobilising people and community, working at the political and international level exist as well; a structure is needed to accommodate multi-level organisation. (See Appendix 6) Still, as well as groups working with what they have, know and trust, time spent filling knowledge gaps, especially in the science of climate change and restoration, is time well spent, including preparing tactically pessimistic and precautionary *Crisis Plans*. (Randers & Gilding, 2010)

Another vital skill related to resilience is *fear management*; Chris Jordan (2014, transcript, p.5) finds the empowerment derived from understanding our many fears liberating. He believes that looking at horror and beauty and grieving together enables the feeling of love rather than sadness. One of his awareness-deepening practices is disclosing his personal story of coming through a crisis of self-doubt and the pain of facing his fears sharing his journey and some of his experiences in nature since that awakening. He made a movie ‘Albatross’ (2017) filmed on Midway Island deftly bringing implications of the Pacific ‘Garbage patch’ into the viewer’s consciousness as we gaze through his lens, examining the plastic-filled stomach contents of dead chicks and then look into the trusting eyes of the beautiful Laysan Albatross.

Jordan (2014, transcript p.2) says: “*The most heartbreaking thing about being human is to see the potential and wonder how to spread awake-ness.*” The challenge is to find how to communicate the feeling of liberation from fear. He says taking action is liberating, freeing us from fears and creating a sense of integrity. Together we identified quite a list of fears a handful of which are briefly mentioned here:

### **Fear of grief.**

Disconnection from nature and fear of grief block effective action; Chris Jordan’s (SLF presentation, 2014) *call to action* is to collectively grieve all that is being lost. He dreams (SLF presentation, 2014) of finding ways to remember the “*sacred miracle of our world*”, wishing we could cry together, have ceremonies together in small and big groups, wishing that countries could together grieve all that is being lost; those of us mainly of the first world could then remember what we have forgotten, how much we love our sacred connection with our mother. “*If we could return to that state collectively, then solving those problems out there would be easy, fast and fun.*” (SLF presentation, 2014)

**Fear of responsibility.**

What often comes up in conversations – striking a subterranean blockage of resistance – is the sense that we each are expected to be personally responsible for trying to save the world. Even though we do share this responsibility, no individual or group could by themselves save the world. This fear gets in the way of reprioritising and consequentially stepping into more relevant ways of being.

**Fear of commitment.**

A common experience is that the level of immersion required in this work causes suffering, including for family and friends. This is a matter of degree and timing; once in a while and throughout history, the result of immersion became genius... For the highly committed, dedicated stalwarts, their sheer single-mindedness was so strong it delivered something that *'a mere mortal'*, an *'ordinary'* person wouldn't be able to do; but there also are legions of ordinary heroes - as illustrated so well in the 2014 series *Cosmos: A Spacetime Odyssey* with Neil De Grasse Tyson.

**Fear of loss of life-balance.**

Many people hold expectations of a balanced life, a job description with boundaries allowing one to finish at the end of the day after a *'fair day's work'* and get paid for it as well. That model rarely applies in this safe climate restoration field; it is a lucky activist who can bring things together receiving support without untenable compromises.

**Fear of other people's fear.**

A common argument about the effect of fear is that it de-motivates; it seems that fear of other people's fear is playing a part in this thinking. There are also occasions when fear proves to be motivating and, clearly, since at least 1992, the global warming situation is fearful; as Salamon (2015, transcript, p.2) asked, *"Have you ever met someone who's really dedicated to climate change who doesn't understand the situation?"*

**Fear of rejection and other repercussions.**

Speaking unpopular truths can create resistance and trigger deeply held personal fears; but they can be broken down and managed, even overcome.

Other self-blocking fears I identified include Fear of Loss, Fear of Fear, Fear of strong Emotions, Fear of Dystopia, Fear of Government intervention, Fear of Complexity, Fear of Overwhelm, Fear of Inadequacy, Fear of Making things Worse. One of the most debilitating fears to succumb to is the Fear of Failure – of losing the battle - so one can't even imagine winning.

In my own case, I found my accepting the minor role of spokesperson for the Ground Bird and other sentient beings (Chapter One) gave me the *permission* needed resist that fear and to speak up. Later, I found the *courage* needed to *Look the climate change Tiger in the Eye* and not give in to fear was also available in other intimidating situations. The need to raise the alarm and be heard also made speaking-up, although often challenging, easier than turning a blind eye. The more I studied and learned, the more certainty I gained that acquiescing was not an option and that I needed to educate, repeat, reframe and refuse being silenced.

Monbiot (2016, p. 5) speaks to the importance of countervailing voices. *Being unafraid to stare down opposition* (Forever Swarm's Principle no. 7 – as mentioned in Chapter 3) is vital and as opposition can get stronger in the absence of strong resistance, deliberately breaking constructed silences became a calling. After years of railing in frustration, I found the deep immersion and indwelling of the heuristic investigation offered a way to sit with, work through and better understand the complexity. I began to find some peace.

#### **4.3.4. Change Knowledge**

Change-knowledge capabilities are needed to resolve excuses, mobilise courage in one-another, convince people to take action, to gauge necessity and achievability of efforts; identify where they strategically fit in the 'big picture', build potential bridges – local and global - and to scope the scale and pace of implementation.

Activists need to be able to hear the excuses people make and respond with logic and, if an underlying fear is detected, with empathy. Sutton (2012, transcript, p.3) suggests: "*It is too easy to say one person doesn't matter, that I am too small to make a difference. This is a big problem to be overcome.*" His rationale behind the excuse of '*Only one drop*' is that it will only make a difference when it occurs in an *ocean of change*. To this, Jordan (SLF presentation, 2014) responds "*Hundreds of millions of people together create a catastrophe and that means no one is too small to matter.*" The logical response is that every person pitching in when combined with the actions of millions of others creates positive change. What is needed is panoply of examples, many combinations of '*just one person*'.

Fully understanding the problem can help galvanise a strong level of commitment and, failing that, a weak commitment is better than none at all; it is a start and holds the opportunity that it can be deepened. Understanding the attributes needed and the social dynamics at play assists when trying to engage people and focussing on local action is a valid way to engage people and a proven



starting point for many. Offering people a sense that solutions are at hand, are scale-able and of a manageable size and have the potential to be rapidly implemented is crucial. Some people want issues to be local and projects like Darebin City Council's Solar Savers Scheme (<http://www.darebin.vic.gov.au/Global/SearchResults?search=Solar%20savers%20Scheme>) and the Transition Movement (Hopkins, 2008, pp. 93-103) attract enthusiasm; for others, *local* could be Australia or beyond and the work and optimism of organisations like BZE draw significant support, also identifying attributes necessary for involvement at this time. BZE intuitively understood that *quite often people won't own a problem until they think that solutions are possible*. They knew that the social dynamics tend to drive these things and that by having at least dealt with some of the big arguments about technicalities, they had opened many people's minds to be prepared to understand the science of it, which made that work so critical and such a high priority. The engagement and traits of those starting BZE and how it emerged from the '*eco-system of groups*' together focussing on the reversal of global warming is instructive for the '*how*' of this work. (See Appendix 7)

In the mid 2000's the ground for this local Melbourne-based eco-system was laid with some key climate science reports, organisations and initiatives providing some sense of how fast everything had to move. The next fifteen years were generative. ZEN (2005), BZE (2006), Global Climate Emergency Convergence (2007), The Big Melt (2007), Climate Code Red (2008), CEN (2008), SCA (2009), T10 (2010), Whole Systems Change Summit (2011), Breakthrough (2014), Darebin's Declaration of Climate Emergency and the first National Climate Emergency Summit (2020).

While laying a lot of solid groundwork for what was yet to come it is sadly true that much of the work of this list of organisations seeking to raise the alarm and kick-start an urgent response has been repeated here 10 years later as if nothing much has changed; Randers' and Gilding's *One Degree War Plan*, released in 2009, was even then bemoaning the absence of realistic urgency: "*While the increasingly urgent scientific warnings are causing rapid growth in the number of people who believe as we do, that we are already facing a civilisation-threatening crisis, it is not yet the dominant view*" (Randers & Gilding, 2010, pp. 2-3).

The authors anticipated the '*inevitable*' *Great Awakening*. "*While we contend this transition is inevitable, the timing is certainly debateable. It is our view that these conditions will emerge before 2020. For planning purposes, we are assuming 2018*" (Randers & Gilding, 2010, p. 6) but in the decade since the paper's release, the federal government's response has been woeful and Australia's greenhouse gas emissions continue to rise. In 2019 Australia was the world's third biggest exporter of CO<sub>2</sub> in fossil fuels behind only Russia and Saudi Arabia. (Kilvert, 2019)

Looking at Australian print media, it seems as if only a handful of people are occasionally beating



the drum, not at all measuring up to the scale of the threat, the speed of the decline, the urgency of a collective turn-around understanding and protecting the biosphere. Those awake to the predicament react with despair whilst it reinforces for others the mendacious message from the country's 'leaders' that *'It is all a mistake, there's nothing really wrong; there is nothing to look at here.'*

It has become increasingly obvious that an understanding of people's state of mind and being, and of society and the body politic in change-making, is centrally important. Even more attention in this area is needed, entering deeper into the biggest and most problematic schisms with a view to overcoming them – rather than just accepting or tweaking them – to ensure that the best scenario's positive tipping point be reached in time.

Fortunately momentum is building at the local level giving rise to some hope because federally it appears the will to act is still far from adequate to trigger the shift to emergency mode and onto a war footing to deal with the crisis.

The locally active grassroots present an increasingly different picture. The need for widespread, values-based transformative change, promoted for many years, has started being accepted at local levels triggering alarmed recognition and stronger action. Over the last three or four years local governments have been starting to go through the processes involved in stepping up.

Darebin City Council demonstrated world leadership on 5 December 2016 unanimously adopting a resolution calling for speedy emergency action, urging State and Federal Governments to declare a climate emergency and developing their detailed Darebin Climate Emergency Plan (draft). The Municipal Association of Victoria (MAV), the legislated peak body representing 79 local governments, in 2017 supported a motion (below) recognising the level of climate threat, the urgency for action and the possibility of restoring a safe climate.

*Motion 56. Climate Change. Submitting Council: Darebin City Council – That the MAV recognise that: (a) we are in a state of climate emergency that requires urgent action by all levels of government, including local councils; (b) human induced climate change stands in the first rank of threats to humans, civilisation and other species; (c) it is still possible to restore a safe climate and prevent most of the anticipated long-term climate impacts – but only if societies across the world adopt an emergency mode of action that can enable the restructuring of the physical economy at the necessary scale and speed; (d) the MAV has a particular role in assisting local governments in this regard. 77% of voting municipalities supported the motion put by Susan Rennie (Darebin).*

*The MAV's submission to the Government to Review Climate Change Policies, May*

2017, acknowledged (p. 5) *“There is an urgent need for the Government to show strong leadership, to trust in science, and to support regulatory settings that foster innovation and investment in clean energy. A steady, evidence-based approach that has bipartisan support is essential.”* and called for federal bipartisan support.

*“Climate change is an international, national and local concern and Victorian councils want and expect the Australian Government to develop policy settings that will ensure Australia can reach zero net emissions before 2050. (...) We call on the Government to develop policy that is informed by credible science and to become a leader in climate change policy.”* (MAV submission to Government to Review of Climate Change Policies, 2017, p.6)

Yarra City Council soon followed Darebin and Moreland City passing a motion of Climate Emergency *Recognition* in September 2018. Banyule achieved success late in 2019 and by then 78 Australian governments representing a total population of 6,677,161 out of a total of 25,120,231 (26.58%) had recognised or declared a climate emergency.

The US was quick to follow Australia’s lead with 5 local councils signing up and Los Angeles City Council, in April 2018, approved on a 13–0 vote to move forward with a plan to establish a Climate Emergency Mobilisation Department with authority over all other City departments and the city’s primary climate emergency advocacy group, LEAP, wanting to transition LA to carbon-neutrality by 2025. (BDC Network, 2018, May 7). (<http://www.bdcnetwork.com>)

As at 14 December 2019 America has 67 local US governments representing 22 million+ people out of a total population of nearly 330 million (6.87%) recognising or declaring a Climate Emergency while in Britain 398 governments representing 54,784,176 out of a total population of 66,436,000 (82.46%) have signed on.

Momentum has a self-reinforcing effect and active local groups always build their base around a project, campaign or tangible purpose; working locally engages and commits. The response quickly became international and is now rapidly gathering momentum. As of January 20th 2020 there are 1315 cities globally in a total of 25 countries stepping up for Climate Emergency Declarations representing 810,414,397 people.

Below are the current charts of the data from the International Climate Emergency Forum’s ‘Governments emergency declaration spread-sheet’ compiled by Margaret Hender for Climate Emergency Declaration and Mobilisation in Action and made available at [www.cedamia.org.au](http://www.cedamia.org.au). CEDAMIA, mentioned in Chapter Two, say *“if enough people demand it governments could declare a climate emergency tomorrow and we could all get on with the job of fixing it.”*

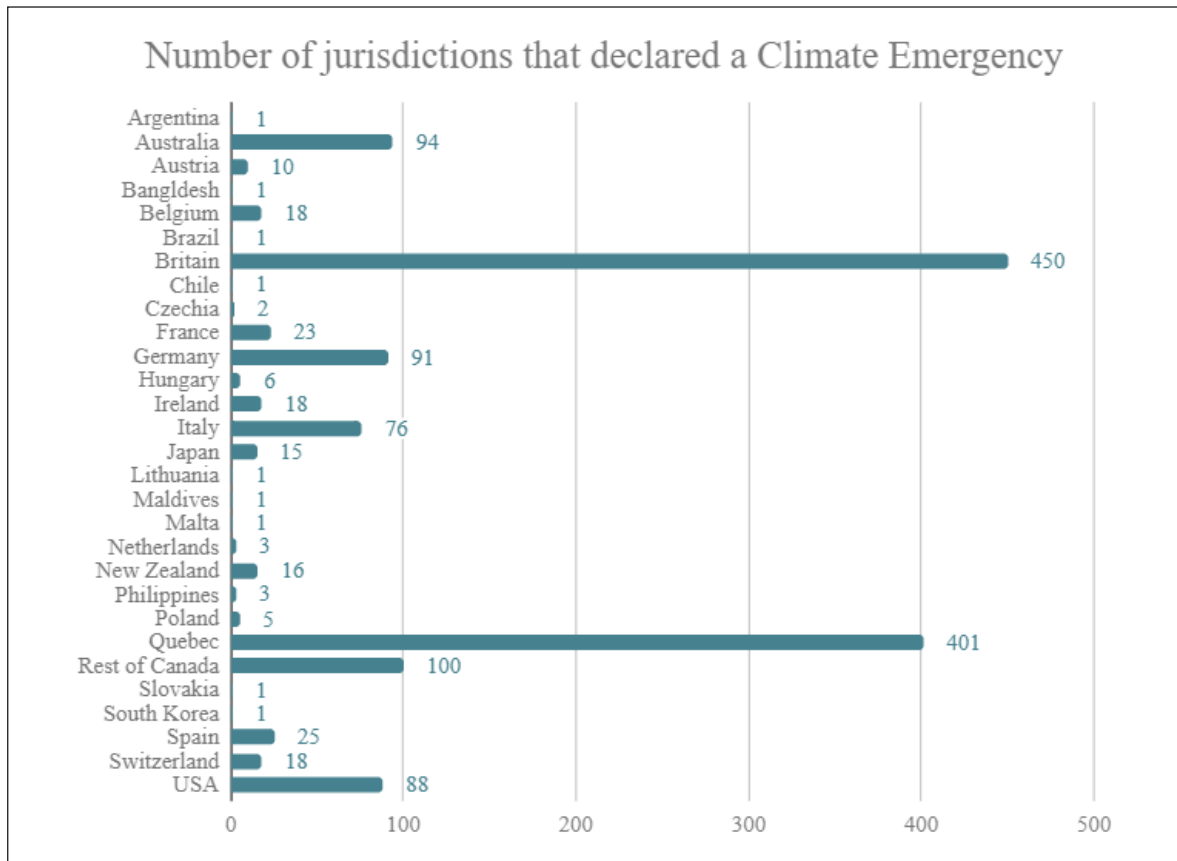


Fig. 22 Climate Emergency Declarations by country – Number of jurisdictions that declared a climate emergency. Embedded table from CEDAMIA 2020

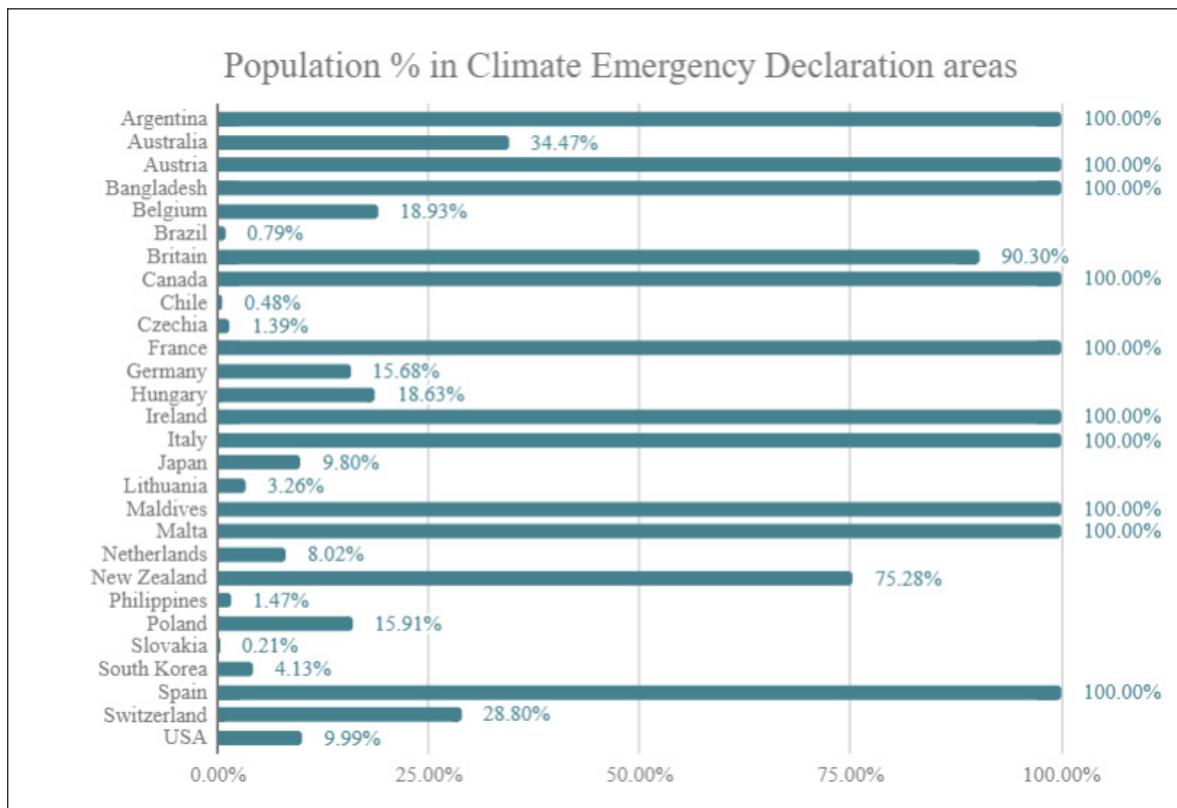


Fig. 23 Climate Emergency Declarations by country – Population % in Climate Emergency Declaration areas. Embedded table from CEDAMIA 2020

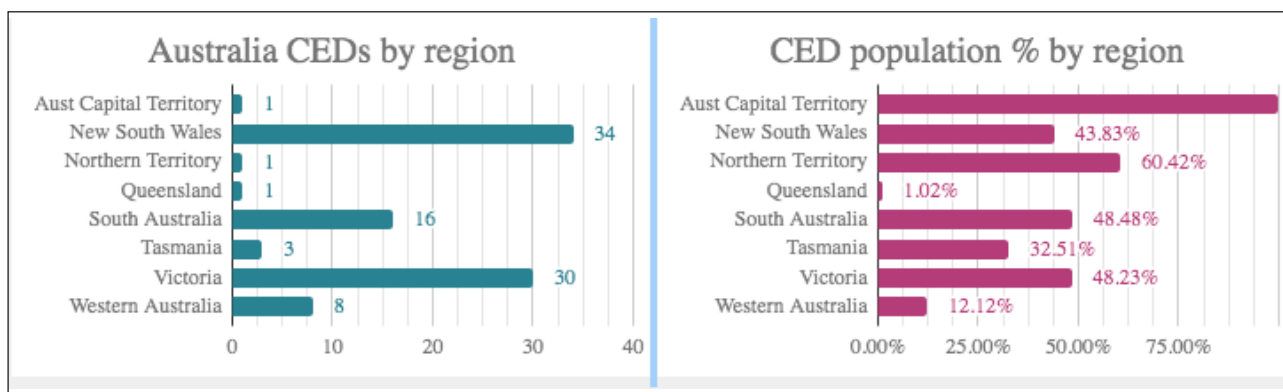


Fig. 24 Australian – Climate Emergency Declaration population % by region. Embedded table from CEDAMIA 2020



Fig. 25 The Global Map of Climate Emergency Declarations. Embedded map from CEDAMIA, 2020

Working on response planning through local municipalities is one way to help build the necessary momentum for rapid transformative change specifically for the climate emergency. Building the support needed to rebuild the economy and to do this really fast cannot occur by watering down the message. One pre-requisite has to be met: a ‘*Super Majority*’ comprising roughly all of the political ‘left’ and half of the ‘right’ at some stage and as soon as possible needs to support strongly for this mode to be successful. Bridging across the currently highly polarised political divide requires

finding conservatives – those understanding that an extremely urgent response is warranted – to speak with other conservatives. People listen to individuals they identify with and are more likely to trust – and the same applies for ‘progressives.’ In my view, it seems that, in Australia, as a general rule conservatives will not come across and be supportive of anything the Labor or the Greens parties propose, a notable exception being the work they will do in collaboration with Labor to diminish the effectiveness of the Greens. Sutton (2012, transcript-vi, p.11) argues that achieving a political ‘*Super Majority*’ is a key part of a meta-strategy for climate action and “*has staggering implications for how we get organised.*” In practice, achieving a really strongly committed super majority of 70% feels like a long way off; it entails bringing at least half the conservatives on side, but it is a key element of the vision and any meta-strategy. It has to be a *super* majority because a *lukewarm* majority is insufficient to enable strong, bipartisan action and to create a new public platform appropriate to the circumstances. A lukewarm majority could either just fall apart when an attempt is made to do something useful because ‘*people aren’t really as onside as you think*’ or be undermined by an opposition mobilising more effectively than expected, resulting in a sudden shift from weak to useless minority.

It is conceivable that 50% of conservatives would be concerned enough to engage in this conversation, but bringing them to support what needs to be done can’t happen as long as the only organising forces are on the more extreme right and act as if speaking for all conservatives. So people who identify as conservatives and ‘get’ the climate emergency are basically unrepresented as yet; but when there’s chance for them to hear the truthful message, they will no doubt jump up as passionately as those on the ‘left.’ (See Appendix 8) This challenges the proposition that messages going to conservatives must be diluted because - presumably - only ‘lefty radicals’ take strong positions. A number of activist organisations believe this, but it would be worth testing if this is just blocking many possibilities for fruitful coalition making.

As Sutton (2012, transcript-i, p.16) states, conservatives can be very passionate, as can all people, about anything they think is important in their scheme of things; one needs to first examine how they could be differently understood or related to so as to get a different result than the one normally assumed one. Understanding that many conservative people are also worried and have not been represented in the political landscape for a long time points to *an opportunity to create dialogue*: “*A nation composed of people engaged in problem solving and willing to vent their anger and sadness will create an environment in which politicians and businesses feel compelled to take stronger action ...*” (Hamilton & Kasser, 2009, p. 7). A super majority with a high level of passion allows, even demands, action, where hiding anxiety only inhibits stronger policy responses. ‘*That’ll never happen!*’ is the expected response when seeking non-partisan support is suggested, but an



Emergency Mode and the *work that must flow through it* cannot be achieved without it. Blockages to trying for bipartisanship need to be removed, which means that activists, politicians and others committed to transformative change have to work through their self-blocking biases and other limitations.

Even when non-partisan support and the super majority are achieved, the search for answers will continue; initial 'answers' might not always be welcome or offer the solutions needed.

Non-partisan support can be anticipated to lead to other issues. As some of the conservatives start to pick up on the message and become more vocal, more active and stronger, there will probably be an automatic and perhaps unthinking reaction against that from the other side along the lines of "*If they think it's a good idea, it can't be a good idea / I'm totally suspicious of where they're coming from.*" The Left can be expected to have a suspicious response: "What if they are just another climate change group that turns into a pro-nuclear group?" (This has happened before). Trying to get agreement and support for broad initiatives will inevitably raise issues about the sides of the political spectrum that will need to continue to disagree and argue. There will also likely be cross-punishments that people try to mete out to each other. Contentious issues like the nuclear energy proposition can be anticipated regardless of the now burgeoning availability of ever-more affordable renewable energy thus making nuclear not as cost-effective as people think and simply not needed.

According to Sutton (2012, transcript-i, p.21), tackling important challenging blocks sometimes requires turning the question around to explore what could make it happen, what could make it different. The question *waiting* in front, pre-prepared, can help something '*out of left field*' to be noticed that might spark the next round of development.

Obtaining an idea as to where the heartland for reversing global warming is seems to move with time and perspective. At this point in time and in Australia, the centre of inspiration seems located primarily in Melbourne but cooperating in mega campaigns and even more, contemplating the possibility of co-creating a *meta-strategy*, will require all of Australia's most vibrant transformative change hotspots to connect and co-operate. Climate change activists will have to actively and genuinely seek to understand each other, attend to disunity, leave vying for sectoral advantage and egos at the door and commit to proactively collaborate. Connecting with the global discourse is vital; for many years, Sydney-based former Chair of the Australian Coal Association, Ian Dunlop has been one of a few Australians taking the high-level climate risk conversation to many influential world leaders and top decision makers in business, politics and research.

As far as values and behaviour change are concerned, the presence or absence of modesty,

humility and sensitivity matter a great deal. For many activists, much of this work is personal, and convincing people they have to change, speed up, reprioritise, get educated, take responsibility, step up, contribute, let go of certain dreams, face terrible prospects, be brave or share the burden, can be difficult. As the late Frank Fisher (2014, transcript, p.2) stated, just because it's urgent shouldn't mean that it cannot be offered with humility. (Appendix 9) Locating and linking with locally respected people willing to help communicate the emergency response is part of good strategy. Good social research, focus groups and market research across different societal segments and cultures are needed to assist in creating awareness about the ethical realities. Equipping people with knowledge and confidence in their personal resources and capabilities and plugging them into well-planned local – and even traditional - activities has exciting potential to mesh localised campaigning with rapid '*sustainabilising*' of suburbs, towns and regions and trigger change-activism.

Having a powerful, clear and compelling vision is essential and the movement has to get a lot better at this, including presenting a really strong and powerful vision for what it would be like to live in a *Zero Emissions World* (Taylor, 2012, transcript, p.4). There is a great need to communicate a *positive vision* for what the future can be like to help build a strong sense of community and collective action; Luke Taylor suggests that this is critically important right now.

Other conversations to articulate the new paradigm could be framed, for example, as the '*Solutions Economy*', or the '*Sustainability Renaissance*'. These conversations need to be had to build bridges of understanding rather than requiring a large leap of faith; explaining that many activities will continue to occur as they do now but on a different basis, such as using solar, wind and wave energy. Such hope-promoting vision fills a vacuum that otherwise can be colonised by fear-mongers; it is an antidote to the untenable trend we're traversing. Salamon (2015, transcript, p.2) agrees that working back from the desired end of a Zero Emissions World, back-casting from success and inspiring colleagues, families, friends and random contacts with a picture of an attractive future is a useful approach.

### **4.3.5 Our Awareness**

Messages, stories, fun, colour, the arts, scenarios and simulations are tools to help build bridges to reach people across biases and past blocks; teach the psychology of marketing, the danger and seduction of techno-fix and the threats and opportunities within industrial ecology; help us wake up, emerge, face hard truths, fill gaps, overcome scepticism, maintain optimism.

That solving the climate crisis involves some new and many existing technological solutions is not questioned; however, an easy belief in these or a reliance that 'something' will be invented that will



save us is wishful thinking and presents a serious down-side. It offers an easy ‘*off the hook*’ belief allowing an escape from scrutiny of polluting and other damaging practices and causes confusion and discord in the climate restoration scenario. If technology by itself could save the day, people’s attitudes and values (especially but not only those in the WEIRD section) could continue to support rampant consumerism in a new but still destructive, growth-dependent and possibly fossil-fuel-addicted BAU economy. So technology alone is inadequate. An awareness of our behaviour and values and the consequences they represent is crucial to even get technology right (or as right as possible).

Anderson’s work on consumerism shows that big gains making sustainability more possible are achievable through radical adjustments and changed standards, particularly cars and white-goods. Anderson (2015, transcript, p.6) was involved in writing a paper for the Alliance of Small Island States (AOSIS) indicating that radical adjustments previously said to be intractable could be achieved and that a 50% reduction in car emissions within 10 years was possible, with no change to infrastructure, without even increasing public transport or changing the amount of driving people do or the kinds of standard cars people drive. Looking at whitegoods, the turn-over of appliances, as with cars, is rapid and regular providing a great opportunity for increasing standards. Kevin says: *“Toasters are replaced every 2 years; and cars: in the UK and Europe 60-80% of kilometres travelled are by cars that are, on average, under 8 years old ... most miles are travelled in the first three years.”* So without even introducing a scrapping system, just by changing the standard, a very rapid reduction in emissions can be achieved that will save money – but for whom? Kevin explains that to save money and avoid the rebound effect, government could direct savings to (e.g.) wind turbine investment; *“But the problem there is if your car is now twice as efficient as it was before so your fuel bill is halved, what do you do with the rest of it? You drive it more, you buy a jet ski or you go on another holiday.”* Encouraging people to use money more wisely is one way. *“Alternatively you can imagine the cost of energy could go up but the cost of energy services doesn’t go up. No-one wants energy. What they want is energy services so actually if your appliance is twice as efficient then you can double the price of energy and it’s no change to your costs. Your costs don’t go down or up and there’s no rebound effect and the government now has that money and can invest it in wind turbines or whatever it wants to put money into ... hopefully something that is getting missed out in our system.”*

Transformative change relies on two main kinds of consumers. *Innovative consumers* see the prototype or the new product and, even if a bit rough round the edges, if it’s something they can make use of, they’ll patch, duck and weave and fill the gaps to make it work. *Progressive consumers* follow at the front end of the awakening mainstream; partly living on the promise, passion and

vision, they love the idea but it has to work. They discern a market in the world, try to launch to this wider public but are pretty intolerant of things being not fully functional. As Tony Seba's '*Clean Disruption – Energy and Transportation*' (Seba, 2014) shows, the psychology of marketing in this area is well developed and relevant to transformative change. Piers Versteegen (2012, transcript, p.3) applies his research to show how perverse incentives (in Western Australia as elsewhere) lock bad practice into the industrial ecology; he discussed false solutions, lock-in technology and the Jevons Effect – an effect of the 'catch-22' of technology, in which the paradox of efficiency results in increasing use because it's cheaper and/or less wasteful. Making technology less expensive and more prolific encourages greater use of electricity and produces more emissions and the overall environmental impact is much higher and does not lead to transformational change. One reason why the efficiencies are counterproductive is because they make money. Technology may ensure the population remains welded to its driver-owned driver-operated (dodo) cars except for the fact that the electric, driver-less fleet is set to arrive soon and the need for (comparatively expensive) privately-owned cars may vanish.

The awakening mainstream need quickly constructed bridges between their work and actions that harness their new awareness, without which connections may be lost. Lack of leadership and an array of mixed messages can lead to loss of interest and momentum, making it twice as hard to rekindle a second time. If people believe they understand climate change but - in reality - lack the full, front-of-mind awareness, it will be hard to re-engage them. Britain's Climate Outreach, (<https://climateoutreach.org>) Australia's BZE, America's Solutions Project (<https://thesolutionsproject.org/>) and many individuals, artist Chris Jordan for example, have experience, research, knowledge, tips and good results to share when it comes to communicating the climate emergency.

George Marshall (*Climate Outreach and Information network - COIN*) spoke at the *Creative Factory* in Paris 2015 about this. For such messages to reach and engage ordinary people, they should include something that makes them feel proud of themselves, proud of their nation, motivated by their ideals for life including their ideal lifestyle. Pride offers people something they can talk about with conviction; the '*trusted person*' builds into the '*bridge*' a sense of pride that helps '*carry the message*' across. Marshall warns to not focus too much on the person's actual contribution to the problem and the horrific consequences thereof. Presenting views that oppose the person's own vision could jeopardise the bridge that is crucial to what follows. To create engagement with elected representatives, public figures and those at the less responsive end of the spectrum requires locating, reaching and building different types of bridges designed to reach across their biases and recognising their constituent support base. Activists and would-be activists may be better informed but still need to try for the right pitch which, even when it seems

good more often than not, still fails to achieve the hoped-for results. Having spent years in the environmental movement, Marshall knew there was more to it. He started to look at how the issue (and what to do about it) was being told and decided that the usual way “*the story of climate change has been constructed and communicated, the people who tell it and how it has attached itself to their values*” was not working. (Marshall, 2014, p. 21) The way stories are told can be productive or counterproductive and training, practice and trialling is warranted. All events, speaking opportunities, meetings and engagement activities need preparation and opportunities for follow-through and a way to plug in, a ‘go-to’ place for people once they get the message, even allowing for a delayed response.

Obviously, whilst being aware of behavioural and awareness blocks, messages about positive, technological solutions like, for example, Mark Jacobson’s and the BZE’s, can be strategically deployed and may be well-received. Jacobson’s ‘*Road Maps*’ are a *breakthrough* development; his work involves innovative modelling and a focused plan to communicate how conversions to wind, water and solar can be done globally, rapidly and affordably, creating transformational change appropriately, effectively, solution-oriented. This was produced for the 50 US States and 139 countries globally including Australia (where he acknowledges the fine work of BZE) in time for the Earth Climate Conference (Paris, 2015) and are all available on his website and the Solutions Project website.

Fun and daring, colour and sensations, celebration and inspiration are sure-fire ways to pull many people in; not everyone needs to be first presented with the terrifying prospect of catastrophic climate change. In fact, when people can be galvanised and enabled to support a mode to fix the problem, the mobilisation job is half-done. The arts, music and non-violent creative action play a great role in getting attention to the message and bringing people sufficiently up to speed, engaged and politicised to help activate a super majority that will trigger the political flip into meaningful action. The arts and artists can add to effective change strategy through sharing of technology, insights and working together. In an emergency it is essential to share skills, talents and combine strengths; Chris Jordan’s art allows large statistical numbers to be understood and he doesn’t feel ownership of his artistic concept: “*The little spark doesn’t come from me, it comes to me;*” (SLF presentation, 2014) after eight years in the making, Albatross is freely shared. (See Appendix 10)

An existential threat evokes many emotional responses and it may be necessary to go beyond rational arguments and engage at the emotional level; linking communication tools eliciting the horror of climate change in the language of a zombie apocalypse creates an effective bridge to face hard truths should intelligence fail. Such a ‘wake-up’ metaphor has the potential to communicate a catastrophic climate change scenario to new audiences. Harnessing the imagination and tell a

different story is vital. The zombie scenario portrayed in the movies is as frightening as the world we are creating and whilst we seem able to face zombies in movies, we struggle to face what's being created in the real world. Movies can prepare audiences, even condition them, to accept bleak prospects and witness triumphs over adversity and against great odds, but inspirational stories of overcoming the climate emergency and evoking positive future are rare. Still, like in *Apollo 13*, a global '*Virtual Houston*' think-tank, supporting action groups anywhere with demonstrable capacity is conceivable and could have merit; it could help sceptics understand necessities and options when considering decisions about thorny issues and difficult possibilities.

Like the non-violent action groups now emerging everywhere (see <https://rebellion.earth/>), a more direct approach would be to just go ahead and set up such a think tank. Create the scenario, do a head-hunt spanning left and right in a really big way and then try and make it happen, especially since the dearth of resources and funding will continue to hinder the work. As long as governments are missing in action and *Business As Usual* is waiting for government to signal the change, this will remain the case. Still, clearly articulated, carefully framed arguments for the funding of resources must be put 'out there', and '*virtual Houston*' emerging from concerted citizen action may be one of the only responses possible at present.

As the movement migrates to this new way of operating, great experience, wisdom and tools from many initiatives become available; workshops, round tables, facilitated discussions, discussions groups, movie nights – the usual engagement tools – bring people together to talk about climate change and what it would take to actually restore pre-industrial climate conditions. Mobilisers promoting positive change need to recognise all the human frailties, wounds, damage done and in need of healing; the emotional responses, immaturities, unpreparedness and misunderstandings; and the different starting points for different people as they find themselves at a point in taking that step or not.

Optimism alone is not enough but it is the crucial ingredient for many. One ingredient building stamina for engagement is maintaining ceaseless amazement that humans can give rise to brilliance, ingenuity, spirit and determination, astounding resilience and ability to truly cooperate. The breakthroughs, the just-in-time heroic stands, sacrifices and epiphanies that are in the bones of human evolution, all can be brought to bear again. Finding a few positive people to rely on somewhere in your life is basic self-protection in fraught times. Surrounded by optimistic people every-day, all immersed in the burgeoning take-up of '*solar, wind and water*', Mark Jacobson is full of optimism. He knows there is pain to get through, but he also knows it would be / will be much worse if we don't move quickly to renewables. Notwithstanding virulent critics, his commitment and belief is rock-solid.

### 4.3.6. Our Big Picture

Opening minds to whole systems change, accepting the window of opportunity, the full effort required; embracing radical solutions for speed and scale and an emergency mode for the duration, until success is ensured; proactively generating a culture of sustainability and conveying the importance of being connected – micro to macro, individual to social, imagining a Big Picture minus the threat of a climate catastrophe.

*Whole systems change* is needed to fix the climate problem and helps describe what is to be achieved. ‘Whole systems’ can refer to natural systems operating globally the context in which climate change has recently occurred as humans have changed the composition of the planet’s atmosphere. Of the nine planetary boundaries identified by Rockström and colleagues, Pearce reports seven are natural systems.

*“There are three that operate at a planetary scale: the oceans, the atmospheric climate system and the stratospheric ozone layer. Each has thresholds beyond which danger lies. There are four more we call biosphere boundaries. They help regulate the planetary systems. They are biological diversity, the hydrological system, land cover such as forests, and the flows of nutrients vital to life such as nitrogen and phosphorous. (Pearce, 2019)*

‘*Whole systems change*’ also refers to what is needed in the global-scale systems humans have devised specifically the geo-political economic paradigm. This world view gives rise to the infinite-growth economic model, the inadequate protection and destruction of the biosphere, the legal status of a corporation as a ‘personal’ identity and the corresponding move away from goals of cooperation, the Commons and equitable distribution of resources. Gro Harlem Brundtland (1987) stated the very process that produced the unanimous Report of the World Commission on Environment and Development: Our Common Future demonstrated what is needed to solve these problems, *“In the final analysis, this is what it amounts to: furthering the common understanding and common spirit of responsibility so clearly needed in a divided world”*. (Brundtland, 1987). Today ruthless and relentless corporate control processes are waged against the Earth and all that live with her and make her alive; future generations, if considered at all, are considered externalities and potential future damage to them ‘collateral’. Yet “[j]ust 100 companies [are] responsible for 71% of global emissions, ... – A relatively small number of fossil fuel producers and their investors could hold the key to tackling climate change” (Riley, 2017)

Whitehead (2014, transcript, p.10) needs no convincing that global warming can be “easily”

solved, but he also knows that much further delay could see the chance to solve it evaporate. The cumulative nature of climate change and positive feedback mechanisms – such as the methane released as permafrost thaws – will rapidly increase the financial costs associated with further delaying action. Right now, the “*costs of adapting are less than the cost of doing business as usual and the benefits are many times larger*” and he points out: “*At the point when the impacts exceed our economic capability for repair, we lose.*”

Damian Carrington’s (2018) article in *The Guardian*, *Leaders move past Trump to protect world from climate change*, reports on the Global Commission on Adaptation being led by Ban ki-Moon, Bill Gates and Kristalina Georgieva, CEO of the World Bank, producing a report for the UN, September 2019. Carrington quotes (para 3) Ban ki-Moon, “*Much more money is being invested in cutting carbon emissions than preparing for the climate change impacts that are already inevitable. .... and (para, 13) Scientists and economists believe the cost of adaptation could rise by \$500 billion a year by 2050 and, in the mid-term, \$300bn by 2030.... The money can be mobilised. If there is political will I think we can handle this matter.*” (Carrington, 2018)

The scale of the emergency and when it could conceivably end needs to be communicated and imagined. If this would be England and WW2 and the bombers heading over the Channel, the response would be personal, by the state and immediate. A *state of emergency* would be declared and the entire population would step into a different mode of being for the duration. When envisaging this, it is essential to remember that it is a state/mode that will end and if done well, can end well. Beyond climate restoration, our actions can successfully put in place the economic and governance systems to manage them, ensuring continued adherence to safe climate principles and practices. There will be ongoing roles to play, but at a point in time, we can expect to step out of emergency mode, depending largely on the diffusion and effectiveness of what we establish and what currently unforeseeable impacts of global warming may occur.

Restoration will involve the nursing of our climate back to good health over time, repairing and cleaning up old and new damage as we go and we will need to step up the protection for those who will need it as we navigate through turbulent times. At first, we will be anxiously watching for signs of lessening warming intensity and later, as the levels of equivalent (referring to other greenhouse gasses that add to the problem) CO<sub>2</sub> ppm start to diminish, ice is restored at the poles and permafrost methane locked back in, humans may be able to develop a relative sense of relief anticipating a stable climate future. Even then some of the effects unleashed such as sea level rise may take centuries to reverse long after CO<sub>2</sub> emissions are brought back down as this early IPCC



graph indicates. From the Climate Change 2001: Synthesis Report and in answer to Question 5: What is known about inertia and time-scales associated with the changes in the climate system, ecological systems, and social-economic systems and their interactions, this graph specifically addresses Inertia in climate systems.

Potentially, having consciously reflected on values and built them into systems' governance principles, we can look forward to a fairer, healthier and happier planet as we co-exist more equitably, starting to really come to know our fellow species and our interconnected world. This is a vision worth striving for.

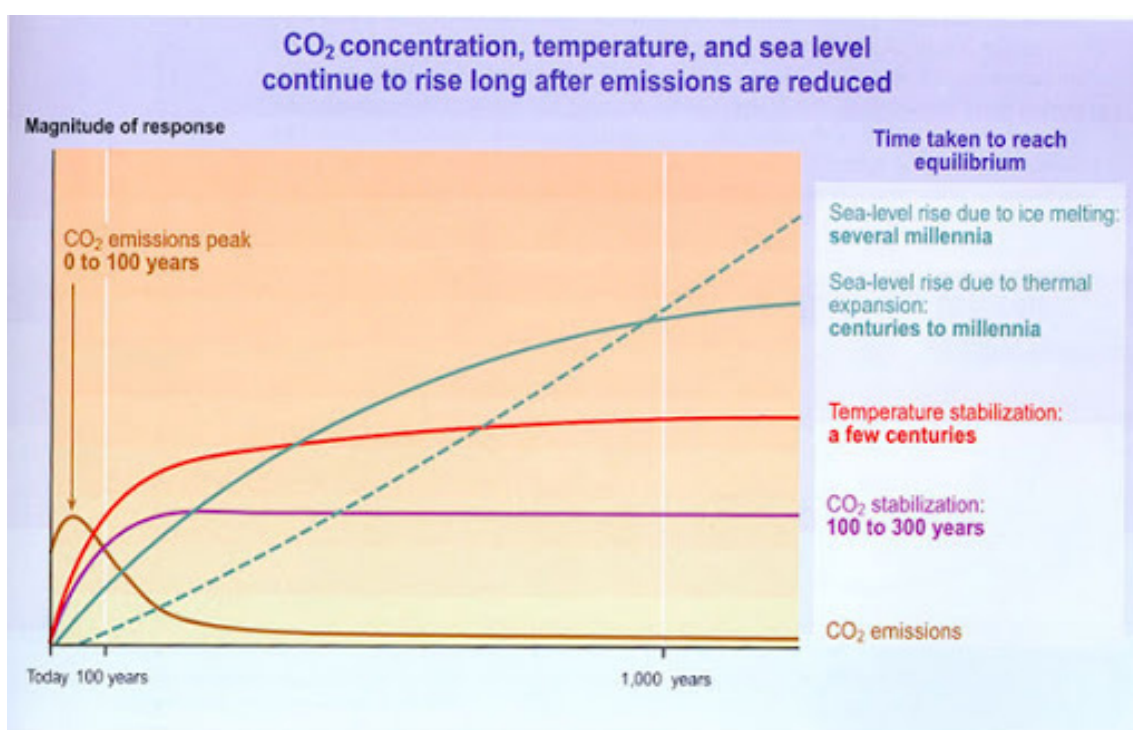


Fig. 26 *Inertia Time Scales*. Intergovernmental Panel on Climate Change (IPCC) Web image from Climate Change 2001 – Synthesis Report.

The ways and pace of how we live and act for Emergency Mode's duration need to be fleshed out; again, many techniques can be brought to bear to do this, some fun to do, some requiring facing our fears, grieving, some deep and meaningful, some tactical and campaign-oriented. Workshops, writing, questionnaires, confessionals, counselling, all have their parts to play as have experiences in deepening, remembering the connection with nature including Indigenous educational opportunities. They all are possible devices to bring home the reality of where we find ourselves on the planet, dealing with the devastation at this time and still perceiving, as Jordan says, that "*the terrible tragic phenomenon is wrapped in incredible beauty.*" (SLF presentation, 2014) All techniques need to convert the growing awareness into useful action, exploring self-blocking and ascertaining the planned change is brought into the '*present moment*'.



The more radical the solutions for getting to the root of the problems, the better they can alleviate other pressures, setting the stage for a more secure and sustainable future for the planet. Specific social-cultural conditions are needed to enable social change on a scale commensurate with the challenge; a sustainability-generating culture must be established that can penetrate and consolidate in the political-economic landscape. Such culture is to be made a priority and entails pitching the campaign at the level of the whole political-economy, leaving no parts thereof not involved and unimpacted.

As Sutton points out, if a *culture* holds the achieving of sustainability as a high ideal and aspiration, it should be relatively easy and the population will explore how to make it possible. With a self-blocking belief that it isn't practical in the so-called 'real world,' the effort put into making it happen is deemed not worth it. The values underpinning sustainability go beyond looking after the natural environment even if that is its major concern in the current crisis; values are social as well, espousing open-mindedness, personal autonomy, equality and social justice, which are at odds with the recklessness of free-market-dominated political conservatisms and 'business-as-usual' which has already caused us to damage the planet's ecosystems and put a viable future at great risk.

The *philosophy* of sustainability goes to another level as it embraces the responsibility and urgency to deal with the *fixing* of things, the *reduction* of emissions to zero as quickly as possible, the *removal* of the stock-pile of pollution in our atmosphere and in our oceans restoring them to full functionality and good health and *finding ways* to sensibly discuss solar reflection methods – with 'safe passage' – to hold or restore the ice to the poles. Cleaning up our act means addressing many symptoms of our neglect, including removing dangerous chemicals from across the globe some now found in unborn babies' placentas, right through our biosphere to the ice caps at the poles. This is *restorative* and *regenerative* living. Protecting the environment is centrally important to this philosophy for a wide range of reasons; '*regeneration*' connects the twin issues of environmental and social sustainability as inseparable, acknowledging the impact humans have on the environment and rendering our lifestyle consistent with the values of sustainability and accessibility for others to observe, explore, understand and, hopefully, be inspired by.

The scale of the emergency means we have to move from mildly engaged and a little urgent into full *Emergency Mode*, a seriously full effort. Critically important in this mode is reconfiguring the economy so everything that happens through it is evaluated through the lens of *Beyond Zero Carbon*; as my informants suggested, standards will be raised radically reducing emissions from vehicles and white-goods (Anderson) to shipping (Bows-Larkin) and other areas. Fossil fuels will be bid a fond farewell and renewable energy finally warmly embraced (Mark Jacobsen, 2015, transcript, p.5-6) and the regenerative economy will take off - it is complex and this brief

description a vast over-simplification.

*Emergency Mode* means that we have to make many changes over a short period of time, some bringing incentives and encouragement, some being noticed and some regulated and a lot won't be felt at all. Many will just perceive it as 'progress' and for those working on building the groundswell right now and the early adopters of sustainable change, work is to be done exploring every nook and cranny, implementing, experimenting and feeding-back, imagining and innovating. The daunting nature of the necessary scale, scope and speed of the transition becomes less so as we understand the capacity that can be drawn from human beings when operating in "*emergency mode*" – a clear-headed, highly strategic and effective, often collaborative way of – as I proposed in my application to the MIECAT Ethics Committee in 2011 – surmounting seemingly insurmountable problems. Dealing with the practical, technical, socially-constructed ways of life in our 'WEIRD' world necessitates transforming our socio-economic system to one safeguarding life as its first priority. At last, awareness is rising and pushback diminishing, but progress remains excruciatingly slow; a full effort is required by each of us as a matter of grave urgency, begging the question '*what isn't at stake?*'

How we live goes to the minutiae of our daily actions and the trick is to start with one or two challenges and work from there; a lot of information is now available on the web and the task can simply come down to following dot points recommended by a trusted organisation that has done the work. Living more sustainably is a galvanising force as it brings intangible joy and satisfaction to be stepping out of unconscious compromise into conscious right action. When consciously trying, as humbly as possible, to show some of the readily available attributes of change, being surrounded by others who teach and also lead by example, makes a big difference.

### **4.3.7. Our Planning**

To move from the very local and personal to wide societal transformative change means identifying and agreeing on some key early elements. Starting somewhere, plans are sketched, shared and ventilated to become shared wisdom, a well-spring, a 'virtual Houston' inspiring consideration, engagement and catalysing other ideas.

According to futurist Peter Ellyard speaking in 2000 to SLF's Melbourne Town Hall event *Shaping Everyone's Future*, if the world is indeed facing the end of 3 major paradigms, the fossil fuel era, patriarchy and capitalism, then as things face their demise backed into a corner and fighting for their lives, they can become very vicious. As the backlash from capitalists, oligarchs, patriarchs,

misogynists, mining companies, fossil fuel magnates and those who are their puppets reveals itself, the state of play becomes clear: we live in tumultuous times, precisely when efforts must be redoubled to give human survival instincts a chance to prevail.

In her 2015 TED talk, Alice Bows-Larkin, Kevin Anderson's colleague at the Tyndall Centre, said: "If the change doesn't happen from within our privileged group then we're not going to avoid the 2° targets." Anderson thinks (2015, transcript, p.11) that overshoot (beyond 2°C) is inevitable as things stand and Bows-Larkin suggests we are on track for 4° right now, a scenario translating to much warmer on land, 6° or worse up to 7°, 8°. Scenarios with even higher numbers get thrown up – 10° or even 12°C. Anderson holds (2015, transcript, p.5) to the belief that deep, rapidly-penetrating social innovations, mandatory upgrades of standards for consumer products and broad, strong interventions at state level can make significant changes if they can be made to happen fast enough.

As is becoming clear, the drawdown and sequestering capacity of the Earth's soils, oceans and atmosphere is significantly less than was previously thought and, critically, than what is needed. The draw-down techniques currently known to be scale-able – specific cropping systems on all appropriate, available land, reforestation where-ever needed and practical and industrial scale pyrolysis (bio-char) – are insufficient for the task even when combined. Soil regeneration and soil carbon farming are encouraging new carbon sequestering developments, but the interviewees I drew on throughout this inquiry concurred that there is even now no carbon budget left to burn and we must reach zero net emissions fast to save ourselves. *Beyond Zero Emissions' Stationary Energy Report* (2010) shows that this can be done within 10 years after full 'go ahead' is signaled. Further, all molecules of carbon from CO<sub>2</sub> that goes up now must be also brought back down, making the already challenging task of drawing down the historical overload of carbon dioxide in the atmosphere even harder.

Encouraging, educating, catalysing, galvanising, mobilising others is the main game right now; once enough people have been mobilised, a certain social tipping point will be reached bringing government and society on board making transformative change easier. Until then, the task at hand is social mobilisation across the entire political, socio-economic spectrum, starting with wherever people find themselves. Ways of protecting the biosphere from lethal temperature spikes will need to be found; exploring solar radiation management, discussed further in the concluding Chapter, replacing the *albedo effect* of the lost ice caps, will have to be explored fully and candidly, meaning that with the *precautionary principle* in place, a clear risk-analysis and a rock-solid commitment to 'safe passage' and ensuring the chances of success of the next best option (that will protect the biosphere from lethal temperature spikes) need to also be fully explained.

The level of ‘inert’ awareness is high, but translating that into constructive responses is not straightforward; Salamon (2015, transcript, p. 2) suggests it sometimes even backfires into either blatant denial or *“I better get mine while I have a chance.”* She finds it personally frustrating to hear words of defeat spoken when we are not yet in catastrophe and have barely got started on the job, indicating little recognition of the implications of giving up: *“People can say they believe it’s ‘too late’ and ‘we’re finished’, without apparently thinking about how that translates to the suicides and the deaths of many.”* Sutton (2012, Mar 24, interview summary, p.1) shares her view: *“Not exploring is, by definition, a person declaring that they want to give up on the problem.”* Especially in the context of an existential threat, he thinks it is irrational, understandable but not acceptable, the opposite to *giving up* being *not giving up*. It is about persevering, keeping on trying to achieve success: the choice to not give up is there. What’s needed are people who overcome their fears, their self-blocking, self-sabotage and defeatism and get going *as if the task can be achieved*; only then does it have a chance. Salamon (2015, transcript, p.2) says: *“We have to make it happen if we want to minimise climate change disruption and costs and get the job done in time.”*

Grim consequences are to be avoided, requiring a rapid transition to a post-carbon economy and the task needs to be constructed as a sustainability emergency that takes us beyond the politics of failure-inducing compromise, opposed to going along at the pace of business and politics *‘as usual’*. New and effective solutions equal to the profound and immense task to consider all these issues *together* are needed, including the large carbon debt accrued by the rich and owed to the majority world. Options that ameliorate but cannot solve the climate problem are no options, as are those that solve the climate change problem but add to other major problems – water shortages, peak oil, ecosystem destruction, resource depletion, global inequity and threat of pandemics. Consciously planning to avoid creating more barriers is essential.

In a campaign, essential skills and strategically important roles need to be played and in this paradigm-shifting, system-transforming work tactics are always at play. The landscape is changing as the law catches up with the responsibilities, fiscal and otherwise, that company directors, for instance, have to provide to their members and shareholders. (Irvine, 2016, Oct 31) Nevertheless, being shrewd and savvy when dealing with attacks is an advantage; a case in point some years ago was the mining industry’s attack on Greenpeace as *‘economic vandals’*; a high-level response can turn such accusations on their head and training to be tactical can be worthwhile, especially when being attacked is likely.

This example, offered by Sutton (2012, transcript-v, p.1), was a shrewd tactic in a fearful context. A prevalent fear that a second Global Financial Crisis could be very severe and concerns that if it happens it could come out against environmentalism are already playing out. Greenpeace was

exposed for having a campaign to stop the expansion of the coal industry, playing up the iconic and specific values of these locations. The attack was not about specificity but about the general proposition that Greenpeace was engaged in economic vandalism. In campaigns what works for one's "opponents" may not necessarily work for another. If the miners can come out attacking the greenies as economic vandals it doesn't automatically follow that if greenies put forward a *Solutions Economy* approach it will get traction. Then again, the absence of a high-level response to the economic vandalism argument can really undercut the campaign. People are worried that they are heading into another recession, so the accusation of economic vandalism is an extremely serious one. A line of argument can be developed. The positive pitch of the green economy as the answer to preventing or recovering from recession flips the 'economic vandalism' accusation on its head. Far from this being economic vandalism, it is the responsible way to go. The economic vandals are the people who allow the exchange rate to go up because of the mining boom, which then destroys manufacturing and service industries and leaves people unemployed and our economy extremely vulnerable. This is then about pitching a campaign at the level of the whole economy. Although the two concepts are highly related, the green economy is bigger than just arguing for green jobs. We are talking about a paradigm shift in terms of these economies.

Thick-skinned determination can be an asset; it can be uncomfortable being met with resistance, sometimes rudeness and hostility, but it is also validating to be received with appreciation, interest and willingness to get involved. Persevering to reach and identify these people is what it is initially all about and from where a base can be established. Many more people are now working on change and the task is not quite as daunting, but they are only networked to a certain extent and the mobiliser needs a *plan* to bring the next phase into being. Insightful work developed for the business world on how this can be done (Moore, 1991) is eminently transferrable to mobilising to reverse global warming.

Activists are engaged in their area of expertise or where they feel comfortable exploring; mobilisers perhaps have a more difficult task as they have to *galvanise*. Often they hope to organise and encourage people to take collective action, the reality being that some may be highly resistant to being encouraged, much less organised, by someone else. The prospect even of learning something new to help with this, such as how to speak to conservatives as discussed earlier (Marshall, 2014), can be absolutely daunting to someone with a worn-out spirit. The sense of being inadequate to the task can throw them into overwhelm; it can be heart-breaking.

I spoke with one older man expressing his dismay and frustration at not being able to get his point across when speaking to groups at public meetings. I was meeting with some of the courageous, stalwart activists and kyaktivists at the Climate Coalition Meeting in Portland Oregon (U.S.A) and

had just mentioned George Marshall's research on talking to conservatives. It raised anguish. The Portland activist (2015, transcript, p.6) said: *"I think that's an example of skills that people need. I don't know whether I can ever have them."* He had an engineering background and loved numbers: *"It's the kind of thing that I treat as comfort food. It lets me know where I stand. It makes me feel good about control over the situation at one level."* But he went on to say that his experience in trying to talk to people was just so difficult; he wanted to take them through the numbers but would find that it was *"turning them off from the conversation instead of turning them on."* He struggled trying to find their personal issues and points of connection as this seemed like the best way to go but, for him, *"I don't know – to me those are sort of extremes of methods."* He badly wanted to bring people together to understand and address the basic problem but he confessed: *"I don't know how to get there."* It is the nature of the climate change discussion that so often those who have had little involvement in the discussion come at it from almost idiosyncratic angles: *"It seems like the way you build your numbers and the way you build your successes is by picking individual battles and fighting them, not as climate battles, as individual battles that are offending someone in some particular way."* An analysis of this conversation led to Strategy #9 in a series of 14 that came out of that meeting collected (See Appendix 11).

Dealing with issues one by one, campaign by campaign, requires a lot of resources and a very fast transition-decade type of change means lining-up a great deal of single issues. As communities cannot simultaneously run the many big project campaigns needed and as there is some historical reluctance to back single-issue campaigns, the need for co-existing campaign streams is obvious; a mega-campaign that ties all the pieces together has to be developed.

## 4.4 Conclusion

---

Fully Understanding covers a wide territory beyond the science, the full social and environmental implications of global warming and the threat to the future of the world as we know it. It takes in the already rapidly increasing costs to humans, to infrastructure and to biodiversity in terms of impacts and the financial and other costs exacerbated by procrastination. It includes the shortness of the time-frame in which to urgently transform to a zero-carbon economy, to prepare for the impacts that are already inevitable, attend to those already happening and also attend to any ‘fat-tails’ (see glossary) that might occur. Fully understanding also includes understanding what stopped governments taking action when it was more affordable and less urgent and what is stopping them now and why it has become the job of the people to insist these actions be taken, to be involved and it indicates the many things obstructing that work and also some of the many ways we stop ourselves from acting.

In Chapter Five we will look more closely at what we are going to do about it, how to more effectively convey full understanding of the climate emergency, the solutions that already exist, the problems that need solutions created and how developing a plan involves working cooperatively in an emergency response mode, prioritising and knowing where to start. That chapter looks more closely at some of the fragments of emergence and details of the ‘solution mode,’ gathering them into 10 themes and recurring threads to form a supportive platform of higher-level strategic principles and concepts to resolve the hurdles.



# SECTION 3

WHAT I FOUND,  
WHAT I NOW  
KNOW

---

# CHAPTER 5

THE REFLECTIVE  
CLIMATE CHANGE  
PRACTITIONER:  
FRAGMENTS OF A  
'THEORY-IN-USE'

*“I think the sad truth is that Western governments’ view of the climate is largely delusional. They don’t understand the evidence. And in many cases they don’t understand that they don’t understand. Many climate scientists say that at 2°C, we’ll actually go over the dangerous tipping points. If, as many policy makers are suggesting, we allow warming to 4°, we won’t recognise our planet: no rainforests, no ice sheets, most species dead. Scientist James Lovelock says once you get to 4° you’ll go up to 6° or 7° because you’ll lose the algae in the upper layer of the ocean which draws down carbon. The only parts of this planet that will be habitable for humans will be south of Melbourne and north of London.” (Spratt, 2009, para 1)*

## 5.1 The Reflective Climate Change Practitioner – Introduction

---

As elaborated in Chapter Four, fully understanding our predicament covers a wide territory including the full implications of the threat, the shortness of the timeframe in which to act, the rapidly increasing costs. These costs are to humans and infrastructure and biodiversity in terms of impacts. The financial costs to act to quickly move to a zero-carbon economy whilst simultaneously preparing for the already inevitable impacts and attending to those already happening are significant. Chapter Four included understanding what stopped governments taking action when it would have been more feasible, less costly and was less urgent; what stops them now; why it became our ‘job’ to insist on necessary actions, to be involved; and the many hurdles obstructing that work.

This chapter has drawn and reflected significantly on both (i) the data – and within that the concepts, understanding and principles - gleaned from the interviewees and the questions and sub-questions they responded to and (ii) a platform developed to support the practical actions tackling how the many hurdles might be resolved. The full repository of the data gleaned, the hurdles and the issues and ways to approach them, sits as an appendix to this doctorate in the form of a wiki discussed later. A representative number of issues have been selected as important to include here in view of the interviews and the questions sets they responded to. They have been collected into major themes that emerged from an analysis of the hurdles and specific attributes that became evident as ways to overcome the hurdles were explored; along with the leitmotifs that fell from them.

As discussed in Chapter Two, my ‘mobilising practice’ is underpinned by experiential learning and observations, my formal study of ‘leadership and change’ (RMIT, 1998) and reflections on and belief in the importance of the ‘learning society’ (Schön, 1983). I see myself as a reflective climate change practitioner utilising theories and practices aimed at bolstering us to embrace speed and scale of the transformative change now required. This chapter contains fragments of this work depicted in greater detail and depth in the wiki (see Chapter 7).

## 5.2 Practitioner Insights

---

The *safe climate restoration conversation* requires an understanding of all elements involved in restoring safe climate conditions as raised in Chapters Two and Four. Activists and change makers need to be equipped with clear, measured and open-ended ways of communicating, allowing serious doubts and valid fears to be properly ventilated. It is vital that everyone in society - but especially the mobilisers - step up to talk about the climate emergency so that doubts and fears can be assessed whilst the broad purpose of the action can be kept in sight.

Understanding human capabilities is important; knowing that surmounting the seemingly insurmountable is possible is essential for believing that safe climate conditions can be restored. If groups of people know that, together, they are capable of achieving this, they will try, so that the message ‘we *can* do it’ if given its best shot, however risky, will be responded to, even if it may feel like an ‘*empty-handed leap into the void*’. If lacking enough confidence to even try, failure is ensured. Motivated by fear and hope, with conviction and confidence in the *Emergency Response* and in good faith, people will come on board in droves as there is no better idea on offer.

*Restorative living principles* go beyond reducing or just eliminating negative impacts as they are about bringing sustainability to the macro level as a sustainability-generating culture (Wahl, 2016) that will create many positive outcomes.

For example, the removal of plastics from the oceans and waste streams requires a detailed rethink of many of our practices and the thinking behind them. Thinking in terms of ‘throwing *away*’ items deemed ‘not-anymore-useful’ is with few exceptions (e.g. toxic waste) damagingly erroneous on three counts:

1. From the perspective of a finite Earth ruled by closed loops within Whole Systems, the idea that there is somewhere ‘away’ that things can be thrown to with impunity we now know to be deeply flawed;

2. the discarding as ‘useless’ of a thing which in fact comprises resources that are useful is a form of cultural biophilia-rejecting myopia and
3. the language of “throwing away” itself – more accurately expressed as “discarding” – trivialises the action rendering it superficial, meaningless and implies without consequences or responsibility.

This is the kind of cultural re-thinking needed to protect the Earth’s ecosystems and the many species coexisting in its biosphere; activities inspired by this new culture should demonstrate that they are ‘*mopping up*’ already inflicted damage as well as aiming at eliminating the root cause of the problems even if this may still take time to be achieved. Such ‘*dual tracking*’ is important to communicate the end-goal, avoid ineffectual distractions and enable iterative processes between causes of and solutions to multiple problems. (Buranyi, 2018)

Achieving *whole-systems-change* requires – on one level – fast-tracking our *personal* understanding of our own involvement in *causing* the existing problems. Learning where the points of leverage are enables us to do more meaningful work as individuals. Having gained clarity about the necessary and most important changes, demands have become clearer and our capabilities for collaboration – also across organisations – have begun to appear.

Returning to a stable and liveable climate requires a different economy; one that can be harnessed and steered in a safer direction away from the ‘Business-As-Usual’ (BAU) model that has played a large part in the ‘creation of the mess’ as previously elaborated. *Whole-Systems-Change* (WSC) is of paramount importance if our economic processes and relationships are to become a key part of the solution. As outlined in the 2017 Briefing paper by the *Urgewald* organisation and the *Unfriend Coal Coalition*, the fact that the economic consequences of climate change are increasingly becoming apparent will hopefully lead to positive changes - even if initially for reasons of ‘*enlightened*’ self-interest.

As time is of the essence, a ‘*save the world*’ campaign only focussing on transforming *existing groups* would be a very slow and drawn-out process; still, engaging in practical ways with them can teach us a lot about existing blockages which, while depressing, are useful to know. Fast-tracking transformative change by resourcing *other groups* is probably the best way to help them with their change efforts and intentions. As well, the difference between working in existing organisations that do and those that don’t have a strong transition culture is important. Either way, the absence of an argument, a document, brochure or tool of some kind might be holding them back and a call-out can be made for someone prepared to generate or trigger action, for example, by establishing a *Virtual*

---

*Houston* network. This avoids a struggle with the organisational culture and only remains a matter of resourcing to get through the impasse.

*Virtual Houston* is a 'Resource' concept drawing on the example of the real and psychological support the 70 NASA experts gave to the astronauts in the crippled Apollo 14 spacecraft. The mere existence of a network of 'experts' to give online advice, support, resources etc. to new groups and people facing challenges that others may have already faced or who have tricky questions is in itself a hugely reassuring boon.

To be most effective in the time available, rather than create new groups trying to do everything or even devoting lots of time to help existing groups get moving, the greater need is to put substance behind the few existing safe climate restoration groups, enabling them to move faster doing good work. Including every new group constantly forming as civil society searches for ways to deal with the myriad problems is not strategic, unless they are already climate emergency and safe climate restoration 'ready'.

Approaches to inspiring and building momentum for transformative change at a rapid pace and sufficient scale and supporting the motivation to restore safe climate conditions can be gleaned from smart business models; The Twenty Mile March, a high value concept to strategically establish the specific conditions needed to bring about desired outcomes guided by criteria, principles and discipline was explored by Sutton (2012, transcript-x, pp.1-3) and is attached as Appendix 12. There is a huge reservoir of knowledge and experiences created by cultural creatives the world over, ever-emerging answers to the blessed unrest (Hawken, 2007) that won't give up, a vault of accumulated wisdom, power and positivity the surface of which has barely been scratched. This was brought home to me in Paris, where experiences through generative and art-based responses and the perspicacity of the Creative Factory model resolved a number of issues that had been perplexing me; it taught me more productive ways to react to the awfulness.

## 5.3 Hurdles to Effective Action

---

### 5.3.1 A bit of Hindsight and now known Context

A short look back at the evolution of the proffered responses to the question of how to *reverse global warming* and returning carbon dioxide in the atmosphere to safe levels while protecting ecosystems is useful here; there was a different answer in the late-1980s and, as discussed in Chapter Two, by the mid-1990s and early-2000s it had become evident that things weren't going according to plan. Climate emergency activists could see early on that climate events were already occurring.

It is important to understand in broad terms the whole systems that impact Earth's atmosphere and that the different greenhouse gases have different properties resulting in their atmospheric lifespans varying "*from months to millennia*" (Clark, 2012). Describing the Water Cycle, UCAR Centre for Science Education (2012) explains a drop of water, for instance, spends an average of just nine days in the atmosphere before falling back to Earth (<https://scied.edu/longcontent/water-cycle>).

NOAA describes how Methane resides in the atmosphere for around 9-12 years. ([https://www.esrl.noaa.gov/gmd/outreach/info\\_activities/pdfs/CTA\\_the\\_methane\\_cycle.pdf](https://www.esrl.noaa.gov/gmd/outreach/info_activities/pdfs/CTA_the_methane_cycle.pdf)) Between 65% and 80% of Carbon Dioxide, however, persists in the atmosphere for between 20 and 200 years before dissolving into the ocean. The rest may take hundreds of thousands of years, which means "*...that once in the atmosphere, carbon dioxide can continue to affect climate for thousands of years.*"

Knowing that CO<sub>2</sub> remains in the troposphere and stratosphere for a very long time enables an understanding of the consequential *lag effect*, meaning that impacts experienced now were put in motion decades or more ago and, alarmingly, as emissions have continued to increase exponentially, impacts, though delayed, escalate commensurately which is why *drawdown* is increasingly recognised as imperative. In addition to the historical back-log already in place, every molecule that goes up now also must be brought down.

For the early climate activists, the understanding of that fact, along with the overall cooling effect of global dimming, made the already serious situation quite suddenly



dire. The appalling picture the science indicated and the increasing numbers of validating observations revealed, as outlined in Chapter Two, galvanised them into action. As these people joined together as forerunners, the upsurge of activity was evident in the flurry of organisations created and papers and books written. They spoke out publicly, ran events and searched for other systems thinkers who could help to do the work and get the word out.

Juxtaposed as tell-tale signs, the speed of the melting polar caps, the thawing permafrost and the growing trend of obfuscation coming from politicians fostered grave unease. The calming '*middle road*' projections contained in muted understatements of the IPCC reports would be unlikely to play out well. In February 2007, efforts to catalyse effective action focused on running the *Victorian Convergence on the Global Climate Emergency*. This language caused consternation amongst activists, afraid of throwing people into despair. It also prompted one journalist to urge his readers to '*pay close attention*' before dismissing '*these advocates as loonies*'. (McGrail, 2007)

Later that year in December, the new Prime Minister, Kevin Rudd, described climate change as "*the defining challenge of this generation,*" promising "*that Australia would commit to 'real' and 'robust' short and medium term targets to slash greenhouse gases, after the Garnaut review is finished next year*" (AAP, 2007, para 3) Unfortunately for serious action on climate emergency, Rudd was deposed 2 ½ years later. Calls from activists for sound risk management and the precautionary principle urging immediate attention continued to go unheard and unheeded; mounting anxiety accompanied the realisation of personal threat and terrible loss, reducing some people to denial or reliance on their own resilience, yet, for others, also triggering a one-by-one epiphany towards climate change activism.

### 5.3.2 The Evolution of Response

The goal to grow from this point meant attempting countless initiatives and running many strategic activities traveling the inevitable path through small groups to build a groundswell and then a movement intended to create the mass mobilisation needed. As Anderson (2015, transcript, p.13) explains, the goal became to raise the alarm, explain the science and promote transformative change. But the message was not popular and the sense of *emergency* not well-received. Anderson's (2015, transcript, p.10) talks were often criticised as being doom-laden but taking responsibility and laying blame are important too and people respond differently. Some see it as unvarnished truth and are very appreciative. The escalating scale, shortening time-frame and pace of the necessary change, the catastrophic climate change scenarios, the lack of effective leadership or action and the conspiracy of silence (*'don't frighten the horses'*) continues to create a range of responses. Some experience overwhelm, choosing, for a time, to pull back; some chose to build personal resilience; others dig into deeper distractions and still others enter a fantasy of hope. Hope today relies on urgently and actively applying the highest priority and a comprehensive strategic response. The personal reflective work many still need to go through, facing their grief, fears and selves, will need support, encouragement and, given the rapidly shrinking time-span, fast-tracking.

Mik Aidt (Aidt, 2018a) describes how, after thirty years of climate policy procrastination, the answer to the question of how to halt and reverse global warming falls into two main parts; in the *geophysical world* of the atmosphere, landmasses and oceans, it requires the urgent achieving of zero emissions, the drawing down of historical carbon load (over time) and, quite probably, the active cooling of the planet to minimise deadly temperature spikes. In the *socio-political world of humans* it requires public recognition of the dire threat to civilisation and the biosphere of climate change, urgently building the resources needed to *mobilise whole communities* into an emergency response able to engage in rapid transformative whole system change and ultimately supporting the nation and influencing the world to do this in the short time left.

## 5.4 Levels of understanding

---

Current climate change-exacerbated disasters are real-time forewarnings of an extremely dangerous, much hotter world and the extreme *improbability* of holding temperature at a certain level and of being able to adapt to the new much hotter conditions. Attention is turning to the length of time now needed to avoid the worst impacts. Anderson (2015, transcript, p.12) is often asked ‘*What will dangerous climate change look like?*’ ‘*What will the impacts be?*’ and yes, ‘*What will the adaptations have to be?*’ but most importantly, ‘*What lengths will we have to go to in order to avoid it?*’ He says a person’s level of understanding of the ramifications of climate change and severity of the threat will determine what actions they are willing to consider.

### 5.4.1 Change Knowledge

Those still wishing for and believing in *adaptation* feed resistance to considerations of reversing global warming (perhaps assuming the task is impossible) and the measures this requires. For them, it may not be until the reality sinks in, and ‘adaptation’ is revealed as a mirage, that hope for ‘*restoring safe climate conditions*’ can finally be kindled. As mentioned, the high level of motivation needed depends on *fully* understanding threat, risks and consequences.

For those who *do fully understand*, the determination to avoid the worst consequences of climate change and bring in transformative change for a safe climate future (i.e. the best *and* least-worst result) motivates them to find their own agency within their socio-political world; recognising the climate emergency reality is the first step. Once recognised there is no honourable way of turning back and, in the absence of responsible governance and effective leadership over the last 2 1/2 decades, or a better, faster, doable idea is the only thing to do. The steps that follow involve *engaging and catalysing the wider community into demanding a non-partisan approach to establishing a national emergency response*. At this late stage and given the prevailing political context, restoring safe conditions requires *mass mobilising*. *Removing the hurdles* to action is part of that and they must be understood if they are to be overcome.

As well, many people need to know what they are being mobilised *for* and required *to do* and offered a strategic plan of action that demonstrates a deeply reliable understanding of the *knowledge* of climate emergency.

Meg Wheatley (2017) challenges her audience to consider and decide who they want to be at this time of the *Great Unraveling* of our world. (Korten, 2006) My research tries to identify the attributes needed to do the work in this situation; whether accidentally or deliberately growing resilience over the years, testing and finding our own *Person Power* can be just part of life. Sometimes it involves a quite conscious collecting, developing and combining of what may become a long list of attributes relevant to the work of safe climate restoration. The list includes: being solutions-oriented, curious, analytical, imaginative, creative, determined, thoughtful, strategic, collaborative, co-operative and positive; honouring the ‘*and*’ in preference to ‘*either/or*’; practicing ‘*can do*’ and not easily taking ‘*no*’ for an answer; questioning rules and championing rights and principles; seeking to live one’s values and demonstrating and encouraging a steadfast commitment to an inspiring and honourable vision.

Contrasting self-interest with the common good presents a false dichotomy; self-interest as self-centredness and egoism can leave one oblivious to the collective existential crisis in which humanity finds itself and to which humans have condemned a great proportion of the multispecies inhabiting the Earth with us. Self-interest thus represents classic self-blocking, ignoring the fact that serving the common good actually enables the survival of the individual member and that it is now, as always, critical to our species’ and the multispecies’ survival.

#### **5.4.2 Telling a new story: Threat, Solutions and Plan**

Mobilising people to become mobilisers, change knowledge developers or change actors themselves requires the building of trust and hope by telling the story of the Threat, the Solutions and a Plan of Action as a package. This helps the next wave of activists understand the catalysts capable of loosening resistance to change, identify and dissolve barriers and accelerate the rate of general re-assessment and sweeping reprioritisation of Business-as-Usual. In the *Push-Pull theory of motivation* (Kirkwood, 2009), ‘*pull*’ motivation imagines a world future that is viable, perhaps beautiful and that avoids catastrophic climate change; ‘*push*’ motivation realises that the only possibility to avoid catastrophe is a global commitment to massive effort to create *rapid* transformative change, thus *Push Pull* also becomes *Pull Push*.

### 5.4.3 Practitioner Attributes

An entire catalogue of change knowledge and practices to support mobilisers is available: skill development, innovation, change knowledge, fresh strategies, synergies, reciprocity and rapid knowledge transfer can enhance leadership and team spirit amongst stall workers, educative activists, doorknockers, communicators, community organisers, mobilisers, campaigners and every humble leaf-letter; these are the bits we do as the bit players we all are. A lack of understanding and skill amongst the aforementioned capabilities and the mentioned roles revealed itself as a significant hurdle; as well, the numbers working to build the momentum have been small and have needed expanding. It became very evident that activists would greatly benefit from some comprehensive education.

*Being strategically optimistic is an important action criterion;* In his interview Taylor (2012, transcript, p.2) suggests that we have to hold onto a strong belief in the human capabilities necessary to turn our trajectory around; Jacobson adds that to know the maximum we can reduce emissions to is centrally important, helping bring to the fore the urgency to create the will within the community to act speedily on an appropriate scale, understanding that ‘*We are all in it together.*’ Whatever the awakening experience, creating the context of an *Emergency Mode* as one element of a meta strategy can stimulate optimism and help mobilise people – younger and older – into considering where their time might be best spent. Wherever people are drawn to contribute, reprioritising other commitments becomes necessary to do it justice. This requires examining the daunting array of reasons and excuses for inaction – personal, psychological, orchestrated or ignorance – and removing as many as possible. Things that get in the way, that block action, have to be removed; the word *hurdle* connotes the possibility of overcoming with action, whereas *barrier*, as it implies impassability, can be self-fulfilling or invite violent action.

### 5.4.4 Self blocking is insidious

All assumptions must be thoroughly interrogated. When examined, it turns out many come under the heading of self-blocking; Sutton (2012, interview-xi, summary, p.1) suggests the most dangerous self-blocking assumption of all is the one suggesting safe climate work cannot be done. The very concept of self-blocking needs to be consistently raised and explained and then addressed with practicalities because self blocking, unless addressed, can get in the way of the development of change knowledge. So too can group norms, cohesiveness, inertia, groupthink and a range of other group dynamics. Group self-sabotage can occur when the desire to ‘*ignore negative information*’ leads members to prefer *agreeing with each other* rather than dealing with the information before

them. (Jayasimha & Nandeshwar, 2010, p. 173) Making change in group behavior can be incredibly difficult when, for example, “*Resistance due to groupthink and escalation of commitment occurs because members ignore negative information – even when they realise that their decisions are wrong – in order to agree with each other.*” (Jayasimha & Nandeshwar, 2010, p. 173)

Offering a stripped-down management plan, the skeleton of a campaign or using fractals to explain and convey the ‘*massive picture*’ – from the *climate emergence* down to the necessary micro-campaigns – can catalyse actions. A myriad of strategically important micro-roles can be distributed, embraced and taken up, perhaps also drawing on voices of experience, for example, Vasily Jack – a South African activist interviewed by Taylor (2012, transcript, p. 7) on the things that can make campaigns successful: “*If you can’t make it to relate to people on the local level, you won’t be able to mobilise them.*”

\*\*\*

## 5.5 Fragments of a Theory in Use

---

### 5.5.1 The process undertaken

Gleaned from the interviews and reflecting on the practice behind the ten years of this work, the remainder of this chapter is the preliminary start of an explorative discussion looking at many fragmentary ideas and embryonic strategies to find ways into solutions to hurdles; specifically the hurdles identified by this research as blocking progress in the climate emergency work. These ‘ways to overcome’ literally fell out of the work when the question was asked “How might hurdles be resolved?” giving rise to the Educative Activist Framework wiki discussed in Chapter 7.

An assortment of hurdles has been sorted and organised into ten categories to indicate the general idea. It is intended that with further collaboration the EAF can be developed into a valuable resource for educative activists within the movement.

Each category contains a dot-pointed sample of *hurdles*. Beneath each hurdle is a very brief comment on potential *ways to overcome* them. The *leading theme* is a term or terms referring to work that exists and is visible in the doctorate and the EAF; it is a characterisation summarising responses existing or potential.

For example,

#### 1. Category

Category description

#### Hurdles

##### 1.1 Sample hurdle

**Overcome by** - How to overcome hurdle

**Leading Theme** - Theme



## 5.5.2 Hurdles and ways to overcome them

Distilled from the several research ‘findings’, particularly the interviews and my own experiences participating in the organising work of twenty-one *Sustainable Living Festivals* (SLF) in Melbourne and Victoria and in the wider sustainability movement(s), the categories are as follows:

1. Not fully understanding: threat, risk, urgency, pace, solutions, what to do
2. Constructed silences – media, government, BAU, social, community, personal
3. Defeatism: Self-Blocking and states of mind
4. Disconnect from nature; disconnect from each other
5. Biases and Fears
6. Expectations and Assumptions
7. Imagination and the lack of it
8. Things perceived to be beyond our ability to control
9. Problems that diminish the movement’s effectiveness
10. Absence of widely-shared Action Plan

### 1. Not fully understanding: threat, risk, urgency, pace, solutions, what to do

The degree to which people understand the emergency and all its impacts is visibly represented in behaviour and priorities. When the percentage of people who understand the extreme severity of the risk is reduced by the number of people who think they understand but don’t fully, the numbers who actually understand shrink and the size of the challenge - to generate rapid change – grows. The information about the degree of change required to reduce timelines to around a decade of change is still largely missing or unspoken. Notwithstanding greater acceptance of ‘climate emergency’ and of the notion of ‘emergency mode’, ‘Climate Code Red’ (Spratt & Sutton, 2008) remains a rare example of the good work of making the information readily available as are the Breakthrough papers.

### Hurdles

- 1.1 The existential nature of the threat, the risks and what is (and isn’t) at stake; that the full severity of the climate situation is hard to accept and not fully recognised – even within significant parts of the environment movement much less Australia’s politicians – and that this is still the case in 2020, is a major hurdle.

**Overcome by** - Update Climate Code Red; produce another such book with condensed version, podcast, TED talk, Breakthrough online discussion papers.

**Leading Theme** - Responses and resources in the vein of Climate Code Red

- 1.2** Belief in the Adaptation mirage. A very concerning widespread belief exists, becoming ever more irrational as the overshoot continue, that we have to and can deal with some ‘reasonable’ levels of changes to our climate. 2°C is extremely dangerous but is apparently being classified as an ‘acceptable’ level some think we can ‘manage’ or ‘adapt to’. This belief is sustained in spite of the fact that many humans and other species will die. As explained in *The Age of Consequences*, offering Syria as a case in point, global warming is a threat multiplier. “The truth is that together we are committing suicide and murder and we can either stop or we cannot stop.” Margaret Klein Salamon (2015, transcript, p.2)

**Overcome by** - Understanding that all futures are now radical. Kevin Anderson (2015, transcript, p.7) urges us to always point this out: “Many people, probably millions of people will die as a consequence of climate change.”

**Leading Theme** - A response showing the scale of threat beyond adaptation –*The Age of Consequences* Report (Campbell 2007) & subsequent documentary (Scott 2016)

- 1.3** Urgency and Pace are typically understated as confusion prevails regarding the available time, the serious effect of the lag-times involved and the sheer scale of the many tasks.

**Overcome by** - Being able to see and depict the scientific picture that has emerged with updates and images of current events and (non) responses, are ways to overcome this hurdle. Backcasting can assist in working through the realities of the tasks to be undertaken; as people realise the need to leap hurdles, time must still be allowed for ‘baby steps’ & for retracing the detailed planning of the ‘steps before’ of past successes. “What (is) the necessary step before even that step?” is a key question (Sutton, 2012, transcript-v, p.2)

**Leading Theme** - The process of Back-casting from Success & considering the Steps Before

- 1.4** Knowledge gaps in the basic science of climate change exist. Science-based projections of what warming of 4°, 5° and 6°C really mean, and even of 2° and 3°C, challenge us to think through and find ways to constructively communicate a dystopian local

neighbourhood scenario; how to face the threat of people stealing the vegetables via the back-fence, realising that supermarkets only stock a few days' worth of food? Scenarios of 4°C+ are terrifying with the certain prospect of millions of desperate people on the move. At what ambient temperature does the human sweat function collapse and hyperhidrosis set in?

**Overcome by** - reading lists, podcasts, MOOCs, study, movies and documentaries such as Homefront. (Taylor, 2019) Such scenarios focus the mind (Lynas, 2007; Hamilton & Kasser, 2009; Christoff, 2014) There's ultimately "no option for sustainability", its absence means "collapse" Margaret Klein Salamon (2015, transcript, p.1)

**Leading Theme** - Science 101

Ecology 101

The Age of Consequences. (Campbell, Gullede, McNeill, Podesta, Ogden, & Mix et al., 2007)

- 1.5** The work that is needed to find equitable ways between nations to meet even the Paris Agreement (UNFCCC, 2015) goals is very challenging (Du Pont, Jeffery, Gütschow, Rogeli, Christoff & Meinhausen, 2017). These authors identify global cost-optimal mitigation scenarios consistent with the Paris Agreement goals and then allocate emissions dynamically to countries according to 5 equity approaches.

**Overcome by** - Include climate justice in the discourse.

Give it a clear focus

**Leading Theme** - Climate Justice

- 1.6** The (UK) Radical Emissions Reduction Conference (2013) opened up a new space for dialogue introducing the notion of 'radical change' into the discourse. (Anderson 2015, transcript, ps. 3-4) But, while working well for imaginative, technologically viable innovations demonstrating significant social change effects capable of rapid implementation (especially for shipping and lighting), social scientists pushed for a more 'leftist' progressive political agenda. For some, climate change was just one more in an 'armoury of reasons' for major systemic change. Many held the view, reinforced the following year with the publication of "This changes everything: Capitalism versus the climate" (Klein 2014 ) that today's system is inappropriate for the long-term. This

highlights the general need, itself a hurdle, to bring people on board from a wider constituency and expert range. (Anderson, 2015, transcript, p.15)

**Overcome by** - Careful selection and preparation of presenters who can make the connections. Anderson (2015, transcript, p.15) credited the pulling together of this conference to Jonathon Porritt, author of inspirational book on change, *The world we made: Alex McKay's story from 2050* (Porritt, 2013).

Conferences like this require long lead-times. Discussion is needed to solicit technically viable papers that talk to the point of implementation and the social change effect that the technology can and cannot deliver. People submitting papers need encouragement and assistance to include thinking about significant change associated with their proposed technological innovation and the time-frames involved. Getting technologically-oriented people involved in social change can be challenging.

**Leading Theme** - Presentation of solutions that get to the root of the problem.

To be called Radical Solutions they need to include the 'social'.

### 1.7 The confusion of all the elements is itself a hurdle.

Some big picture thinkers believe that the science of climate engineering has arrived and humans, having created a greenhouse, will now forever manage the planet and there will be no nature anymore; however, on any planet, the maintenance of a healthy ecosystem and a life bubble for any species will remain precarious. Parallels can be found with Frank Herbert's epic book, *Dune* (Herbert, 1965) in which the ruler of the almost completely waterless planet, beset by fierce sand storms, was the Planetary Ecologist (Whitehead, 2014, p.4).

**Overcome by** - To maintain all the elements in the over-arching 'big picture' the many activities occurring across micro to macro levels are named *Fractals of Transformational Change*.

Politicians grasping Systems Ecology - 101; change-knowledge developers (CKDs) teaching science and offering accessible tools; such as one-pagers presenting ramifications of research including Solar Reflection

**Leading Theme** - Fractals of Transformative Change Breakthrough, The National

Centre for Climate Restoration; RSTI - Research and Strategy for Transition  
Implementation

- 1.8** Understanding and being able to imagine Emergency Mode – why it’s necessary, how to live and act consistently with it and for how long; what might success and the positive pathways (mega campaigns) to get there look like – all represent a large hurdle.

**Overcome by** - Utilise information, activate imagination and explore questions.

The vision of a Sustainability Renaissance depicted by Porritt (2013) and (Hawken, 2017), is alluring. If all listed avenues were implemented, (with the reversal of global warming) life on Earth would be much improved.

**Leading Theme** - Vision for A Zero Emissions World; Transformative Change; Solutions Economy; Whole Systems Change.

- 1.9** Confusion about the most important ‘Things to Do’ right now is a hurdle requiring rapid conveying of change-knowledge to the wider community through education, training, consultation, communications and other processes.

A massive ‘physical’ problem like climate change requires more than simply imagining a physical solution; social change needs to provide actual solutions and change-knowledge developers and implementers require criteria to mediate between big picture and implementation of small change ‘steps.’ Currently, this is still a work-in progress.

**Overcome by** - A strong interplay between the important strategic roles of Change Knowledge Developer (CKD) and Solutions Generator (the latter often fully focused on the technology).

Before a robust sense of what is needed can emerge, it is often just a matter of getting on with it and trying. CKDs need to understand the system they’re working with well enough to develop effective implementation that could also be replicated elsewhere.

**Leading Theme** - Task appropriate Change Knowledge needs consistency and specialization between the roles of Developers, Implementers and Solutions Generators.

- 1.10** Mobilising Next Wave activists so any and everybody can play their part requires finding and recruiting activists and practitioners based on attributes and criteria; and providing Safe Climate Restoration training to enable them to build bridges, multiple pathways and to signpost ways forward.

**Overcome by** - Identifying the wide spectrum of options, teach and implement a self-audit process, develop a ‘work with what you’ve got’ approach and offer classic skills training, including speaker training (see BZE model, public speaking, door-knocking and good conversation openers).

**Leading Theme** - Building the Next Wave.

Understanding and promoting Safe Climate Restoration

- 1.11** How to Reprioritise – workshop the implications of ‘holding on’ to certain things in the context of climate emergency (CE) and provide training, tools and criteria to facilitate reprioritisation. When deciding about committing resources for specific parts of the emergency, the anticipated longer term ‘casualties’ would be top priority (e.g. by transforming the economy to restore safe climate conditions). Investing heavily in fortifications that in the context of lag-time and future consequences already unleashed can only ‘buy time’ needs to be challenged.

**Overcome by** - Setting up initiatives using clear, consistent criteria, templates, processes, guiding the applicant through necessary details so that focus stays on Big Picture goals; working through set-backs. Creatively support development of and enlisting in government safe climate initiatives.

Committing resources to repairing certain types of damage done could be logically rejected however, if ‘buying time’ slows the pace of extinction(s) while climate restoration necessarily takes time, it must be considered.

**Leading Theme** - Reprioritise. Transforming the Economy to restore a safe climate.

- 1.12** Organisations seeking to engage in transformative change need encouragement from the top, diverse support groups and Communities of Practice created to work on the inside to catalyse and nurture relevant ideas.

Meeting a hurdle with no known solution or coming across endless problems indicates that it is timely to go back and ask: 'how are we going to do this?'

**Overcome by** - A Quality Circle created in the management process can be highly motivating to demonstrate that there is support to build the knowledge people feel they need to tackle the problem. Spin-offs include the sounding board effect, feedback, opening up and the flow-on of directly relevant insights. By actually practicing the change, learning the creative process naturally flows out in a reflective and creative way.

**Leading Theme** - The Educative Activist Framework (EAF)

- 1.13** Finding climate emergency and restoration activists is an ongoing quest to help build the next wave and amplify the message. An awakened sense of urgency can create resources. It can catalyse a powerful drive to act but *acting in haste* can mean *repenting at leisure* too.

There might be a need to build resources before diving right in especially if commitments are to be made and if there is a 'lag time' that involves other projects or initiatives.

The search for those other climate restoration conversations happening elsewhere on the planet continues as at least some will have an affinity with the local conversation and as they meet, something strong and vibrant can result.

**Overcome by** - The *Hasten Slowly* approach carefully considers what is most strategically important, who can do what and the sequence of initiatives; most significantly, what is something important that perhaps only a particular individual can do.

Simply *Diving In* and sharing ideas, concepts, successes and failures, reporting what is being done, all the learnings, where it's going and addressing barriers; all can help locate valuable associations and make connections. Philip Sutton located Ezra Silk in Boston USA this way, then connected with Margaret Klein Salamon and The Climate Mobilisation (TCM) in New York and, with many long international skype calls, TCM adopted Emergency Mode and the war footing approach. Bernie Sanders joined TCM and took that language into his political speeches contributing to the Democrats change of policy and move further in the emergency direction. A small yet significant example in which Australia influenced America by 'diving in'.



**Leading Theme** - Hasten slowly.

Dive right in.

- 1.14** Old paradigm (BAU) constraints and blocks; the 1950s Anglo-Saxon political approach is not good with systems issues or getting to the root causes to realistically consider possibilities with rates of adjustment and other issues now faced.

The radical urgency required to combat climate change meets the hurdle of short-termism and political pragmatism. (Anderson, 2015, transcript, p.1) These things will not just go away.

**Overcome by** - Up-scaling the strong 'Pull' of the emerging Culture of Sustainability, harnessing the positive and naturally occurring multiplier effect has potential to turn around destructive-living; Anderson (2015, transcript, p.13) thinks that social scientists may be best able to pick up the necessary scale of whole systems transformative change. With 25 years of development to draw on, a wealth of experience and established wisdom is contained within change management processes. Knowledge management likewise has much to contribute and great potential lies in the coupling of these approaches.

**Leading Theme** - Proactively developing a Culture of Sustainability

- 1.15** Compounding the already daunting problems surrounding climate change is Target Creep, making the already rare conversations about climate repair appear even crazier the further we deviate into the over-shoot scenarios.

Accepting scientific research documenting the trajectory we're headed on has come to mean accepting or barely questioning that trajectory. Once mentioned, numbers such as 2°C get a life of their own, politicians quickly calculating adaptation costs, time-frames and fallout in a short-term political context. Knowing that the political and commercial context in which we operate readily accepts 'overshoot,' a strategically better number would have been 0.5°C or, at most, 1°C of warming above normal. This lower 'limit' may have galvanised a more urgent and realistic response to changing the trajectory; 2°C was never meant to be a target; it was a limit first 'guessed' by an economist, not a scientist and only ever mentioned in the same breath as 'we must not allow the world to heat beyond it' but 2°C and 350 ppm were latched onto early, making the communication task more confusing. As Jacobsen (2015, transcript, p.4) agrees, they were meant to allow time to incrementally reduce emissions and figure out what to do, which not only failed

to hold but the clamour around it and ‘normalising’ the overshoot now sees most science and scientists dealing with that end of the spectrum. As society fails to deliver anything significant, as the science dialogue moves along, as scientists normalise their work, as emissions rise and thresholds approach, carving out space and time to consider how we can obtain a far safer, more sensible outcome proves very difficult. Targets always get pushed, as Anderson (2015, transcript, p.13) concludes. I think we could call this target creep in action.

**Overcome by** - Jacobsen (2015, transcript, p.1) suggests that the target could become a moot point, doing the best one can whatever the pace of the transformation.

Depicting this potential for crazy responses quite effectively is *Tomorrowland*, an ‘overshoot’ movie starring George Clooney. (Bird & Lindelof, 2015)

Systems theories need to include contextual social culture and more precision about what education and explanations people most need right now. As the downward adjustment from 2°C to 1.5°C became necessary (potentially to 1°C or even 0.5°C), an opportunity to discuss options and ramifications in more detail emerged, leading to possible tweaks and changes in the response.

On the strong advice (the pleas) of Philip Sutton and David Spratt, Bill McKibben subsequently added the ‘less than’ arrow symbol in front of 350.org.

**Leading Theme** -Reform agendas for Rapid *Transformative Change* consistent with *Precautionary Principle*, ensuring *Climate Justice* and *Spirit of Generosity* would naturally mean *No More Bad Investments* - NMBI

## 2. Constructed silences – media, government, BAU, social, community, personal

*“The climate crisis is already here but no-one is telling us. That’s because the media prefer to turn away from important issues and give us trivia”* The title of article in The Guardian (Monbiot, 2016). *“The most important thing you can do right now to fight climate change, according to the science”* Title of an article in Think Progress (Romm, 2019).

Both articles point to the importance of Patti Smith’s message – addressing everyone from the stage of Le Triannon’s Pathway to Paris concert, (2015) to *“Use your voice!”*.

### Hurdles

- 2.1** Climate and social scientists, tech people, innovators, investors, artists and actives and organisations are, in general, not talking enough with one-another at this time.

Finding and supporting speakers with audacity to speak out and break the silences.

Locating catalysers and organisers arguing strongly for 280 ppm

**Overcome by** - Innovators need to be encourage to give attention to ‘rate’ of market penetration and to raising standards;

Adjusting the standard conference model to something more dynamic – such as a ‘Creative Factory’ or a ‘Conferring Factory’ with focus on action on outcomes. Inviting the interest of a leading organisation – such as Melbourne Sustainable Society Institute.

- 2.2** Business-As-Usual/status-quo arguments gave permission to be *asleep at the wheel*.

**Overcome by** - Building on years of solid work on an ongoing awakening campaign strategy, new wake up messages will no doubt be utilising creative disruptions.

- 2.3** Many people aren’t aware of possibilities and only a small proportion of the population is reached.

How to get mainstream television communicating what a Climate Emergency Response can achieve? Could a pitch for a TV sitcom series be developed such has been done before? E.g. during the Depression in the 1930s in the US in the films produced for the Tennessee Valley Authority, e.g. Wild River, A 1930s Tennessee Valley Authority agent, Chuck Glover (Montgomery Clift), is sent to oversee the completion of the Tennessee

River dam, with the assignment of convincing the locals to move from their homes for this project. (<https://www.youtube.com/watch?v=p2pOLdj1nXg>)

And also in educating viewers about the ozone layer hole via a hilarious episode of the Australian TV series (1998, 2000) *The Games*. In this episode John Clarke had agreed to appear on ABC TV's *Lateline*, hosted by Maxine McKew. He was hoping to address the scheduling concerns of the swimmers, represented by Linley Frame, but was ambushed by Maxine's third guest, Simon Palomares. Palomares was far more concerned about environmental issues and wanted Australia to indemnify all visiting athletes against the potentially cancerous effects of the hole in the ozone layer (<https://aso.gov.au/titles/tv/games-rural-and-environment/clip1/#>)

Ventilation of all related aspects of global warming and climate change need support from outstanding people with high-level communication expertise.

**Overcome by** - Develop new communication modalities, create new language, reclaim the concept of 'radical', explicate sustainable society, social enterprise and community dividend. New knowledge needs to be framed within a values-based approach; as our values are realised and mediated through economic and social transactions, we need new linguistic and economic systems (Escott & Quante, 2014) a new language containing positive framing and an optimistic description of a future we actually want to reach (i.e. after the transformational change we need to embark on) and which change practitioners can identify with and share.

The Bureau of Linguistical Reality (2014) is a public participatory artwork by Heidi Quante and Alicia Escott focused on creating some of this new language as an innovative way to better understand our rapidly changing world due to manmade climate change and other Anthropocenic events.

The vision of the artwork is to provide new words to express what people are feeling and experiencing as our world changes as climate change accelerates in order to facilitate conversations about the greater experiences these words are seeking to express to gain a greater cultural shift around climate change.

A new economic system, a value creation model that is not growth-dependent or based on abstract financial value. The idea of a community dividend with the capacity to shift and replace the private-acquisitive economic dividend in people's minds, as Verstegen (2012, transcript, p.21) suggests, allows reciprocity and the 'gift-society' to flourish;

a social contribution can catalyse a community dividend and members know that something will come back.

- 2.4** People still ask where the science is that proves the need for returning to 280ppm; Philip Sutton's "Draft Strategy For Restoring A Safe Climate" is available through RSTI (<http://www.green-innovations.asn.au>) and Anderson (2015, transcript, p. 11) acknowledges that safe climate restoration is not impossible but the full scientific case answering 'how' is yet to be fully developed. Research programs and funding in this area are hard to find and, astonishingly, this critical research is not yet undertaken.

Lobbying for funding and finding grants

**Overcome by** - When asked directly, scientists invariably confirm that the possibility exists that it is not too late to reverse global warming and change the trajectory. Successfully campaigning for resources to be allocated to explore the detail of how safe climate conditions can be restored would enable scientists to make the case for returning 280ppm or even lower. As Anderson (2015, transcript, p. 13) argues, whilst scientists are not making this case publicly, one example of something being done would suffice to make the point and stimulate others to follow.

- 2.5** Well-versed commentators (e.g. Monbiot 2011; Hamilton, 2015) and knowledgeable scientists (e.g. Hunt, 2015; Anderson, 2015) may well have contributed unhelpfully to the hesitant start of research on solar reflection methods (SRM) with either/or positions that are pre-emptively pessimistic, even fearful.

Framing the discussion from the outset as two oppositional options – (i) advocating constraint on emissions or removal of carbon from the atmosphere OR (ii) don't do those things and instead consider SRM and other geo-engineering possibilities – effectively stops discussion before it begins on an approach which could employ all three. Being cautious, even fearful, is a rational response but if/when the situation warrants it, shouldn't 'gag' discussion.

**Overcome by** - Jasonoff (2018, 7 min 58 sec into Harvard video clip) ([https://geoengineering.environment.harvard.edu./](https://geoengineering.environment.harvard.edu/)) at Harvard University and others advocate setting up governance organisations and protocols as soon as possible / now: "*We have not diverted attention to the institutional structures that are now needed in order to*

*respond to the challenges. We have to get global buy-in” and David Keith (2018, 6 min 46 sec into Harvard video clip) ([https://geoengineering.environment.harvard.edu./](https://geoengineering.environment.harvard.edu/)) adds: “We need a research program that thinks about how to reduce the technical risks by figuring out better science and technology and how to build institutions that have a better chance of governing a technology like this in a divided world... We need a diverse systematic effort to figure out how geo-engineering might work ... non-commercial, open access and it must be international. Moreover this is a problem where a multi-disciplinary approach is absolutely vital. We need engineering and science but unless it’s embedded in a larger universe that thinks about governance, thinks about business, thinks about ethics and even the way this fits in our environmental literature, we won’t be able to do something that really helps the world ultimately make decisions about it.” (Keith 2018)*

- 2.6** In the sea of silences the patchy discussion has all too few voices influencing the embryonic but vitally important discourse on solar reflection methods. The public’s role in the big topic needs to be thought of. What should be considered and where do the decision-making rights and big responsibilities lie?

**Overcome by** - A collation of five ‘voices’ commenting on geo-engineering –Hunt, Caldiera, Monbiot, UK Government and Harvard University – can be found in the appendices (See Appendix 13).

- 2.7** If geo-engineering is “the deliberate large-scale manipulation of an environmental process that affects the Earth’s climate, in an attempt to counteract the effects of global warming,” ‘drawdown’ or CDR is geo-engineering.

**Overcome by** - An idea, relayed by Dr. Veron when asked by Philip Sutton whether he had heard of any concepts that could buy time for the reef, involved sending robot boats onto the Great Barrier Reef to create cooling clouds of water vapour to support the reef’s living organisms while safe climate conditions are restored. (This conversation occurred at the Transforming Australia – Whole Systems Change National Summit, November 2011).

- 2.8** Another silence: while not ‘deliberately’ intending to manipulate the planet’s climate system, many practices do just that, consciously and carelessly – pollution, deforestation,

burning fossil fuels, large agriculture monoculture, etc.

**Overcome by** - The completely unintentional effect of global dimming that is associated with millions of human deaths every year from particulate pollution, whilst also masking the full effects of global warming by cooling the Earth, especially above cities, by about 0.5°C needs to be publicised and widely discussed.

- 2.9** Citizens have direct agency in only a small number of high-level emergency-scale solutions. Agency mostly resides in being informed, discussing, lobbying or promoting, wishing, hoping and voting – and, when opportune, demonstrating and protesting.

Without strong leadership and many voices echoing needed actions, ideas and realisations, take time to be accepted much less implemented.

**Overcome by** - Initially, the concept of zero or negative emissions received a lot of push-back in the environment movement but came to be accepted as necessary. Next, the need for ‘drawdown’ / CDR became accepted as the consequences of the historical overload of carbon in the atmosphere was more fully understood; Whitehead (2014, transcript, pp.9-10) proposes it can occur via revegetation, certain grazing techniques and pyrolysis/bio-char. Carbon farming and soil regeneration techniques can also help.

**Leading Theme** - Drawdown

- 2.10** The realisation that things have gone so far that even zero-emissions and drawdown won’t go far enough to protect the biosphere is slow to catch on.

**Overcome by** - Whitehead, having researched this area, speaking to audience at Breakthrough event at Melbourne University’s Australian – German Climate and Energy College, October 2015, said: *“There is not enough suitable land on planet Earth to meet the scale of drawdown that’s needed to reverse global warming and actively cool the planet pointing to the conclusion that some form of solar reflection at the poles may be unavoidable. .... We are going to have to drag it [CO2] down really hard and cool the planet actively.”*





Fig. 27 *Clouds*. Oil on board, 40 x 35cm G Wilkinson 2014

### 3. Defeatism: Self-Blocking and states of mind

#### Hurdles

**3.1** Hurdles include pessimism and lack of enough optimism (to be strategic); cognitive dissonance (some is also due to trauma from Global Warming events); blind spots; avoiding self-awareness; looking away from, rejecting or being unconscious of one's own values.

**Overcome by** - Values-based transformative change and personal authentic change.

Consultations, workshops, reading lists, etc., websites, rallies, private conversations; education that goes to the point of personal values – by one means or another.

**3.2** Words like 'intractable', the way issues are framed and certain beliefs and biases can add to the sense of intractability.

**Overcome by** - New language is needed and learning the art of re-framing and re-re-framing.

**Leading Theme** - Bureau of Linguistic Reality

### 3.3 Ducking, Shirking and Abdicating Responsibility.

Being complacent.

Being too afraid to look.

The confronting nature of the issue can even catch many professionals unaware; they may not have consciously thought about vicarious impacts as they were focussing on supporting those who more directly experienced the events or worked with the scenarios.

**Overcome by** - Understanding this occurs in every Emergency call to Action; helping people through their resistance to learn processes to unblock, to find their capabilities, self awareness and willingness.

Some people, younger and older, find within themselves the capacity and courage to not just look at it once, tick the box and go away, but to revisit the ‘scary scenario’ as a necessary step. Whatever shape it takes, the more often visited, the more it tends to become familiar. Rather than becoming immune, the terror loses some of its shock value; it doesn’t hold the same potency to derail as it did at first; keeping a balance gets easier and staying with the work more possible. Fully facing the existential threat renders more realistic that we’re All in it (and working) Together.

**Leading Theme** - ‘Looking the Tiger in the Eye’

## 4. Disconnect from nature; disconnect from each other

### Hurdles

**4.1** Being disconnected from nature, from other sentient beings, from the other than/more than human, from the land and geo-physical landscape we inhabit results in distress, stress, loss of empathy, knowledge and respect and – sometimes - insane acts of violence against nature. The fractal relationship (CH 1, 1.6) with how humans can treat each other and then descend to a level of self-abuse, self-hatred and extreme isolation represents a major hurdle. The interconnections between inner and outer worlds are of central importance to the circumstances we find ourselves in.

The Age of Consequences shows the population of Bangladesh excluded and contained by a hostile India with a double razor-wire perimeter security fence patrolled by 8,000 armed troops.

A quantitative surge in wall-building has occurred since 9/11, depicted in a ‘hockey-stick’ graph so prevalent in global warming related data. *“As of 2010, there were nearly 45 border walls (soon to be 48) totalling more than 29,000 km.”* (Vallet & David, 2012). Based on the trend this number would have (by 2020) risen to around 80 or more.

**Overcome by** - Consciousness raising; reconnecting; relearning that “The essence of humanity: [is] our connectedness” (Monbiot, 2016).

**Leading Theme** - Ways, processes, resources, experiences through exposure to or involvement in opportunities such as Albatross (the movie); Council of All Beings; Forest Bathing.

## 5. Biases and Fears

### Hurdles

#### 5.1 Schisms and other ‘isms’; Parochialism and Territorialism; Disrespect; Competition.

A focus remaining on the split can be self-reinforcing.

Disrespect between the generations is often more a symptom of frustration and ego.

*“These young people are all the same”*

*“These old people are all the same”*

#### **Overcome by** -

- (i) Build bridges and confidence; pull back from emphasising difference, use historical examples, research literature; emphasise possibilities of complementary work e.g. between Melbourne and Sydney rather than succumb to the traditional rivalry.
- (ii) Analysis shows that people young or old are not *all the same*; representatives from both groups have dedicated their lives to changing the trajectory we’re on and continue to do so; some put a lot of store in ‘green’ technology to save the day; some make big efforts to be involved in behaviour change. In both groups, some were more aware and engaged earlier than they are now and, as the sense of climate emergency escalates and recognition grows, more people from both groups step up all the time. Some from both groups resist waking up at all.
- (iii) Keep an open mind, group-work, move towards consensus decision-making; understand how biases and motivations reach into ordinary lives.

**Leading Theme** - Accessing tools such as Principles of Cooperation; Mindful Communication

- 5.2** Many fears need to be unpacked: fear of loss; extinction; death; fear of fear; fear of other people's fear, grief and strong emotions. It's all too easy to imagine hell on Earth – dystopia. But there are also fears of taking responsibility, of committing, of loss of life balance, of not living one's own life, of overwhelm, inadequacy, failure and losing the battle (also because one can't imagine winning it!); fear of being ostracised by ridicule, push-back and rejection, fear of 'reinventing the wheel' (or not), fear of not measuring up.

**Overcome by** - Look for support and help; find a 'happy home' for involvement; find people who have experience of winning to tell their stories.

Be the support for others whose work is of value.

**Leading Theme** - 'Looking the Tiger in the Eye' and 'Facing Death, Embracing Life'

- 5.3** Fear of Government intervention... certain ideological and political quarters prefer minimal government intervention: on the right because it's seen as undue imposition, on the left because of the anticipation that the history of bad policies will only be prolonged and reinforced.

**Overcome by** - Anderson (2015, transcript, p.10) has this to say: *'Addressing the problem of achieving decent policies requires government to be held accountable to the responsibility to propose strong moves to tackle climate change and to be challenged whenever it seeks to place the responsibility on the public packaged as 'choice'. Every time the cry of 'granny state' goes up as if something unwarranted is being imposed and the public is unfairly being robbed of choice, strong moves are duplicitously avoided. Refrigerators, cars, etc. must be labelled with efficiency standards, reducing emissions, and it's the job of the politicians, not the job of the public who just want to buy a decent product, to make those decisions. Manufacturers will complain when standards are tightened 'by 5 to 7% every year' and then go ahead and comply. The public only need to be told what they could be doing and what government should be doing and they can go back to their day job and not notice a lot about climate change. No-one actually gives a damn ... what insulation is in their fridge. They will notice when energy bills are lower.'*

#### 5.4 Fear of complexity and difficult thought processes.

**Overcome by** - The pictures of fractals and nested Babushka dolls help in representing the complexity, starting from the ‘big picture’ and moving to the small and local everyday. Once the ‘macro-level’ architecture of the problem/solution is shared, it can assist further unfolding through a process of discovery and creation, making it possible to understand and create a picture of which even people who don’t quite understand the whole system can have a sense. Then ‘drilling down’ to where specific changes need to occur becomes possible. Sutton (2012, transcript-v, p.6) suggests that many are happy to be involved in practical things, get instructions, know enough to understand what’s important saying *I accept that. I don’t need to know. Just tell me what to do.*

## 6. Expectations and Assumptions

### Hurdles

**6.1** Having generally low expectations of humans, – ‘*we’re all selfish and self-centred*’, ‘*we can’t act until its upon us*’ – is a real hurdle

**Overcome by** - Capability messaging – refer to human brilliance in other emergencies; workshop Emergency Mode parallels; share movies/ documentaries (e.g. The Corporation, Merchants of Doubt, Age of Consequences)

**Leading Theme** - To think consciously, be proactive about Expectation Setting and Resetting

**6.2** Assumptions can be self-fulfilling and dangerous – ‘*Safe climate cannot be restored*’, ‘*we’ve run out of time*’

**Overcome by** - The vacuum created by the absence of traditional leadership (political, corporate, academic, faith-based) enables non-traditional, ‘fertile-ground’ leadership as strategists, thought leaders and whole-systems thinkers to engage with the ‘big picture’ and challenge assumptions. In transformative change, the new leadership is dispersed rather than centralised and distributed (see glossary) rather than individualistic.

**Leading Theme** - We are the Ones We’ve Been Waiting For; New Leadership

## 7. Imagination and the lack of it

### Hurdles

- 7.1** Whilst the war analogy is apt and many talk about needing a WW2-scale response to Climate Change, we might not be able to solve it and it certainly won't just happen. (Gilding, 2011)

Most of us were not yet living during WW2 but it is a frequent analogy, especially the reference to the Marshall Plan. It communicates well the scale and potential of (re-) construction needed to build the infrastructure of a renewable energy economy. A jobs boom of huge proportions and a new period of great optimism as action is taken to tackle the problems being faced could be envisaged but we struggle to imagine a positive future, a different story. We have difficulty imagining life in Emergency Mode and life afterwards too.

### Overcome by -

- (i) We have to *make it happen* if we want to minimise climate change disruption in time, as Salamon (2015, transcript, pps. 1–2) suggests. Such analogies need to be explained to younger people or better ones found to communicate how strategic optimism and hope underpin a solution oriented engagement.
- (ii) Self audit and writing exercises, scenarios, techniques to work through difficult thoughts to find ways forward including post-Climate Emergency; initiating non-violent direct action (e.g. the successful Student School-strikers); look overseas for inspiration; use art, music, dance, theatre, social media.

### Leading Theme -

- (i) Marshall Plan
- (ii) Creative Factor

## 8. Imagination and the lack of it

### Hurdles

- 8.1** The multiplicity of climate related issues creates a hurdle one could call a negative multiplier effect.

**Overcome by** - Raise confidence by Can-Do messaging

Tell the empowering true story of Apollo 13

**Leading Theme** - Failure Is Not An Option

- 8.2** Our rampant Consumerism – stuff obesity, boundless growth, externalities; the capitalist system as a threat to life, and damage that has been normalised.

Doing it quickly is a large, highly pressured task; a lot to be done in a short time.

Discussions that appear to be endless, that go into huge open questions of the meaning of life, how we have a good life, how we do things right, etc., can create a level of frustration and a sense that there are just so many possibilities and nobody can agree. So hopes of resolution are therefore unrealistic. Such unproductive conversations tend to drive people to either collapse back down or into not doing much; or they might go back into what they would have done anyway; or might trigger the emergence of incremental / more modest outcomes which may make progress but not be the progress with the speed that's needed.

**Overcome by** - joy of and pride in leaving 'lighter footprints'; change-knowledge for a rapid transition to Restorative Living is 'out there' and the creation of a Sustainable Society mark 1 is underway.

Sutton (transcript-i, p.2) suggests that focused approaches and productive conversations are needed to avoid deterring people with too much complexity.

**Leading Theme** - Voluntary Simplicity, Restorative and Regenerative Living

- 8.3** Time, urgency and still practicing participatory democracy in the joint actions.

Time pressure disallows fixing capitalism or democracy before climate emergency work; demands we work within current reality and broad spectrum of values and political allegiances.



**Overcome by** - Engage in philosophy and draw on wisdom (the people's wisdom); nurture political engagement in civil society to secure votes; teach skills for participatory decision making and self-managed work teams; participatory democracy builds bridges to a future 'status quo' consistent with structures and processes protecting future/returned safe climate conditions.

Still, participatory democracy can guide the process towards more secure outcomes and is essential for these to hold firm.

**Leading Theme** - Safe Climate Restoration;

Moral Imperative;

Purple Sage Project

## 9. Problems that diminish the movement's effectiveness

### Hurdles

- 9.1** Divisive and counterproductive positions: in Emergency Response Mode, any hindrance to sharing change knowledge and useful insights is counterproductive.

**Overcome by** - Approaches to contend with parochialism and other forms of narrow-mindedness or self-blocking require careful thought and research.

- 9.2** Flawed communications and conclusions. When complex things need to be shared, more sophisticated means are required.

The challenge is to frame and share messages most efficiently

**Overcome by** - Social media have a role in getting simple information out fast; developing great memes and getting them moving is vital but has limited application.

Ensure recipients can be receptive and say: 'yes, I already knew that', 'yes, you've articulated something I was 'kind of' understanding' or even 'I didn't know that'.

**Leading Theme** - *New Power, How power works in our hyperconnected world - and how to make it work for you.* (Heimans & Timms, 2018)

### 9.3 Stuck with old framing and lacking tactical and strategic skills.

Helping people understand ‘framing’; the passion that flows from the array of positions is a vital ingredient for motivating and mobilising others to act, yet the work of Lakoff ‘*Know your values and frame the debate—Don’t Think of an Elephant*’ (2004, p. 33) indicates that the ‘truth’ is not enough

**Overcome by** - Lakoff establishes the case for learning and practicing the art of framing so that the ears of the intended audience are reached with values-based words that can be heard and - hopefully - related to.

TCM is using the ‘existential threat’ truth as an effective values-based frame calling for action; when people ‘get it’ and confidence is engaged, responsibility embraced and the leadership potential that lies dormant in our societies is tapped, there is nothing more important. It sorts out what matters most and changes priorities; as Salamon suggests: this level of mobilisation is critical for meaningful movement forward.

Cognitive science research showing patience and confusion – rather than rigor and certainty – are the precursors of wisdom. Develop communication and language workshops.

**Leading Theme** - ‘*Don’t think of an Elephant*’ (Lakoff 2004)

*Hare brain, tortoise mind – how Intelligence Increases when you think Less.*  
(Claxton 1998)

### 9.4 So many needed, so few active full-timers – how many needed to ‘flip’ politics? A commonly-held view that more environmental disasters will give the wake-up call takes the urge away from behavioural change and is in fact only partly true. The devastation wrought by Hurricane Sandy awakened many, but not as many as expected, to the gravity of climate change encouraging them to become active. Salamon (2015, transcript, p.2) is surprised that understanding does not necessarily translate into action or votes. People who experienced traumatic disaster can instead be the very ones showing the greatest propensity for utter denial, finding it unimaginable that such a thing could happen again and too heart-breaking to even consider, so many go back and rebuild in the very same spot. (Marshall, 2014) Three years after Sandy, the subway system still wasn’t fully restored and boardwalks and seawalls were even then being repaired. Enormous financial cost and many years of problems result from these disasters, along with the

sure knowledge that there'll be a next one. The international 'safe climate' discussion frequently confirmed the alarmingly small number of those considering safe climate restoration as a potential option. Anderson (2015, transcript, p.12): *"There are a few people in the UK I hear mention that but not many ... 1% of the people I come across who are actually genuinely concerned about climate change. Such a small percentage."*

**Overcome by** - Conferences, Conferencing and Creative Factories, international online forums and other ways of bringing people together can help coordinating the Big Picture conversation; evaluating pros and cons of implementation; developing advanced courses specific to safe climate and the politics associated with this issue.

Re. the numbers considering safe climate restoration a potential option, some sympathise, want the same things and can imagine the possibility that it's doable but Jacobsen (2015, transcript, p.4) is one of the very few who are able to have a high-level conversation about transformative change; his team has been working on solutions for a while but as he says *"Most people focus on one thing rather than the whole picture."*

- 9.5** Gender imbalance in the Safe Climate wing; a gender divide amongst speakers is often noted, also amongst older people particularly 'Boomers', commenting on the predominance of women joining groups, projects, attending meetings and rallies.

The difficulty of finding younger females willing to speak in the radical discourse on how global warming can be reversed and safe climate conditions restored continues to be a gender balance problem.

**Overcome by** - The gender divide is less obvious in the younger generation, although the number of males in more senior positions in organisations continues to illustrate the dominant patriarchal paradigm.

The recent arrival of the student strikers could potentially change all that. A website recognising women leading the way in safe climate restoration work could help.

**Leading Theme** - Create visibility with a website focusing for instance on Women Leaders for Climate Restoration.

- 9.6** Different motivations moving different generations can create frustration; many of the older women are by now grandmothers; they are of the asset-rich generation and, as a

consequence, 'retired'; they belong to the first cohort of the consciousness-raising 'baby boomer' generation, many of whom were aware of the Greenhouse Effect decades ago, perhaps explaining their predominance. Research findings on gender in the motivational 'push/pull' in entrepreneurship suggest that ... both women and men appeared similarly motivated by a combination of push and pull factors. Three gender differences were found in the incidence of motivations: women are more influenced by a desire for independence, women considered their children as motivators more so than did men; men were more influenced by job (dissatisfaction) than were women. (Kirkwood, 2009, para 3)

**Overcome by** - The problem of Climate Emergency is so large that many more hands on deck and shoulders to the wheel are needed; and no matter how nice it would be to have a bit of relief, the luxury of 'handing over to' seldom exists. Society has to draw out all its strengths with receptivity and commitment, developing the necessary attributes and skills, learning, practicing and honing them with use.

The Baby Boomer men and women, especially the grandmothers, could be proactively activated to provide financial support to organisations they trust doing the work they see of value perhaps with their grand children in mind.

- 9.7** The generational 'divide'; the 'push/pull' theory of motivation has sometimes been simplistically applied to the different generational approaches to climate change as older people are more about 'push' and younger people are more about 'pull'.

Many, but not all, younger people (Millennials and Gen Z-ers) are perceived to be disinterested in knowing the frightening side of climate change beyond a certain point of discomfort.

**Overcome by** - Understanding the motivations of generations and genders can help (Rampton, 2017) (Kirkwood, 2009) (Corner, Roberts, Pellisier, 2015). While young people are perceived to be more motivated by the promise of technology, jobs and a low-carbon, high-tech version of a sustainable world this is a generalisation that is not true across the board and, like so many generalisations, can be hurtful.

- 9.8** The blocking of information – 'I know enough already' accompanied by the raised open hand – is often an expression of denial by both older and younger generations; it protects

against shock but undermines the work of re-prioritising, dilutes needed actions and also sets people up for a crushing shock when the full, awful reality (getting more awful by the day) penetrates. Still, without the full understanding by large enough numbers of people, the necessary steps will not be taken.

There is truth in the accusations too, as climate change has happened ‘on the watch’ of the older generation. Anderson (2015, transcript, p.9) tells his students that *‘if they find themselves being lectured on sustainability by a grey-haired man, they should expect an apology for failing to start the work; that generation has failed to deal with ecological issues, particularly climate change. We had a very short time frame and we understood it well and we’ve chosen to fail and there is no getting away from the fact that, as a generation, saying ‘sorry’ is required.’* He sees failings in the younger generation too; at many street rallies and meetings, grey-haired people turn up muttering *‘where are all the young people?’* For Kevin, in the end, questioning whose responsibility it is does not tackle climate change; as a university professor he glumly sees most students disengaged and sees the older ones much more at work. At this stage: *“...the younger generation generally are not leading by example... By the time they’re at university they’re all basically very high emitters, flying around the world, desperately trying to find a job with as much money as possible, so they can consume as much as they possibly can, being no different to the older generation except in the fact that their opportunities to consume more are even greater because of economic growth.”*

### **Overcome by -**

- (i) The circumstances and ideological positions held by young people need to be better understood so they can be engaged in ways they find meaningful. Expectations both of individuals, their capacity and the organiser or mobilising organisation and its resources need careful setting and re-setting to keep everyone aligned.
- (ii) Intergenerational co-mentoring is one useful bridge.

Much intergenerational rejection of responsibility and ultimately unhelpful although not unwarranted complaining can be worked through as expressions of a shared, frustrated anxiety, but if a generational divide is at play, it needs to be understood to exist on a number of axes.

Great moves have been made in recent years bringing the generations together to more effectively share attributes needed for this work but ego and blame can still get in the way.

**9.9** Lack of funds. Similar to Australia, the world-renowned Tyndall Centre for Climate Research at Manchester University, along with the government Hadley Centre, two prestigious and globally leading climate centres in the UK experience lack-of-funding; Anderson (2015, transcript, p.15) agrees this may have to do with the fact that the ‘old paradigm’ is unwilling to fund its own death and support the emergence of a new paradigm.

**Overcome by** - As older sources dry up new ones are being sought.

**9.10** In 1977 Queensland dispensed with its probate tax starting a trend that led, by 1984, to the state and federal removal of all estate duties. Until 1985 philanthropic trusts were often established to avoid this ‘death tax’. In those days many philanthropists focused on health and education, especially of women and girls, but the ‘environment’ was not seen as a big issue. This partially explains the dearth of philanthropic money for issues surrounding climate change today and is one more reason why community mobilising is so important. (Reinhardt & Steele, 2006)

**Overcome by** - A *safe climate* specific call for funding

**Leading Theme** - A Transformative Fund established to raise and distribute funds for climate restoration initiatives specifically scale and pace focused.

**9.11** Problems needing solutions, information that needs sharing, lots of great groups and initiatives needing referrals, skills support and guidance are out there but scattered, who’s out there, how to find them?

**Overcome by** - Teach the *how* of 10-year plans;

Develop, trial and analyse tactics, plot success and replication; Promote Educative Activist Framework (EAF) replication opportunities +

Build values-based lifestyle + sustainability supporting culture.

**Leading Theme** - Virtual Houston; mapping the Groundswell of Sustainability Initiatives

**9.12** Achieving strong participatory democratic support for emergency mode means building support across society – the left and the right.

**Overcome by** - Specifically lots of conservatives are needed to get bi-partisan campaign support; ‘we’re all in this together’;

A concerned conservative voters’ concerted campaign.

**Leading Theme** - Super Majority

**9.13** The lack of Personal Resilience is a hurdle

**Overcome by** - Learning to live and work in Emergency Mode; to live with paradox-building optimism and the experience of joy; accepting change, choosing change; raising the bar, getting off the treadmill; addressing lack of self-care, community care, supports and proactivity; struggle, personal/family; self-reflection and self-awareness supports.

**Leading Theme** - Grameen Bank (<http://grameenfoundation.org/>);

Inner work through meditation, etc.

## 10. Absence of widely-shared Action Plan

### Hurdles

**10.1** The absence of a joint action plan is a big problem.

The absence of such a plan contributes to blurring fragmentary concepts of sustainable living with climate emergency/restoration and the still yet to be developed and fleshed out safe climate work.

### Overcome by -

- (i) Creation and availability of a starter plan plotting the course to the desired end; to be a ‘breakthrough’, it cannot just be any old plan; it must be a plausible Big Picture plan made up of many smaller targeted plans of action. A widely-shared Action Plan is something to ‘cling to’, take hope from, to get teeth into and from which to make progress.
- (ii) finding those who collaborate in multi-stream mega-campaign(s) pitched at whole economy, rapid Whole Systems Change (WSC), environmental advocacy, climate justice and other related threats. Becoming able to effectively communicate the



Climate Emergency with consistency across the Movement;

‘Don’t Mention The Emergency,’ (Morton, 2018) – a booklet produced by the Darebin Climate Action Network released at the Darebin Climate Emergency conference – tackled psychology and optimal communication of the climate emergency.

- 10.2** Participatory democracy is a central plank in any platform of transformative change and a specialised mobilisation strategy.

It fills gaps at all levels of the emergency, from micro to macro and at a meta-level working and elicits engagement across institutions and with fast tracking potential.

**Overcome by -**

This requires finding people who can communicate whole systems change focussing on the economy.

The emergence of cities declaring Climate Emergency lends itself to the creation of a ‘plan’ that keeps the efforts on track with scale and pace and includes principles and constraints to protect and shore up the work.

- 10.3** The transformation to bring about a ‘safe climate economy’ needs to occur on all levels and requires an Action Plan and the motivation to activate it. A Sustainability Generating Culture with sequenced series of discussions, key words, concepts and language, ‘possibility’ statements framed to elicit answers, could move people into activism and change consumer thinking. This could also help redirect where energy use ‘savings’ go, avoid the rebound effect where savings make energy and products cheaper and counterproductively boost consumption and explore what (e.g.) radical adjustments in the economy would mean and how they can be achieved.

**Overcome by -** Change knowledge developers are an important audience to reach for the next wave of mobilisation; the rapid conveying of change knowledge to this group requires drafting a conceptual skeleton that generates a shared planning framework. These words and concepts can then be further committed to in communities and networks where change knowledge practitioners operate to bring others on board.

**Leading Theme -** Change Knowledge Developers and Implementers

**10.4** The level of project management required needs the role of Systems Architects with capability for lateral thinking, to work up the case of what is possible and plausible and weave the major campaigns together into a coherent Tapestry. This approach combines many complementary and synchronistic elements including the BZE Model, the Solutions Project's Road Maps and the Vision of a Zero Emissions World. It also depends on harnessing and fostering a sense of emergence, creating communities of practice (teaching) and a culture of urgent cooperation. To deal with the many pieces of the puzzle that need to be taken on and minimise the potential to overload, it is important to map out a kind of a basic architecture to start with and then identify a whole series of micro-roles and people interested in taking them on.

**Overcome by** - Piers Versteegen's interview (2012, transcript, p.5) focussed our attention on whole systems change, material flow, the use of resources, the levers that can enable significantly larger reductions in material use and the decoupling of resource use from economic use facilitated through the construction and use of economic instruments around environmental policy. Governments need the power to create different policy instruments (2012, transcript, p.8) that can require responsibilities to be built-in at the design stage. The development of regulatory instruments to achieve a policy framework through a piece of legislation at the state level can give them that power. "A fantastic phenomenon" (2012, transcript, p.21) is happening within society, feeding into the achieving of a successful outcome. Ways are being opened from the ground up that allow structural reform to occur on a macro-economic scale helping get us off the growth-dependent economic model and enable other economic models that aren't based on financial value as we know it (i.e. other types of value). People are now spending real money on things that aren't material goods; that have other forms of value, for example, an eco-tourist experience or an immersion in Indigenous culture. So catalysing different social enterprises can involve looking for opportunities and examples of ways to work with government, e.g. on an environmental or social justice reform agenda. With a lot of literature (2012, transcript, p.22) now available on social enterprise, this innovation is getting some serious attention from government as a service delivery model. It helps to grow another form of account indicating a social contribution. In this way, social enterprise using environmental reform agendas and environmental advocacy can achieve a number of good results. Imagine the shutting down of a coal-fired power station in Australia being linked with the formation of a national park and some form of social enterprise around renewable energy. Having examples of value creation (2012, transcript, p.24) that are not financial and that communities can invest in and that have

a 'community dividend' has capacity to eventually shift and replace the 'economic dividend' from people's minds. This is indeed a shift away from Business-As-Usual. Positive change is breaking through. (Piers Versteegen, 2012, interview transcript)

But now, let me take you to Paris for the COP 21 in 2015 and other momentous and highly relevant happenings. Paris had beckoned two years prior as I recognised the crucial nature and timing of this particular Council of Parties, referred to as CoP21. Where better to check up on the world's intention to increase the pace of positive change than at the 21st global Council of Parties climate change negotiations? To be there, to stand up and be counted, to be a witness to whatever ensued was compellingly important. It was also an opportunity to offer the best contribution possible – the safe climate restoration conversation; which meant I arrived equipped with one hundred 'Climate Rescue' USB drives loaded with a dozen documents, video clips and papers, to be given to 100 people selected for their bright and 'Climate Rescue Ready' conversations.

# SECTION 3

WHAT I FOUND,  
WHAT I NOW  
KNOW

---

CHAPTER 6  
BREAK-  
THROUGH  
AND MOBILISE

## 6.1 My Paris experience – Australian practicalities

---

Mobilisation is a means to an end, the ‘end’ here ultimately meaning the physical and systemic transformation of the operations of the current dominant global political-economy, previously identified as the main hurdle preventing meaningful climate emergence action. For such breakthrough to occur, a strong multi-partisan imperative guiding government to act to restore safe climate conditions needs to come through, an imperative that precedes and generates the non-partisan ‘super majority’ needed to fully embrace Emergency Mode. Drawing on my experience during the Paris 2015 climate summit, I attempt to consider how the overarching context of ‘*Mobilising whole communities to restore a Safe Environment*’ could be applied to the Australian realities and the practicalities of how to get there from where we find ourselves now.

This Chapter looks at the necessary *imagination* to describe what *mass-mobilisation for a ‘safe climate’ emergency mode* might look and feel like at the start, in the middle and at the end. What took place in Paris in 2015 provides a glimpse. Using my experience as a starting point and bringing it from the global to national to local scenarios, this is an invitation to consider how to prepare and what kind of educative activist framework would be useful. There is an instructive story to tell about Paris, the daesh (see glossary) and CoP21; Anne-Sophie Novel and civil society’s Place To B (P2B) (<http://www.placetob.org/about/>) and The Creative Factory where people from all over the world were welcomed to participate in building a fresh approach to communicating climate change, and the colourful, emotional, epiphanic experience that it was!

David Holyoake, founder of ‘Forever Swarm’, was one of the Creative Factory team running a series of workshops at P2B throughout the 2015 CoP21 designed to provide “*a hotspot of fresh thinking and new idea generation*” in a “*creative space and meeting place where people gather(ed) and collaborat(ed) with a Makers ethos: the right to experiment, fail, to copy and modify, all the while having fun and sharing with others.*” Diversity of profiles; collective intelligence; “*dynamic, multi-disciplinary experiment, co-built by all the participants.*” (Aldous, Bonnier, Holyoake and Noor, 2016)

## 6.2 Terror Attacks

---

So there I was, in the City of Lights, quite close-by on the busy Friday night (November 13<sup>th</sup>), when the *daesh* struck a rock concert, a restaurant and a stadium, five central places in all. One hundred and thirty innocent people were killed; so many were so young. Many hundreds more were injured; at least a hundred were on the critical list. I witnessed the impacts of the terror attacks on the people; the grief, the anger and the dignity. Even as the pain and grief was being expressed, the anger and refusal by the French to bow to the bullying of the *daesh* came through strongly once again. It was, after all, only 9 months since the *Charlie Hebdo* murders had been perpetrated on this city. The anger was palpable and the country and world went into mourning once again.

As intended, the attacks caused mayhem and, in the dark tragedy of it all, everything looked very bleak. The French climate movement went into shock; every activist I encountered knew someone caught up in the horror and people were still missing. Martial law caught everyone by surprise; the climate movement carried by France's civil society was put on a tight leash. Then the reality hit home – the planned march had to be cancelled. After many months of preparation, people were all set to show the world how the French could stand up for climate justice. Coordinated as part of the massive climate event occurring throughout the world, the Parisians expected huge numbers for *The Peoples' March*, in their hundreds of thousands. Timed to send the message from the people to the Heads of States of 197 countries, civil society would demonstrate by sheer numbers its determination to finally, after 20 years of failure, get a viable agreement. The stakes were as high as ever and the march was cancelled.

Many other actions, smaller but equally heroic, had to also be cancelled; the Dutch Foundation Urgenda's (2015) "*Climate Miles*" action would have been impactful; their 900 people had just won great admiration by successfully suing the Dutch government on 24<sup>th</sup> June 2015, forcing it to take more measures against climate change, and they had organised an over 500 kilometres-long walk from Dutch Utrecht to France. Booked to walk with them for the final two days through beautiful forests and little country towns and finally to Paris to join the big march, the cancellation of 'Climate Miles' was disappointing. Still, as the devastating news of the cancelling of

public gatherings ricocheted through the movement, the message went out that ‘*other creative ways*’ to be seen and heard would be found without violating martial law. A few days later more disturbing news leaked out via Australia’s famous Climate Guardians amongst others that, along with the hunt for the terrorists, emergency powers were also being ‘used’ to clamp down on climate activists; reportedly, 30 people were being held under house arrest (Hart, D. (2016). Climate Guardians in Paris. Retrieved from <https://www.youtube.com/watch?reload=9&v=WUXcTNH-0V8>).

CoP21 would go ahead, however; even in this dire environment, priorities validating the critical importance of climate change remained in place, assuring the pivotal role of the CoP. People on the street and in the *Place To B* were asking each other if the attacks had been timed specifically to force the cancellation of the Summit; to many the link seemed obvious.



## 6.3 Global warming as a civil unrest ‘threat multiplier’

Then, fragments of commentary started to give focus to climate change exacerbating civil unrest in Syria and the wider region and as one of the factors involved in terror and migration. It was considered quite plausible that the *daesh* could be using the dwindling of resources (especially water) to exploit and manipulate the anguish of people already pushed beyond their limits, especially farmers broken by the extreme heat and drought. Unable to feed their families much less their stock, after generations of farming, they were crushed by these conditions and forced off their land, to then endure the frustration and humiliation of extreme overcrowding in the cities and the cruel and dismissive response from the Assad government. It was not hard to see how these conditions and the resulting anger could be redirected into other agendas, including those of the *daesh*. It seemed a classic instance of *climate injustice* playing out, whereby the link to likely future terrorism could be made. NASA satellite images, already circulating amongst activists, told a climate story of Mediterranean heatwaves and droughts in the years leading up to the calamity still unfolding in Syria providing shocking evidence of the ferocious severity experienced in some locations.

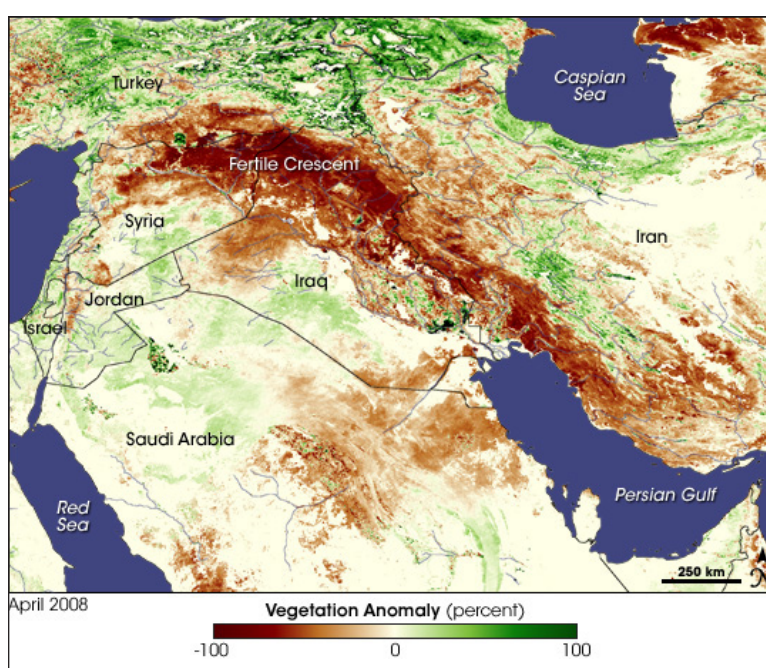


Fig 28  
 Map of the Fertile Crescent. Scientists linking drought to climate change. Web image. NASA 2008.  
<https://earthobservatory.nasa.gov/images/200010/drought-in-the-fertile-crescent>

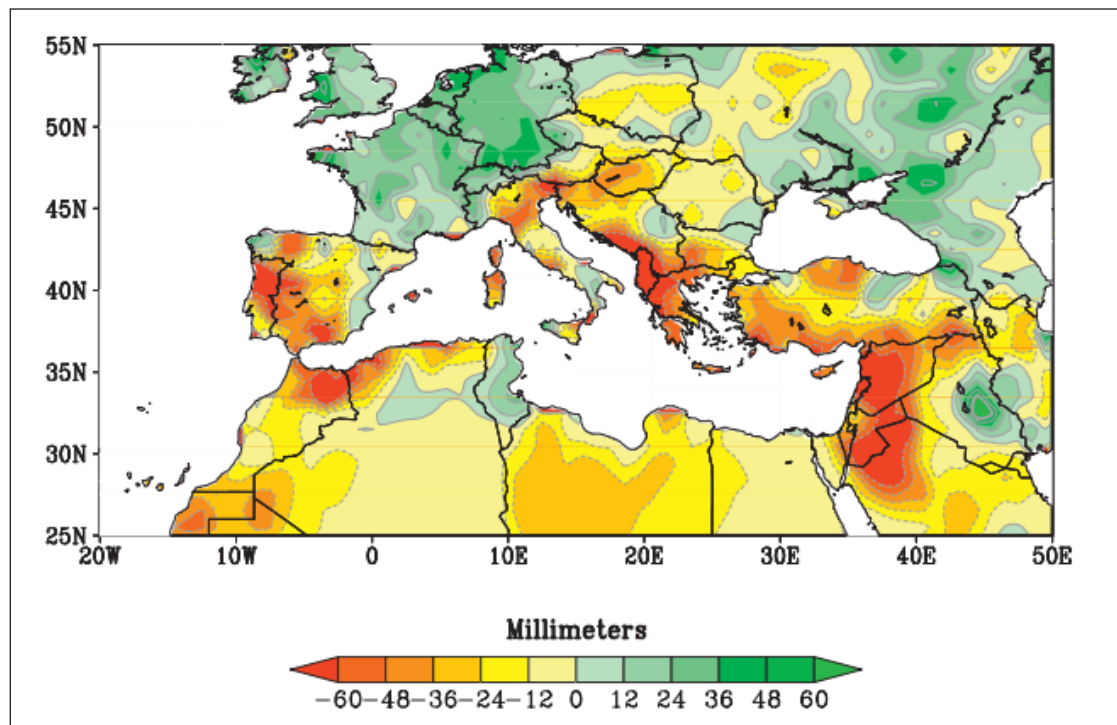


Fig. 29 Warming-worsened drought causing problems all around the Mediterranean. Web image. Map by NOAA 2011 reprinted in ReNew Economy 2013 “Syria’s climate warning to the world” by Joe Romm.

*Syria’s Climate Warning to the World* (Romm, 2013) depicts the details and context of this widely shared graph in stark detail citing Friedman’s article titled *Without Water, Revolution*, “This Syrian disaster is like a superstorm.” (Friedman 2013)

Meteorologist Eric Holthaus, physicist Joe Romm and many scientists and writers have contributed to the exploration of the connection between climate change and social unrest (Holthaus, 2014), whilst mainstream media have for years largely avoided the topic, ostensibly so as “*not to frighten the horses*”.

*Drought is becoming a fixture in the parched landscape, due to a drying trend of the Mediterranean and Middle East region fuelled by global warming. The last major drought in this region (2006-2010) finished only a few years ago. When taken in combination with other complex drivers, increasing temperatures and drying of agricultural land is widely seen as assisting in the destabilization of Syria under the regime of Bashar al-Assad. Before civil war broke out there, farmers abandoned their desiccated fields and flooded the cities with protests. A series of U.N. reports released earlier this year found that global warming is already destabilizing nation states around the world, and Syria has been no exception. (Romm, 2012)*

---

This point was made unequivocally in *The Age of Consequences: The Foreign Policy and National Security Implication of Global Climate Change*, a report on US National Security and Global Stability (Campbell et al, 2007). Climate change has since been officially known, in the US at least, as having a causal and/or multiplier effect on situations of fragility and unrest. It was not until Jared Scott's movie revived interest in this report that the national security aspect of climate change impacts started to reach public audiences in Australia. Perhaps the most important movie launched in Australia Breakthrough in 2017, *The Age of Consequences: How Climate Change impacts Resource Scarcity, Migration and Conflict* (Scott 2016) brought audiences to speechless tears. Looking through this lens, the implications are truly awful, sending a strong message to Australia to look to the North at what the US refers to as 'Disaster Alley'. Luke Taylor realised Australia needed to see the direct implications to our nation through our own eyes and so produced *Home Front. Part One, Existential Gamble*, was launched in February 2019 (<https://www.homefront.site>).

## 6.4 Martial Law

Paris felt very heavy, bristling with police, gendarmes and soldiers and everything shut. The 1.00 a.m. calls from home (9.00 a.m. Melbourne time) had woken the household and the sound of sirens and helicopters had brought a dawning realisation that something terrible was happening near-by. The next day even the Saint-Cloud National Park was padlocked with a letter of explanation fixed on the gate.

Previously staying in Gare du Nord (the purple block in the diagram), uncomfortably close to the terror attacks (the red dots), the move across to St Cloud (safely just off the map to the west) happened just a day earlier.



Fig. 30 *Martial law shuts down much of Paris.*  
Photograph. G Wilkinson, 2015

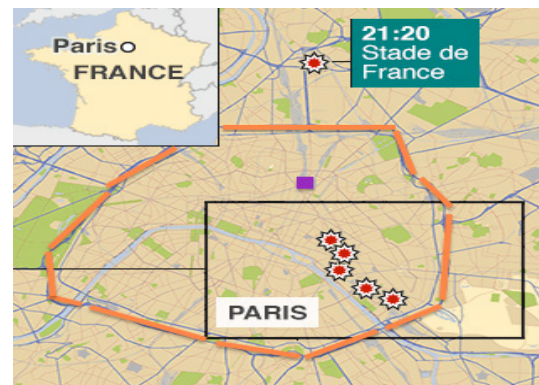


Fig. 31 *Map showing location of terror attacks and place of previous night's accommodation. Paris.*  
Web image. [BBC.com/news/world-europe-34818994](http://BBC.com/news/world-europe-34818994)

Even before the terror attacks the presence of the police was very noticeable. There were reports, more alarming than reassuring, that 30,000 police were on duty in Paris due to the importance of the visitors attending CoP21. On the 11<sup>th</sup> of November, blissfully unaware of what was about to take place two days later on the 13<sup>th</sup>, the presence of army personnel toting automatic weapons outside the Sacré Coeur cathedral on Armistice Day had struck a jarring and incongruous note. France was already on Red Alert and numerous other planned attacks had apparently already been intercepted.

---

After the night of terrorism, the closures, lock down, the declaration of Marital Law; the news broadcasts of the manhunt; the focus on the *daesh* and the tide of grief engulfing Paris, France, leaving the city to visit the regions felt like a good idea. While the Loire valley and France in autumn was indeed beautiful and the hospitality generous, not a day went past without a dark reminder that France was in a state of emergency. Yet even under Martial Law, actions did go ahead telling world leaders global warming had gone far enough.



## 6.5 The Movement's Response

Arriving back in Paris, just ahead of the CoP and the scheduled date of the Peoples' March, now cancelled, subway billboards advertised “*Our Shoes March For Us,*” encouraging ordinary people to donate pairs of shoes showing support for the cancelled march.



Fig. 32 *Our shoes march for us.* Subway poster promoting the demonstration replacing the cancelled People's March. Paris. Photograph. G Wilkinson, 2015



Fig. 33 *Preparing the installation of 11,000 pairs of shoes.* Paris. Photograph. G Wilkinson, 2015



Fig.34 *Place de le République at Dawn* – Paris. 29 November, 2015. (Maybe Pinterest.it)

As promised, organisers had come up with other creative ways to protest; by the morning of the action, laid out neatly at the Place de le République, making their eye-catching, photogenic statement, were more than ten thousand pairs of shoes. It was November 29<sup>th</sup> – the Sunday day before the start of the government bureaucrats and lobbyists’ CoP21 and of the civil society program at Place to B (P2B).



Fig.35 *Private demonstration. Shoes cover Place de le République. Paris. Photograph. Miguel Medina. Agence France-Presse (AFP) November 30, 2015*

Then the word went out round *The Place To Be* that *Coalition Climat 21* was proposing a creative action, a Human Chain; not a *march*, it was to stretch along the original route of the climate march.

Tributes to the victims of the terror lined the Boulevard Voltaire and the crowds walking past were very quiet. A flurry of activity at the scene of the Bataclan theatre attacks as some dignitaries including Canadian Prime Minister, Justin Trudeau, arrived to pay their respects.



Fig. 36-40 *Boulevard Voltaire. Paris. November 25, 2015. Photograph. G Wilkinson*



A little further on, the Human Chain started forming; later reports mentioned that ten thousand Parisians and activists from many parts of the world linked arms, talking to each other with empathy and passion calling for peace and climate justice. Sharing stories from their countries and sharing the desire and determination to make things right. A Peruvian woman told me her story of the heart-breaking injustices happening in her country. Her community had fund-raised and supported her to come all the way to Paris to try and get their message out.

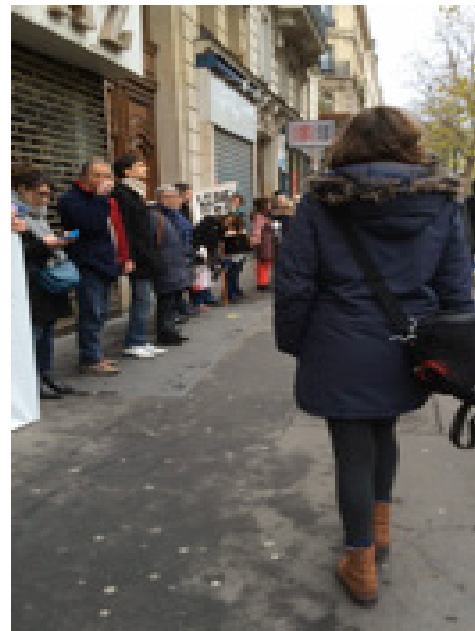


Fig. 41 *Walking along the Human Chain.* Paris. Video. G Wilkinson, November 25, 2015 (<https://vimeo.com/396620728>)

The little group from *Place To Be* stayed close, looking after each other and sticking together till the end. This was the first protest in defiance of martial law and people were nervous as it was directly violating the State of Emergency ban on congregating and although technically a Human Chain was not a march, the risk of a heavy response from the police felt high. The thought of getting caught up in something violent or being arrested in a foreign country, especially under martial law, was chilling. Having gone to France, however, to stand up and be counted, this action felt compelling. Already the big march had been cancelled and it was the right decision to stay and be there in solidarity with the French activists, with the victims of the terror and the activists concerned about global warming from all over the world.



Fig. 42-46 *People's March.* Melbourne's reported (front page The Age Saturday 28 November, 2015, "On a Wing and a Prayer") as largest in the world. Photographs, [australianaid.org](http://australianaid.org) November 28, 2015

At the end of the March4Me action, things did turn violent. The event had been a lovely, peaceful expression of unity throughout the afternoon, but it was illegal and large numbers of police were massing in the side-streets around the Place de la République, putting on riot gear and showing their strength. The tone was changing. Amongst the crowds still wandering around the statue of Marianne (representing the Republic), some were pulling balaclavas over their faces. Time to leave. Walking away from the feeling of mounting danger, we counted around a hundred big police people-movers, many full of police, in one street alone. It felt like two gangs were about to have a stoush. What followed was a heavy-handed, violent clampdown with teargas and many arrests. The fact that the people's action was illegal under the changed framework of martial law meant the absence of the usual cooperation between organisers and police, making it even more dangerous. There were no organisers or marshals on duty; for the police, it was a show of force.

Our small group got away, not finding out till later what had transpired: those who did not leave the area in time were not allowed to leave for hours; those arrested for violence were almost certainly *not* climate change activists. The next day, Monday 30<sup>th</sup> of November, was the start of the two weeks of the CoP21.

As it turned out, from then on, the attitude of the Government softened enough that non-violent actions were legally permitted. Everything stayed on an even keel leading up to the grand finale on the last day of the CoP, Red Line Day, Saturday December 12<sup>th</sup>. Red Lines were drawn in the 'sand' and under the Eiffel Tower.



Fig. 47-50 Red Line Day – end of COP21. Paris. Photograph. G Wilkinson. December 12, 2015

## 6.6 Place To B.

Anne-Sophie Novel (November 2015) introducing the concept of her brainchild - the Place To Be. Aptly named, its success was in large part due to the long lead-time she gave it, the high caliber team she created and to Anne-Sophie's own creativity and dedication.



*“I dreamed of a place that could welcome narrators from around the world during the COP21 and where collectively we would write a new story about the climate, where we would find the right words, the right formats, the right argument to challenge and mobilize the public opinion on the climate “ Place to Be website.*

Fig. 51 Anne-Sophie Novel at The Place To B. Photograph. G Wilkinson November 2015

Anne-Sophie, a Journalist, author and blogger with a PhD in economics and an interest in alternative economics and changing the world, had a vision about reinventing the discussion around ecological transition and climate change that led to the establishment of Place To B (P2B) and all that has flowed from it. She wanted to get a new story happening, talking about the topics of climate change in a very different way, making them more understandable for the general public and making the people's response larger than the CoP21.

Locating the P2B pop-up community at St. Christopher's, the large *Backpackers* just down from the Gare du Nord railway station, and developing a rich and meaningful program ensured the entire building was fully utilised, housing 600 activists from around the world and enthusiastic to participate. The old Parisien multi-story building, famous for Jake's (Blues Brothers') Bar, was a key central meeting place for P2B's meet and greet, interviews and media centre. It had meeting rooms, office, overflow room, dining room, lounge, café, entertainment stage and at times boisterous dance parties. It also housed *The Creative Factory*.

While the bureaucrats, lobbyists, heads of state and negotiators got down to business at Le Bourget not far from Gare du Nord, Anne Sophie's project team ran a packed program of events, workshops, interviews, movies, performances and experiences for the thousands of artists, writers, actors, journalists, musicians, filmmakers, students, teachers, farmers, bee-keepers, activists and change-makers who dove into the program, soaking up the opportunities and revelling in the creative and exciting environment.

The end result was that nearly 15,000 people from around 70 countries were involved and over 200 events were held in Paris and another 80 in the regions. P2B generated activities reaching directly and through communication technology to an estimated audience of 313 million people.

Themed to create a new story of climate change, Anne Sophie had been working on it for two years ahead of the event. She started by creating a powerful team of 40 partners including media people and savvy organisers with the intention of forming long-lasting partnerships to work on a long-term plan to change the mentality of the public around climate change. Based on an African proverb, their motto was '*Alone we go faster, together we go further*'.

The place was jumping every night, but the bunkrooms were only a few flights up and getting almost enough sleep was not too much of a challenge. Room 105 was a little microcosm of the world on its own; many of us there for the fortnight, got to know each other sharing experiences and empathy. It was a 10-bed women's dormitory that became home to a lovely young English artist, an earnest young journalist from India (grappling with the horror of the 2015 floods back home), an activist from the US, and a group from the Rural Women's Assembly of southern Africa, all rural farmers from Zimbabwe, Zambia, Malawi, Mozambique, Swaziland, Namibia and Botswana. It was a makeshift community for two weeks and a lot of fun.

The series of fourteen exceptional evening talks were fully booked every night. TV monitors in the upstairs overflow room screened them for those who couldn't fit in the Media Centre downstairs. All talks were related to the New Story being created and continuing with the 'Be' theme, asked a range of questions which the visiting luminaries got to explore, Rob Hopkins, James Hanson, Naomi Klein, Vandana Shiva and George Marshall to name a few.

- Rob Hopkins, well known for his writing and activism promoting the end of the fossil fuel age, founder of the Transition Towns Totnes and the whole Transition Towns 'catalyst and outreach' movement, says it is about 'just doing stuff'.
- James Hanson, best known as a global warming climatology researcher, had testified to the US Congress in 1988, continued to campaign, calls coal trains 'death trains', had been arrested and



was very pessimistic about the outcome of this COP. He told the audience at Place To B that the problem with Obama's commitment to reducing emissions and of all the commitments, is that without a binding global agreement for all countries, a piecemeal approach will simply drive the price of fossil fuels down and someone somewhere will continue to burn them. He said we need a fee imposed, a fixed price on carbon, and that the money should go to the people and from them into the economy.

- Naomi Klein had published *This Changes Everything: Capitalism vs The Climate* and the movie had been released only weeks before. Headlining the Paris Workshop on The Leap Manifesto: A Justice-Based Energy Transition about systems change on a deadline, the 'Call for a Canada Based on Caring for the Earth and One another' applied directly to Canada and anywhere.
- Vandana Shiva was well known to many for her broad activism including standing up against genetic engineering, globalisation and defending organic food production and women's rights. She visited Place To B regularly and was also on stage at the Pathways to Paris Concert with Patti Smith and Bill McKibbin – speaking not singing – from <350.org, one of the key organisations behind the Global People March.
- I knew George Marshall personally as his book *Don't Even Think About It: Why Our Brains Are Wired To Ignore Climate Change*, written for a general public audience on the psychology of climate change, had involved him with SLF and brought him to Melbourne earlier in the year. He and Jamie Clarke, Executive Director of Climate Outreach, were involved in delivering a couple of workshops to the Creative Factory on the need for fresh stories and approaches to achieve deep and effective public engagement. They also were staying at Place To B and were there for the full two weeks providing ample opportunity for illuminating and often hilarious conversation in Jake's Bar.

The questions that underpinned the fourteen evening talks stretched the parameters of discussion, stimulating ongoing conversations: "Why Doesn't the Message Come Across?" "How shall we learn from the past?" "How can scientists talk about climate change differently?" "What is the Role of Technology in changing the world?" "How to reconnect with our human nature?" "How can we revamp our economies and invest the future?" "Special focus on ocean and climate" "A new mission for religion and spiritualities" "How shall we redesign collective action to answer the biggest threat humanity has ever been facing?" "How can we build a new shared meaning?" "How to Change Everyone to Change Everything" "What are the Legal Priorities We Need to Deal With?" "How to Act on Time" and "This is Not the End".

Combined with the six *Creative Factory* two-day workshops – Dismantling the Buying Imperative; The Balm of Nature; Invoking the Spirit of Change; Empathy in Action; A Children's World; & Life

Renewed – the whole experience was intense, emotional, amazing, provocative, challenging and highly creative.

The team facilitated the six workshops, each featuring extraordinary guest-speakers focussing on weighty subjects and challenges devilish to communicate. David Holyoake, Forever Swarm, wrote in the Creative Factory Report that,

*Creativity is unpredictable. There is no way to guarantee the output from a space dedicated to generating ideas. You can simply bring together the right conditions, expertise, inspiration and tools for the process to take root, then hope that the human chemistry in the room will provide the spark to breathe things into life. We were lucky that all these factors aligned in the two weeks of the life of the Factory and that the people in the room proved to be open-minded, open-hearted and passionate about the tasks we set them. We kept things simple and honest, brought in some impressive experts, cleared the decks of the old ways of telling the climate story, then just told people to go for it: to unleash their imaginations. We then challenged participants to grow their ideas in the most strategic ways and to avoid falling back into some of the old traps of climate communications. (Aldhous et al., 2016, p.3)*

Each workshop was an experience in deep immersion, discovering the aspects to the topic told by people directly affected, or entrepreneurs creating new ways of doing things, new products, new games, or academics specialising in communication for climate.

The Report explains the *Creative Factory* was established as a “*think-make tank focused on off-the-grid thinking for transformational climate change communications.*” The first morning, during the first workshop, directors David Holyoake and Chris Aldhous introduced the framework of the “*10 PRINCIPLES to guide us in everything we create*” (see below). The framework and workshops were developed by a small arts-based change organisation, *Forever Swarm*, as part of their collaboration with *Place To B*.

Although integral to an organising rather than a research methodology, the *Ten Principles* through which the *Creative Factory* operated, exemplify the PAR approach; it made sense of what I had been doing without creating the immediate link between organising to change the world and trying to better understand that world. In the *Creative Factory* we wanted to create a *different climate change story* and the organisers started us the way they meant us to continue, at a cracking pace and in step with principles. These ten principles, pinned to the central column of the huge meeting space as a ready reference for all involved, offer guidelines for transformative change; they form the bones of the new narratives.

*The Ten Principles* (Aldhous et al., 2016, p.16)

1. Be different from what has gone before



2. Provide a Positive Framing and Optimistic Vision for What the Future Can Be
3. Go Beyond Rational Arguments to Engage People's Emotions
4. Build a Strong Sense of Community & Collective Action
5. Seek to Understand the Every-day Lives, Routines and Motivations
6. Maintain a Strong Moral Imperative
7. Be Not Afraid to Stare Down and Confront Tough Challenges
8. Deliver Meaningful Movement Forward
9. Offer a Simple Practical Guide to Actions Required
10. Be Capable of Catching On and have Potential to Be Replicated Widely for Maximum Benefit.

Figure 52 *The Creative Factory's Ten Principles*. On the central column, Creative Factory, Place To B. Photograph. G Wilkinson November, 2015

The *Creative Factory* was set up specifically to access and generate new knowledge and energy at the time of the CoP21, when levels of hope, frustration, determination, overwhelm, enthusiasm and despair were all peaking. Creativity is employed deliberately in all fields to help solve complex, so-called 'wicked' (see Glossary) problems - the global climate emergency surely being such a problem in need of the full contribution of artists. Art communicates; it helps me communicate my messages and it also fosters transformation in me.

Specialists and eminent people, hands-on workers and grassroots activists told their stories and with performers and artists-in-residence stimulated, supported and empowered small groups of participants to develop important messages: from embryonic concept to polished end-product within two intense days. Participants were stimulated, inspired and challenged to come up in their small groups with something going from blank canvas and sketchy, often digressing thoughts, to an end product – a prototype for a game, a film clip, a concept for a big conference; whatever the group got behind was given the full weight of the *Creative Factory* and within 48 hours delivered and presented something astonishingly good. It represented the *new story* on climate. It was not sad, bad and maddening. It was not tame, lame and timid. All were impressive, some very memorable.



Combining imaginative, provocative and well-resourced immersion experiences, it was powerfully inspiring, exciting, loaded and, perhaps most importantly, replicable. Eureka....!

The model of these workshops and in particular the enabling factor of the many layers of really useful material support and the carefully constructed stimulation, all the ingredients that went into them, can be replicated to great effect anywhere. Reporting on the collaborative model piloted by Forever Swarm and Place to B in the Creative Factory during COP21 David Holyoake wrote,

*The Creative Factory successfully proved the need and potential for collaborative, multi-disciplinary work on climate communications. The model of involving artists and creatives not in the process of 'making' but as embedded within the thought processes around more effective story telling and campaigning was a big success, with several participants describing the Creative Factory as 'transformational' for their work.*

(Aldhous et al., 2016, p.1)

Concepts and insights flowed amongst the banter and new terms were flung around, any of which could turn up on a poster or in a slogan. Terms like 'zombie myths' and 'the pantheon of economic deities' (i.e. referring to Personal Success, Free Market and the 'big daddy of them all' - Economic Growth) added gravitas to the conversation. The creating and telling of new stories, the exposure to radical other ways, like *Solar Punk*, sparked questions and the turning around of ideas so that sit-ins could also be play-ins. The story had a serious side but the goal was to make it more engaging and positive. Imaginations were nurtured through that process and fresh ideas around accelerating the transition and turning off the lights on the fossilised age were tantalising.

The time spent in Paris at the *Place To B* and the *Creative Factory* focused on the new story, something to take home. The old story had been collectively dissected and found to be (often) unhelpful, even counterproductive (polar bears, green things, etc.); the new story was about breakthroughs and the promise of a far more sustainable future. Many people, projects, prototypes and new concepts were introduced, demonstrating that this was well within reach, that much was already happening and some of the new story could be seen in the scaling-up of existing concepts, like getting energy for the world from sun, wind and wave. Existing ideas, like the active egalitarianism of the co-operative model, received new attention in contemporary expression and new ideas introduced creative approaches bringing artists and thinkers together to create creative disruptions, explode myths and foster emergence.

## 6.7 The Paris Agreement

Looking back, it is clear that this moment in time, the European autumn of 2015, was indeed a turning point for the world and for me; something in the politics shifted, lifted and ended. Something new in the group gestalt began to push through. *Big Red Lines* were drawn, a deal was struck and an agreement was signed.

At the exact place where in 1948 the United Nations adopted the Universal Declaration Human Rights, some of us representing *The People* stood on the steps of the Trocadéro to solemnly take the *Oath of Paris* repeated sentence by sentence in both French and in English. December 12th 2015 (Appendix 14)



Fig.53-55 *Taking the Oath of Paris on the steps of the Trocadero*. Paris. Photograph. G Wilkinson, 12 December, 2015

‘Out’ in civil society, the strains of the new anthem were heard far and wide, the marchers chanting “Change the System not the Climate”. Finally, after years of banging drums to raise the alarm, ‘we have a climate emergency folks’, the world shifted up a gear to begin to address the problem. The CoP21 entailed fourteen days of tough talks, hidden agendas and obfuscation, posturing, lobbying, demanding, despairing, pushing, pulling and pleading. Issues of social justice had become centrally important as the vulnerable low-lying and island nations became highly visible on the world stage, bringing new influential voices, together with faith groups, into play. Not previously considered, 1.5°C became the new preferred maximum warming target in the discourse and five yearly reviews on each country’s emissions were agreed upon, delivering to business and the elites an unambiguous message to get aboard or risk economic suicide.

Reducing from current levels to what's needed to achieve the goal of 1.5°C would indeed require very strong action. The doubt-spinners framed this gap as simply being too wide to be spanned, impossible, mongering the fear of *wrecking the economy* as an argument for ducking strong action on curtailing of emissions. Diplomats and deft negotiators worked through the haze of issues, searching for resolution, staying focused, persisting, tweaking, finessing and holding it all together. Like getting fleas into a matchbox, their task to craft an agreement the nations of the world would sign onto had seemed impossible. At one point near the end, a *typo* threatened to derail the process. It caused a crisis; someone ended up having to go over someone's head, an apparently obfuscating senior negotiator was removed and, in the final hours of the last day, December the 12<sup>th</sup>, the agreement got through.

It had been recognised that civil society had linked globally, mobilised and demonstrated its own '*this is far enough*' line, achieving much that was on the '*gonna do*' list two decades ago. At last the legality of actions and policies opposing climate change science was being challenged moving the spotlight on the underlying systemic issues behind the mad inaction on climate change. The red line 'deal-breaker' in the CoP21 was that each country agreed to measuring and reporting on their emissions. China, India and other big emitters should properly account for their greenhouse gasses and, sincerity aside, everyone knows that not all governments can be relied upon to *willingly* honour their commitments.

Unfortunately, the agreements could not be made legally binding, largely due to the Republican block in the US Congress. Holding governments accountable to get on with the job of the 1.5°C commitments requires global citizens to maintain vigilance. At least rules around the measuring and reviewing of emissions were introduced. The watchful eyes of the world, with the help of technology including satellites, need to measure CO<sub>2</sub>, greenhouse gas emissions and the size of forests, country by country. Supporting these organisations is part of the job, now more than ever.

That was Paris in 2015; a new story was needed and began to unfold. All of 197 nations in the CoP21 reached an agreement to keep warming below 1.5° although in reality the actual commitments made condemned the world to 3.5°. Place to B had opened a new way to work towards change and civil society had moved focus: '*Change the system not the climate*'. The *Creative Factory* had dissected the old story and framed a new one. Artists and activists, in a natural alchemy of creativity, had revealed an extraordinary potential unleashing genius for clever disruptions, exploding toxic myths and fostering a new story.

The ripple effect of what happened in Paris continued around the world reflecting a growing awareness though it seems some have moved on while others have gone backwards. Here and now,

the focus is on an Australian mass-mobilisation into an emergency response and what that might look like.

For those keen to discuss the restoration of safe climate conditions reversing global warming, the experience over the past decade or so has been that the focus on 2°C as being *too hard* and 1.5°C being *even harder* made this conversation far more difficult. For those for whom capping warming at even 2°C seems impossible, actually solving the problem must seem off the charts. Until recently, in all these discussions virtually no attention could be given to the actual restoration of safe climate conditions and what that means scientifically, what it practically entails and the capacity and timeframe that would be needed to achieve it. Partly because the misinformation campaign has been hard at work ‘dumbing-down’ the Australian public and confining the country in a virtual bubble of constructed silence, it has been much harder to have this conversation here than it was in Paris.

Civilisation’s history-making course had been (slightly) corrected, in words if not actions, but the commitments of the nations, as they currently stand, still take the world *over and well beyond* 3.5°C. The ‘*lustful urge*’ of commerce to capitalise, the complicity of governments and power elites and their control of the discourse through media machines ensure an impetus to sabotage the agreement. The huge challenge to implement the needed measures to achieve, or return to, 1.5°C will inevitably take enormous pressure, vigilance and resolve from civil society and with close monitoring and further corrections, could set a direction to where we hope to go.

Heading home, I was glad about the CoP’s successes and glad too about the Red Lines drawn by society; a more positive outlook was irrepressible. A ‘safe climate’ for all species and for civilisation was still in the future and, over the horizon, but the way to get there was now more open. I was happy for some optimism to have been renewed even in the face of the challenge to hold nations to their pledges; inadequate, yes, but at least accountabilities and measuring had been introduced. Faint breezes of hope had strengthened that whole-systems-change could be catalysed in Australia, and for the first time in so long, winds of optimism filled the sails of this little safe-climate boat.

It was reassuring to see the many, many thousands actively involved; the knowledge that a stronger global movement had been forged and was growing felt good; it was a relief to see the mass-mobilisation make the issue of global warming rise in the consciousness of the world, to be recognised for the existential crisis it is; it was a pleasure being able to make the case that restoring safe climate is the only conversation in town; as people awaken to danger, more will step up demanding change.

The *Place To B* and its *Creative Factory* proved that disruptive creativity can help catalyse constructive change, the kind that only the heart and the imagination can really know can happen.

The *Creative Factory Report* identified 9 key elements vital to the success of the model being trialled,

- (i) establishing a safe space for creative brainstorming, including the right to fail and the need to be sensitive to others.
- (ii) paying careful attention to the booking and invitations process, in particular ensuring balanced skill sets and a balance between *creatives/artists* and *campaigners/experts*.
- (iii) In particular - we learned the importance of having at least one or two visual thinkers (illustrators, graphic designers, film makers) in each team. An interesting learning was that teams without visual thinkers took a lot longer to clarify their ideas/concepts.
- (iv) facilitation by people experienced in the topic (climate change) as well as with the creative process - able to provide thought leadership and suggested direction but only when needed.
- (v) a physical space with possibilities for 'live arts creation' which considerably enhanced the creative mood/energies
- (vi) paying enough time to reflect on what is not working in the 'old way' of communicating the climate story, to avoid falling into old traps.
- (vii) providing enough strategic direction to focus the creative energies of participants, but never limiting or imposing communications objectives
- (viii) securing the participation of climate change experts and communications experts to inform creative processes - but being careful not to 'overload' participants with information. Days that were most successful were those where expert talks were broken up with creative exercises and group work.
- (ix) pushing participants to the finish line - to the completion of a 'prototype' idea capable of being evaluated by the end of day 2.

(Aldhous et al., 2016, p.10)

An opportunity to go up a gear had been established and for some it was indeed transformational. All in all it was an epiphany.

2020. Four years later, Australia and the US neo-conservative governments have worked relentlessly to undermine and pull out of the Paris agreement. One effect has been the galvanising of local governments and some States (or Territories) into goals and actions reflecting recognition of the climate emergency. Official Climate Emergency Declarations are being signed onto all over the world as a result.

## 6.8 Global mass-mobilisation and what to expect in Australia

---

One thing we can say about mass-mobilisation in Australia is that it necessarily comes with a very long lead-time exacerbated and caused by decades of procrastination at Federal and State levels. (Aidt, 2018) It has taken decades to build the awareness and the groundswell that exists today and mass-mobilisation is still to occur. It's well over a decade since the 2007 Global Sustainability Emergency Convergence was convened bringing the Environment Movement together to determine the best way forward and argue about the use of the 'emergency' word. (McGrail, 2007)

Mass-mobilisation is characterised, in the words of Philip Sutton, by "*The unwavering intention that every action is measured against: the creation of the social and whole-system transformational change at a pace rapid enough to restore a safe climate future.*" Whatever the sector, issue or project, the key strategic foci must from now on be the rapid reduction of green house gas emissions at the highest rate of decarbonisation that can be safely achieved, coupled with the front-of-mind, consciously shared, responsibility to build the momentum for the emergency response. Think and act globally and locally in the Climate Emergency.

Even the less-daunting, smaller local campaigns need to have the Big Picture in sight; Taylor (2012, transcript, p.8) maintains "*A good thing for us to grapple with is how do we make our stuff relate on a local level without compromising the overall meta-demand ... that's where we've been struggling.*" The 'safe climate' camp recognised the importance of identifying the meta-goal but has been reluctant to back single issue campaigns; although they could easily be connected to the meta-goal, they seemed, in their own right, to be isolated and disconnected from the meta-goal demands. Hanging onto the meta-goal's major and essential elements from the beginning is challenging and needs to be resolved.

As mentioned before, after years of solid work by individuals and community organisations, including groups like the Darebin Climate Action Network (DCAN), the municipality of Darebin demonstrated remarkable leadership as the first local



council in the world to – unanimously – adopt and announce a climate emergency in November 2016 and put in place available on their website, the ‘*Darebin Climate Emergency Plan.*’ Since then, as reported by Climate Action for the Climate Emergency (CACE), Darebin:

- Successfully put a similar climate emergency motion to the Municipal Association of Victoria (MAV);
- Developed a climate emergency plan prioritised in their Strategic Plan;
- Created two full time CE positions while capacity building existing staff;
- Established *Climate Emergency Darebin* (Board structure and executive staff);
- Increased the capacity of their *Solar Savers* program five-fold;
- Scheduled a climate emergency conference for councils and community.

As discussed in 4.3.4, the Victorian Councils members of the MAV (Aidt, 2018) passed a motion in 2017 with 77% recognising the climate emergency; its sister organisation, the West Australian Local Government Association, WALGA, also passed their climate policy (July 2018) with strong climate emergency language, demanding urgent action and recognising the role of councils and Vincent Council in WA passed a climate emergency motion in March 2018.

94 Australian governments/councils have signed on as at March 8th 2020 representing 8,658,641 people or 34.49% of Australia’s population of 25,120,231.

1455 international governments have now similarly ‘declared’ representing 824,168,340, people from 28 countries.

Progress working with local government authorities has over the years been bumpy. It has to be recognised that they are traditionally risk adverse, hindsight and precedent focused and constrained by conservatism that is at odds with the critical need for scale and pace commensurate with an actual climate emergency.

Breakthrough recently undertook research conducting a survey carried out from November 2019 to January 2020 in order to understand what impact the declarations are having on council policies, programmes, advocacy and budgets. Conducted by Alia Armistead, Research Assistant at RMIT University and Breakthrough National Centre for Climate Restoration, the preliminary findings released at the time of the National Climate Emergency Summit (Feb 14th and 15th, 2020) gave an early indication that the take up of real action commensurate with the climate emergency is patchy at best and yet to start to bring about the change needed. As the report noted:

*“Most Australian councils have declared a climate emergency within the last six months, many in the last three. 41 councils out of the 64 respondents have declared a climate emergency since 1 August 2019, 12 of those since 1 November 2019. This time frame may be insufficient for councils to have amended budgets, drafted new policies, strengthened targets or altered the relative importance of climate policy within council operations. Qualitative responses in the survey indicate that many of these activities are underway but have not been completed and so cannot be included as such in the survey data.” (Armistead et al., 2020) (NB Erratum. The version attached in the References / EndNote has an error at the start stating that 2 Australia state governments have made declarations but in fact none have as yet.)*

There is a lot of work yet to be done to reach the level of rapid transformational change needed as the clock ticks and the window in which to act threatens to close.

Although dispersed nationally and globally, the current ‘heartland’ for the ‘*Safe Climate Restoration*’ wing of the ‘*Climate Emergency*’ movement is predominantly in Melbourne, focused on courageously, responsively and compassionately discussing the many unresolved and contentious issues and talking honestly about ‘solutions’.

The broader ‘*Climate Emergency*’ movement, also strong in Melbourne and achieving growing success, especially at the level of local government, is likewise springing up and it too is spreading in other parts of Australia. It appears that the national climate movement is becoming the climate emergency movement, notwithstanding some persisting disagreements.

***Parochialism*** - *Right now the internal differences in approach of two of the key centres, Melbourne and Sydney, are quite stark. Sydney has a heavy-duty concentration of the alternate paradigm mainstream. Quite a few prominent climate groups headquarters are based, resourced and running from there forming an ecology of conservative climate thinking, largely exclusive of the work coming out of Melbourne, which has often been deemed irrelevant. The perspective they combine to give could lead the people of Sydney to see Sydney as the centre of leadership but this could also be holding Sydney back. The schism appears to stem from, on the one hand, a pocket of critical, ‘heretical’ Melbourne-based organisations seen to be unappreciative of the work of people in Sydney (and the rest of the movement) and disrespectful of the ‘heavy hitters’; and, on the other, some Sydney people being seen as not appreciating the pure-heartedness of the Melbourne push.*

*The main thing here is that one of the same blocking problems that affects organisations (and individuals) is also affecting the movement and has to some extent polarised into another form of unhelpful parochial disdain. Not good in a time of crisis and both camps would undoubtedly agree that this is divisive and dissipates vital energy.*

*When even unambitious political demands are unsuccessful it is not hard to see why Melbourne climate restoration advocates could be seen as being quite madly radical. To address this a sensible place to start would be ventilating it, facing it and trying to work together specifically on this problem. Melbourne can also work constructively on more effectively communicating with its Sydney sisters and brothers so they may better appreciate the ‘method in the madness’ or at least understand the work as complementary and useful in the big picture. (Wilkinson, 2015, journal entry)*

Responding to the climate emergency by demanding an end everywhere to mining, fracking, drilling, the transporting, processing, investing in, building infrastructure for and burning of fossil fuels (especially of coal and gas in Australia) is represented by a burgeoning groundswell of determined and defiant groups – Quit Coal, the Climate Action Groups (CAGs), Healthy Futures, Lock the Gate, Friends of the Earth (FOE), Climate And Health Alliance (CAHA), Climate Action Network Australia (CANA) and all the CAN groups including VCAN, DCAN, YCAN, (Victoria, Darebin, Yarra respectively), The Climate Guardians, The Wilderness Society, Australian Youth Climate Coalition (AYCC), 350.org, all the anti-Adani groups, Rising Tide, Extinction Rebellion, the School Strikers and so many more.

All this work and commitment, whether halting fossil fuels and/or replacing them with renewable energies, is about ‘upgrading’ the current carbon-based economy to a 21<sup>st</sup>-century-appropriate clean energy economy. These efforts are immense, the pace is ‘*as fast as possible*’, progress is being made – yet it is not fast enough. Emissions and the Earth’s temperature keep rising; as the time to renew the economy is slipping through society’s ‘fingers,’ the sense of danger grows; groups are re-doubling their efforts and more direct action is happening.

The climate emergency ‘practitioners’ are joined by innumerable other community groups doing emergency work on endangered species and habitat protection, the ‘*holding actions*’ described by Joanna Macy and Chris Johnston (Macy & Johnstone, 2012). In *Active Hope* Macy and Johnstone explain that these are the “*campaigns in defense of life on Earth*” (dynamic 1), combining with the ‘*Shift in consciousness work*’ – about ‘*change in our perception, thinking and values*’ (dynamic 2) – and the ‘*Life-sustaining systems and practices work*’ – “*developing new economic*

and social structures” (dynamic 3) – to comprise the work of what they call *The Great Turning*. Many organisations’ actions spread across several of the three elements and all express a growing awareness of the implications of the Climate Emergency. Yet, the third dynamic – developing new structures – is (surprisingly, in the context of grave urgency) the least supported. But this is a newer area that has emerged into an environmental movement that was historically and predominantly about *dynamic 1* and perennially over-stretched. That climate change was cast, in the first place, as an environmental issue and therefore *dismissible*, slowed society’s response; environment and people are inextricably entwined (hence social and environmental sustainability) (see Glossary), but our ‘siloining’ habit meant that penny took a while to drop.

Sutton suggests that the good news is that the 537 Australian local councils in total are altogether far more approachable for the growing grassroots groundswell than are governments at State or Federal levels. P. Sutton (personal communication, 11 Nov, 2018) and we can take note of the way things happen overseas and look to Australia’s civil society to anticipate how things might unfold.; The Cedamia website has resources for community action to this end. (<https://www.cedamia.org/local-council-action-kit/>)

It appears that elsewhere the most decisive action is also happening at local government level. In the US, Richmond has followed Berkeley and Santa Cruz (California), Montgomery County (Maryland) and Hoboken (New Jersey) to announce Climate Emergency Declarations. The City of Los Angeles (California) is also moving rapidly along a similar track, with the expected soon-to-be-announced creation of a city-wide Climate Emergency Mobilization, led by Los Angeles City Council member Paul Koretz in partnership with The Leap and a coalition of environmental justice organisations called Leap L.A. Koretz updating on the progress of climate mobilization efforts in Los Angeles, notes that, “*there’s one silver bullet that can take on all the crises [that governments face] . . . a worldwide emergency mobilization started at the local level and with the lens of climate justice.*” (<https://www.theclimatemobilization.org/blog/2018/9/4/dispatch-berkeley-climate-emergency-town-hall>)

In the UK, the Mayor of Greater Birmingham, Andy Burnham, discusses the strong and very long-term commitment that is needed and being made by his Council, inviting Kevin Anderson to speak the hard truths about Climate Change. (Burnham and Anderson 2018) In December 2018, London’s declaration and commitment to take strong actions mirrors similar declarations in support of The Climate Mobilization campaign in Bristol, Frome, Stroud and Totnes. Reported by Trillions on 13th December, 2018 this makes London the first Capital City internationally to declare a Climate Emergency as defined by the Climate Mobilization movement. (<https://www.trillions.biz/>)

news/152913-London\_Declares\_Climate\_Emergency.html)

Real evidence of the full understanding of global warming will emerge as governments begin to pass legislation to prohibit bad investments and initiate *Emergency Mode* thus creating a filter through legislation, steering a passage to the safe climate future that an economy (that sustains all life) needs. Addressing the scale of the transformative change, we do indeed need everyone; Naomi Klein (2014) put it so well:

*Slavery wasn't a crisis for British and American elites until abolitionism turned it into one. Racial discrimination wasn't a crisis until the civil rights movement turned it into one. Sex discrimination wasn't a crisis until feminism turned it into one. Apartheid wasn't a crisis until the anti-apartheid movement turned it into one. In the very same way, if enough of us stop looking away and decide that climate change is a crisis worthy of Marshall Plan levels of response, then it will become one, and the political class will have to respond, both by making resources available and by bending the free market rules that have proven so pliable when elite interests are in peril. (Klein 2014, p.14)*

This crisis must be addressed with rapid transformative change and still it will take a very long time to be successful in restoring safe climate conditions. Sooner or later, mass-mobilization will be underway and it will become visible in the actions of people at home, work, in school and in shops, in changed behaviour and in election results, in the media, visibly and audibly demanding rapid change. It may be less visible in the myriad efforts at the personal level, many having little impact on emissions but adding powerfully to the necessary role of responding to the moral imperative and building momentum of change.

To begin with, it will be seen in some attention-attracting events and evident in the many meetings and awareness raising, educational and skill-enhancing forums, workshops and training building the next wave of trained and equipped activists, capable and resourced to mobilise the whole community. Local government has a very active role to play in removing obstacles inhibiting people meeting and workshopping providing *material* resources instead, and in leading the way with educating staff, its wider network and associates, so that all people holding official civic responsibilities are as *fully informed* as possible.

Councils will be reaching out to the community urging and supporting it to become better informed; conversely people will become active doing things that they believe really matter. They have to *know* it matters – where it fits in the plan.

## 6.9 The Mobilising Package

---

Transformative change requires the strong will of the people and a groundswell of action built by the now rapidly growing movement. To this end the Educative Activist Framework that emerged from this research – see also in Conclusion – seeks to address many of the hurdles and offers ways to approach and resolve them. (Wilkinson 2020)

At this stage the power to implement rapid transformative change still largely rests with big government and big business but to date their awareness of the need for scale and pace is lacking and the will to transform is arriving too slowly at the current rate to be effective in the long-term. The privileged, elitists and oligarchs will all play their roles too. If equipped with good information and intelligence, that may be for the better.

The Mobilising Package is firstly about preparation for the necessary change then about the change itself. At the local level this means ordinary / extraordinary people working at the grassroots coordinating and activating within community often through community groups and a variety of ENGOs and often engaging with their local council as well as the state and federal political sphere.

Much of the Educative Activist Framework is aimed at addressing the education of budding and struggling activists to support and help them to do this work for by so doing they are swelling the movement towards the numbers needed to enact and achieve the very changes that can lead to the reversing of global warming.

The Mobilising Package has to include the threat, the solutions and the plan and communities need to be reassured that

- (i) it is, firstly, necessary to be fully informed of the scale of the threat and of the challenge of the transformative change that is needed to the economy and society's infrastructure;
- (ii) secondly, that it is important to have an understanding of the solutions and that there is a plan emerging to get us through this crisis. i.e. via an *Emergency Mode* for a period of time;
- (iii) thirdly, that there is work to be done, much can be done at the community organising level and that government, often starting with local Council, is



increasingly up for it, starting with its own organisation's collective behaviour, bringing along everyone working together towards the solution.

Councils can assist in ensuring media attention, providing funds and other material resources, staff resources and venues. It has a key advocacy role lobbying State and Federal Governments and - building further out – inspiring processes that drive Australia and model them for the world. Funding is to be found for research focusing on safe climate restoration, for which budgets need rejigging, taxes raised or reassigned enabling rapid whole systems change.

Some of the foreseeable tasks which need to be taken care of include:

- *Governments' action on 'big item' changes, sending a message of seriousness* – no new airports or expansions, monitoring and calculating of all air-travel related emissions and raising ticket pricing accordingly.
- As Emergency mode kicks in at the highest levels, *institutions, politics, industry gear up* making important policy changes that require non/multi partisan support. E.g such as Save The Planet policies (Whitehead 2013); adopt new standards for electricity, building construction, materials and practices and low greenhouse gases emissions; roll-out new very low emission equipment for industrial purposes.
- Ethics and governance committees and community consultative panels, with government commitment through a political portfolio, are tasked with *monitoring the soundness of decisions* in the context of safe climate restoration.
- Ecopreneurs, bioneers, intellectuals, creatives, social scientists and social psychologists are brought into *collaborative open spaces* to think and work through problems, remove blocks, contribute possibility, fast track transformative change.

As Paul Gilding, introduced in Chapter 4, explains, there will be some job losses and a flurry of new jobs created; old industries are very stream-lined by now with computerisation, technologies and processes that maximise profits for share-holders while requiring fewer and fewer employees - think mining or banking. New industries need to be developed, e.g. installing, maintaining renewable energy infrastructure, and they will start with labour intensive jobs. There are good things to look forward to and they will, barring major social collapse, simply happen. The period at the start of the Industrial Revolution – even if we are now suffering so many unforeseen consequences! - would have been one such example of tumultuous change that brought a lot of disruption and over time improved lives on many levels.



It remains to be seen how Australia's and global mass-mobilisations will evolve and take place; in all likelihood, conceptualising, practicing, implementing, training, researching, refining and advancing of relevant action will continue to evolve simultaneously. In the context of the emergency a willingness to commit the necessary resources will support a plethora of projects of meaningful actions to flourish, guided to relate to the big picture, rapid and equitable transformative change and the building of momentum. That will be the essential underlying and overarching purpose of the activity in addition to the value of the specific activity.

There will be disruptions of all kinds; welcome disruptions will be those that transform society rapidly to low-carbon, zero-carbon and beyond-zero-carbon modalities and those that bring people together in more resilient communities, living a set of values that help people through tumultuous times and nurture the sustainability and regenerative renaissance that is emerging. These disruptions might include an overhaul of the banking system, the re-embracing of participatory democracy, a scheme to support farmers to move from traditional farming to regenerate their land. Clean disruptions, such as the replacement of the fossil fuel fleet with electric vehicles and driverless electric vehicles can be anticipated soon. (Seba, 2017)

All this stands on the shoulders of those who have come before; Paris brought this home to me yet again as the sadness of leaving morphed into a grateful recognition of all the dedicated work over so many decades and the recent years and months and weeks leading to this moment in time. Recognition expanded to include all the world's luminaries, scientists, journalists, authors, poets, academics, artists, children and grown-ups, people of spirit, Indigenous people, islanders and the extraordinary array of amazing activists world-wide past and present; the ENGOs and the savvy businesses, far-sighted bureaucrats and uncorrupted politicians who saw the writing on the wall a long time ago; the citizens and civil society, the philanthropists and the faiths stepping up; all the generations making their contributions and the waves of new people – younger and older – engaging right now.

*Finding ways to develop a sustainable relationship with our planet requires not only the engagement of scientists, political leaders and civil societies, but ultimately also a moral revolution. Religious institutions can and should take the lead on bringing about such a new attitude towards Creation. (Pope Francis 2015, page 3, para 3)*

# SECTION 4

THIS IS WHAT  
I PROPOSE

---

## CHAPTER 7

FROM EMERGENCE  
TO SAFETY:  
THE IMPORTANCE  
OF THE EDUCATIVE-  
ACTIVIST  
FRAMEWORK

## 7.1 Introduction

---

### THE QUILT

Here is a quilt in a frame created to combine all the elements, the patches of Content, the Epistemology, the Methodology and the Method. Fitted together and stitched into a flowing, sequenced presentation of my argument, a way of thinking about this vexing problem is depicted; this presentation pinpoints factors and decisions leading to my methodological choices; and what I actually did.

Every patch quilted into this work relates to every other patch; whether real things or possibilities, each and every one I believe is helpful to the whole piece. The categories teased out through the synthesising of the interview information and the key ‘bits’ raised in the thesis are combined and represented in twelve patches.

#

*Cultural creative, change agent and activist, countervailing and optimistic, I turn up asking what I can do. Delving my lived experience, values, vision and ideals, I record auto-ethnographically in words, poems, art and images.*

#

*Love of what is being lost translates to moral imperative. Fear and rage drive great urgency to commit to defend. Through overwhelm and bleak times I discover many things and understand that hope must be active.*

#

*The search for clarity and breakthroughs, the questions and the interviews, the data and gleanings looked at the climate emergency and science, epistemology, impediments to progress and educative strategies.*

#

*The research, heuristic, participatory, qualitative, sought ways to foster emergence, release our / my best shot, framed the sustainability renaissance with life affirming reasons and logic, good process and ten principles.*

#

*Connecting with Earth as home, beautiful in a planetary system, now with a future changed for all sentient beings, brings responsibility. The existential threat, the challenge of me, us and the big picture is primarily relational.*

#

*Fractals of change support / give reason for emergency mode and radical solutions. Stories, voice and self-awareness feed into values-based living, participatory democracy, sustainability-generating communities and culture.*

#

*Triggering the multiplier effect to fully unleash human capabilities needs younger and older – all of us, new ideas, innovation and everything known about co-operativism, communalism, collectivism and biocentrism.*

#

*Positive approach mega campaigns are needed to deal with complexity and economic transformation; to overcome blocks to whole systems thinking, zero carbon, drawdown, biosphere protection and solar reflection.*

#

*Achieving scale, picking up pace for a zero carbon world, reversing global warming ensuring climate justice, requires new stories, frameworks, ideas, change-practitioners and fixers with specific roles and attributes.*

#

*To mobilise collaborative, strong, significant majority non-partisan support for a strategically optimistic solutions campaign holding tactical pessimism, activating hope, tackling silences, promoting 'stick-ability' and the role of the arts is needed.*

#

*Linking choices, presence, wisdom, imagination, uncertainty and emergence a Tapestry of Mega Campaigns supporting an emergency-appropriate mode can lead to meaningful global agreements and ultimately, restorative living.*

#

*An educative activist framework drawing on unleashed creativity can empower, disrupt, train and foster new knowledge, service, strategies, dispersed leadership and breakthroughs implicit in transformative change.*



Fig. 56 *The Quilt*. Diagram. G Wilkinson 2018



## EDUCATIVE ACTIVIST FRAMEWORK

Global warming can be reversed. Safe climate 'Holocene' conditions can still be restored. Fixing the climate and avoiding chaotic catastrophe can be done. (Brown, 2006) Humans will step up, but success is now predicated on reaching sufficient scale and pace in time.

This reflective investigation set about exploring the grave threat to vast numbers of unique species and the corresponding deteriorating chances of humankind survival on our planet because of global warming and other ecological factors; it proposed the strategic mobilisation necessary to help ensure recovery and safety. The achievement of a robust national multi-partisan emergency response brought about by virtue of society's determination was identified as a key '*step before*' the urgent need to rapidly, pro-actively transform our ways of living and relating 'in time'. A coherent, plausible and hopeful alternative, incorporating a coalition of the various elements in the movement and broad cultural consent are needed to pave the way. The task entails generating new-and-improved, life-sustaining social systems epitomised by safe-climate economies and practices that will restore climate conditions safe for all - all species, all people, all generations.

Having prevaricated for so long, for the many people who are craving to face the issues and want to get out of denial, a strong, shared inspirational vision is needed; nothing short of whole systems change is required to avoid the direst impacts of climate change. Facing and surviving tumultuous times is far better than the alternative; this is what drove this work.

## 7.2 Survival

---

*The only value that **all** human beings can readily share is the continuation of life on Earth. In this one goal, all individual self-interests are united. Unless such a species identity takes precedence over the more particular identities of faith, nation, family, or person, it will be difficult to agree on the course that must be taken to guarantee our future ... Earth Charter. (Clugston, Calder, Corcoran, Vilela and Roerink, 2005, p.130)*

Life loves life (Bryson & Matthews, 2003); humans love life; humans caring about life, each other and participating in the lived-in world underpin this work.

In 2012, twenty years after her first extraordinary speech to the UN as a 12 year old in 1992, Severn Suzuki speaks at Rio+20 about *intergenerational love* as “The most powerful tool we have”. (Suzuki, 2012)

Bringing together the interconnected biological life-loving web with the foible-filled ways diverse human lives are lived is how our capabilities of caring are expressed and where the capacity to work on the problems humans create and must face is located. This ‘marriage’ has derailed and to get back on the rails and into a safe shape, reinvigorated to get on with the messy task of living together and with Earth, our only home, we must recommit. A vow between parties reviving universal, biocentric values safeguarding life can be made one by one; nature is ready to repair and regenerate the minute humans stop hurting themselves and doing damage.



## 7.3 Straight talkers call it an emergency

In the Foreword to *Fatal Calculations* Ian Dunlop asks,

*What cost should be put on civilisation? Apparently very little from the economist's perspective, for despite the escalating climate disasters globally, not least our bushfires, this preoccupation with the cost of action — and a blind eye turned to overwhelming future damage — remains the dominant thinking within politics, business and finance. ... such thinking must change, fast, if we are to have a realistic chance of avoiding escalating climate catastrophes. The economics profession must reassess its approach to existential threats of this kind, giving far greater weight to precautionary policies to prevent such outcomes, whatever the cost. Our survival should be paramount, not economic numbers.*

*The coronavirus pandemic is a major threat to human security, but human-induced climate change is even more so, with the potential to destroy civilisation as we know it. The global response to coronavirus demonstrates the importance of immediate precautionary action in the face of major uncertainties.*

*Sensible economic analysis would urge exactly the same emergency-action principles be applied to climate disruption without delay.*

(Armistead and Spratt, 2020, p.3)

One of the most immediate of the many tasks is to build sufficient resources to 'wide-scale' and 'up-scale' social change; multi-tracking is needed for the mega-strategies that can stimulate and support the scale and pace needed and build on all the work done over recent decades, raising awareness of the ever-increasing and now extreme urgency. An upsurge of reminding and raising awareness and education is essential across all levels and institutions; organisations and peak-bodies have a particularly important role to play.

The Plan, when fully developed, will comprise all these and many more pieces of work and many questions will emanate from it: how it can be pulled together, who can do it, what are emerging timelines? Large complex projects do happen and the expertise is out there somewhere. Somebody should be able to figure this out. It needs *project management*; when BZE put their first plan to their first audience, the reaction was strongly positive, even emotional, demonstrating an exciting way of helping people *break through*.

The conversation about *solving the whole problem*, although persistent, has been until recently largely unsupported both in Australia and the wider world; useful discourse and research has been largely lacking. Open and honest discussion about the *extent* to which the atmosphere has to be cleaned of carbon and the science-supported extreme *tightness* of the timeframe in which it has to happen has been very difficult to have. This research has attempted to identify these issues. Traction around 'The Climate Emergency' is just starting to become evident, mentioned in *The AGE*, a major newspaper in the state of Victoria, perhaps for the first time in September 2018. Titled 'It's not too late to act on climate emergency', the article described how Darebin City Council looked rationally at what the science was telling them and "the only logical response is to declare a climate emergency." (Gilding, 2018)

Finding a focused receptivity globally, even with scientists or activists, to fully explore big picture *solutions* has been extremely difficult, as this thesis has illustrated. It is astounding that, in spite of the enormity of the consequences of inadequate action, these questions remain; people will soon be, already are, dying of global warming exacerbated events and situations, in effect, sacrificed but not *willingly*, which makes the imperative clearly one of *morality* and not just of *rationality*.

Winding atmospheric carbon back to pre-industrial levels requires activating solutions at scale and in time, evaluating and managing the risks involved and it still remains to be seen who will declare to be in charge, how good governance is managed and what has to happen to kick-start the necessary actions.

## 7.4 The anatomy of inaction

The quagmire of obstacles in the way of wide, constructive, collaborative discussion results in a *less than full* understanding of what is at stake; when the full implications of climate change and the urgent need to restore safe climate conditions are *fully understood*, an emergency response will be prioritised breaking through barriers, overcoming hurdles; we will move into a new stage of action, the *Emergency Mode*, giving it at least equal top priority alongside other very high priorities.

Trying to understand *why* appropriate action has been so stymied, the work has dug deeply into the quagmire, identifying multiple hurdles humans have put in the way, each a millstone around the necks of those pushing for action. The following eight points are a sample of the factors that contribute to the mess we have before us and some of the ‘cleaning it up’ difficulties. They have been informed by my interviews, my own participatory experience and further reading as it came to hand.

### 1. NATION STATES PLAYING BRINKMANSHIP.

The Paris agreement showed that progress was possible; yet all references to social and climate justice were, at the last gasp, deleted leaving many active campaigners conflicted, suspicious and unhappy. The agreed 1.5°C warming limit was still too high leaving island states and vast stretches of low-lying coastland around the world almost certainly doomed to inundate. NASA’s Coastline population research (see glossary) indicates that, with “*about 620,000 kilometres of coastline... over one-third of the total human population, nearly 2.4 billion people, lives within 100 km of an oceanic coast*”, large numbers of poor people living on coasts are prime victims. Against this shocking backdrop, self-interested ‘sceptics’ continued to play their dangerous games. Standing under the Eiffel Tower when CoP21’s concluding statement was released (12<sup>th</sup> December 2015) we were informed Saudi Arabia had signed the CoP 21 Paris agreement on the proviso that there would be no effect on its oil exports. The Paris agreement, neither legally binding nor adequate, was still deemed a ‘success’ indicating a welcome shift after years of dismal failures.

## 2. DEALING WITH CONSEQUENCES.

The climate has changed and the planet warming impacts are already causing death and mayhem; the move away from fossil fuels burning and other suicidal practices is advancing, the momentum probably unstoppable as corporations belatedly anticipate the market consequences for their profits. Nevertheless, aided and abetted by entrenched political groups, some clusters remain stubbornly pro-coal and oil, regardless of the consequences.

## 3. PROCRASTINATION LEADS TO LAST MINUTE ACTION.

Up-scaling the effort to reverse global warming is a necessary and urgent job, involving more voices to be heard, filling the vacuums in leadership, dispersed or otherwise. ‘*Clean disruptions*’ (Seba, 2017) to release the corporate impetus for positive change triggering rapid transformation from politics-as-usual and business-as-usual to the social and structural change, are needed.

## 4. PESSIMISTIC EXPECTATIONS LEAD TO DYSTOPIA.

Managing expectation is crucial to enable active hope and *strategic* optimism to be held whilst looking the *Tiger in the Eye* realistically and with *tactical* pessimism. Dystopia or collapse has to be seen as a real possibility as the impulse is to shy away and actively avoid dealing with it. Although utopia *feels* less plausible, it may also be in the realm of possibility; getting through and surviving the existential threat is something to actively strive for.

## 5. KEEPING A ‘BIG PICTURE’ VIEW WHILE MANAGING MINUTIAE IS A CHALLENGE.

Working in complex, ‘messy’ problems is challenging; solutions may seem too many, too individual, too unconnected, too reductionist. To engage a super-majority in an emergency mode to bring about safe climate restoration requires many to understand the importance of framing and frameworks; in *Don’t Think Of An Elephant, know your values and frame the debate*, George Lakoff (2004) describes two contrasting overarching frameworks differentiating progressives and conservatives, the first one a nurturing, encouraging ‘parent frame’, the other a disciplinarian ‘father’ frame reinforcing separation, difference and punishment. Being relevant to the diverse ‘segments’ of society requires the necessary education approaches to adapt to the several other frameworks

currently shaping their thinking. Knowledge from advertising, social psychology, politics and social science can be intelligently utilised.

## **6. COMMUNICATION IS INADEQUATE, OFTEN MANIPULATED.**

Reaching, informing, educating, inspiring is patchy; it can be muted, censored, shut down and sometimes high-jacked; it can be complicated by unequal funding relationships and fear of reprisals can force a less forthright approach. After decades of work, vast numbers of people still don't know what is happening or about the tight time frame, how dire the consequences of further tardiness are or the wonderful and hopeful breakthroughs; all of that after so many successful conferences, festivals and other events, using all social media, with exposure in mainstream press, radio, television, blockbuster movies and useful documentaries, billboards, books and articles, awards and other recognition given....

## **7. LEADERSHIP SUFFERS AS DISINGENUOUSNESS AND SELF-INTEREST ABOUND.**

On the whole, Australian Governments of all kinds have contributed to making the 'mess' messier rather than cleaning it up. Their role is critical but many do not give the problem top priority, moving at a glacial pace inconsistent with an emergency, sometimes even undoing effective measures like the 'polluter pays' carbon tax (<https://www.theguardian.com/environment/2014/dec/24/australia-records-biggest-emissions-drop-in-a-decade-as-carbon-tax-kicks-in>) that brought emissions down and created new jobs and was seen to be working. (<http://environment.gov.au/climate-change/government/repealing-carbon-tax>). Grassroots and community groups cannot achieve transformative change on their own, yet most relevant leadership emerges from citizens, not-for-profits struggling to exist in a world of bureaucrats, politicians, business people, corporates, academics and the 'system'. Many find it hard to maintain optimism in the face of government failure.

## **8. SELF-BLOCKING ALSO BLOCKS OTHERS.**

Self-blocking to avoid or prevent useful action is pervasive on all levels, in individuals and organisations large and small; it remains unperceived and needs to be searched out and consciously corrected. Seeing evidence of the inconsistencies that exist between our thoughts and actions "*between what we think we are trying to achieve and the way we go about it are often not what we imagine: our espoused theories differ from our theories-in-*

*use.*” (Dick & Dalmau, 1999) It gets complicated: Dick and Dalmau identify the taboos against revealing taboos. They quote Argyris, “*the undiscussability of the undiscussable – the cover-up of the cover-up*” (Argyris, 1985). In the context of the existential threat that can conveniently be cast into the far future, unhelpful beliefs and counterproductive attributes can be held to be ‘intractable’, the wealthy can pretend that their money will immunise their lifestyles and neo-con ideologues conspire to prevent government from governing as ‘it goes against market forces’ and their ‘stakeholder’ interests.

Each constructed silence, each fear, each lie, each excuse, each refusal, threat and backward step have created an apparently ‘insurmountable’ barrier that became for many the final *reason* for failure: *giving up*. The belief that *incremental change* still suffices results from neo-conservative market fundamentalism and the short-sighted interest of those profiting from it. When economists get these things wrong their mis-calculations can have fatal consequences. “Bad economics has contributed to a policy-making failure on a global scale, and continues to drive the world to the edge of civilisational collapse.” (Armistead, A and Spratt, D. 2020, p.6)

In the context of runaway climate change, the defrosting of the Permafrost and worst-case scenarios of sea-level rise, super-storms, super-infernos, pandemics, food and water shortages, nice-sounding targets are next to useless.

*The curve we’ve been forced onto bends so steeply, that the pace of victory is part of victory itself. Winning slowly is basically the same thing as losing outright. We cannot afford to pursue past strategies, aimed at limited gains towards distant goals. In the face of both triumphant denialism and predatory delay, trying to achieve climate action by doing the same things, the same old ways means defeat. It guarantees defeat.*  
(Steffen, 2017, para 12)

The problem is further compounded; political compromise and pragmatism, vested interests, short-termism and deliberate ignoring or denying of the science combine to *rationalise* addicted reliance on incremental change. Governments the world over have relinquished civil power and responsibility through privatisation, giving in to plutocrats; they have purposely dumbed-down, defunded and disempowered *the people* and thus weakened democratic engagement; *too much democracy* gets in their way so must be systematically removed. (Aly & Stephens, 2018; with Saad-Filho)

The climate threat becomes viscerally more urgent with each action impeded or inadequate; the *spectre* of the multitude of hurdles seems to grow exponentially and the deep shadow thrown by this accumulation of obstacles is long, dark and singularly immense. To remove this massive

blockage in the time available and before damaging climate change fully escapes our capability to contain it, appears just too difficult. This work has sought to deconstruct, untangle and dismantle the conundrum blocking our work towards a safe future, transmuting it into smaller, less overwhelming obstacles referred to as '*hurdles*'. To tackle the work of climate restoration, to be able to ventilate and discuss what is at stake, the hurdles we humans have put in our own way now need to be removed.



## 7.5 Deconstructing the barrier

---

Exploding myths and spurious arguments turns the conundrum into a series of passable hurdles and manageable gaps that need bridging. This is now happening and with gathering speed as evidenced by the first wave of Local Councils now recognising that global warming has already reached the level of climate emergency, that time is in short supply and that impacts are increasingly evident and intensifying by the day.

### The Educative Activist Framework

Building society's *resolve* to engage in an emergency response to a high level of support is essential to accelerate the transformative change and enable the actions necessary to restoring safe climate conditions. The preliminary step entails working out what humans must do to mobilise as individuals, as communities, as entire societies, to develop the process and plan of action to be able to rapidly proceed with the work of reversing global warming. Ten years ago much was known about what needed doing and the call for action was urgent then, but important aspects were not yet known of which this work has identified and collected several, moulding them into an *Educative Activist Framework*. The framework also seeks to address key things we must break through as they are in the way of prioritising *existential* action.

One of these is the recognition that the current polarisation in the political spectrum prevents progressives on the 'left' to deliver strong enough support on their own; attention must widen to include the more 'progressive' (or less reactionary) conservatives on the 'right', those who are deeply concerned about global warming, who share a determined desire to avoid catastrophic climate change and who have been sorely abandoned by their own parties. Growing numbers of transformation-minded people wanting urgent action on climate change are yet to be adequately represented by almost any party, much less the major parties, so the need for a '*Super Majority*' becomes urgent.

In Melbourne, work on the movement and mobilisation has been underway for over fifteen years; as one example, it is central to the work of Sustainable Living

Foundation now in its twenty-first year. Solving climate emergency-related social and technical problems involves steadfastly supporting relevant and effective initiatives and the resilience of individuals and groups throughout Australia and around the world. Sooner or later, it will become obvious that governments falling short of their Emergency Response responsibilities can no longer be countenanced at which time voting patterns will change. Reported in the *Sydney Morning Herald* in October 2018, with “*Climate change ... firming as a deciding issue*” (Hasham, 2018), the 2019 Australian federal election was referred to as a ‘*climate change election*,’ (Chang, 2018), most environment groups were already targeting marginal seats. Billionaires invested excessive sums of money in a campaign to prevent change.

## 7.6 Crafting a Breakthrough Approach

---

This inquiry considered the hurdles, gaps, paradoxes and self-blocks and found that overcoming them and other associated difficulties not only involves avoiding diversions, such as “*new innovations*” that turn out to be reiterations of business-as-usual solutions or engaging in an ineffective crisis mode, but also looking closely at things which are in the way, identifying gaps and *imagining* and *designing* the many bridges that need building. To move each problematic item to a solution, from threat to opportunity and to create a cogent, coherent, comprehensive breakthrough, each piece of evidence, each effort must be examined looking for what is needed. A small sample of these problematic items and the steps involved in addressing them was included in 5.5, specifically the examples covered in 5.5.2 *Hurdles and ways to overcome them*.

This approach led to the compilation of *elements of education and activism* and revealed goals for a framework of collaborative work to this end. Incorporating it as part of a cooperative mega-strategy for the Climate Movement and its allies, a collective of safe climate restoration advocates could make this optimally effective. The development of models and of Mega- and Meta-strategies has begun; some practical guides to actions are already emerging. For example, CEDAMIA–Climate Emergency Declaration and Mobilisation in Action and C.A.C.E–Community Action on Climate Emergency which have detailed step by step descriptions of responding to the climate emergency.

As previously mentioned, an educative activist framework is emerging, aimed at achieving on a wide front the many breakthroughs that prove to be rapid enough for the task. It is currently contained in the interactive wiki pitched to concerned citizens and awakened society; to climate emergency practitioners, activists and the movement; to change knowledge developers; and to big picture thinkers and mega/meta strategists.

A major recommendation from this inquiry, is that an *Educative Activist Framework* (EAF), be considered as a key resource to mobilise replicable, infectious, values-based behaviour and change – including personal transformative awareness – for maximum benefit; fostering the emergence of *Restorative Living philosophies*, catalysing people into living, acting and working in ways and pace consistent with a Climate Emergency. This framework, currently and unapologetically embryonic, has potential to help resource a yet to be developed mega-strategy designed specifically to support the work of *mobilising whole communities*.

The EAF is designed to assist in catalysing *Transformative Change*, adopting an *Emergency Response*, demanding *Safe Climate Restoration* to *safely* enable the return of environmental conditions such as existed before the industrial revolution. With Climate Justice front of mind, the *Emergency Response* will be consciously underpinned by high level principles, values, ethics and processes ensuring the transition is one that is *just*. It needs to be useful and applicable in the most difficult situations, e.g. how to effectively and with sensitivity address the conundrums for farmers worldwide.

Australian farmers have one of the highest suicide rates in the world. Supporting farmers to survive on their land by protecting and healing it rather than by participating in the destructive industrialised systems of *Big Ag* will require an emergency mode commitment with the backing of a super majority. Promising developments are emerging with Regenerative Agriculture Day and Regenerative Earth and Carbon Farming initiatives such as Soilkee - building soil carbon at rates comparable with forests - the first soil carbon project to receive carbon credits under the Emissions Reduction Fund. Transitioning agriculture from a source of greenhouse gas emissions to a significant carbon sink is an important milestone.

In the context of the moral imperative of *what* we want to sustain and why, of the specific solutions, and with the help of a variety of simple, practical *Guides to Actions*, the EAF will:

- Look at ‘Climate Justice’ and the restoration of a ‘safe environment for all,’ aiming to avoid catastrophic climate change and keeping the now unavoidable climate change impacts less dangerous. Work published by *Breakthrough – National Centre for Climate Restoration* weighs up the costs (what’s at stake) and the odds (the consequences of doing less than enough), making the case of actually solving the problem and restoring safe climate conditions.
- Answer the basic why, what, how, where and when questions of taking action on safe climate restoration with as much depth as possible, getting to the root of each problem so as to see and set about solving the underlying problems. In this respect, it will be radical.

- Be predicated on what we can do from a *moral* standpoint and how we and our country can work ethically to protect the good of our lifestyles, to do no harm, care about the ‘neighbourhood’ and leave the legacy we hold dear for the next and future generations.
- Help practitioners look at everything and everyone, from Gene Sharp to Machiavelli, from Apollo 13 to the Marshall Plan, with an eye to co-option, adaptation, emulation or whatever it takes.
- Find different ways of expressing the fractal theory of change and different entry points on the continuum from micro to macro, local to global and the mega- to meta-spectrum.

The Framework for Educating Activists in its current format has been derived from the ‘know why’, ‘know what’, ‘know how’ and ‘know when’ analysis of this inquiry. It provoked a myriad of possible tasks. It also leaves lots of gaps to be found and filled.

Five groups of EAF goals emerged: Activists Personal Change; Removing Self Blocks; Being Fully Heard; Prioritising Emergency Mode; Big Picture Tapestry as follows:

### **Activists Personal Change**

1. Guide seekers of Restorative / Generative Change to find, align and prioritise their values, asses behaviour against further information, identify appropriate action, learn and practice mindful communication, create a culture of mutual respect and nurture the spirit of generosity within the climate emergency movement as it grows.
2. Workshop the relevance of Voluntary Simplicity to the Climate Emergency. Identify the potential fruits of change and envisage the results when goals have been achieved. Learn how and when to take Baby Steps and to Back-cast from Success. Incorporate the role of Personal Change, the emergence of expressions of consciousness that nourish activism and find your version of self-care. Develop robustness and resilience.
3. Practice cooperation, collaboration and communication, make heart-felt connections, maintain sensitivity and ability to contribute, stay the course, even through painful challenges and be bold when necessary. Promote practices that lend themselves to People Power. Facilitate a Radical Solutions conference for younger people and social scientists.

### **Removing Self Blocks**

4. Fill knowledge gaps. Study the basic science. Ecology 101. Build an understanding of what sits behind the problems and hurdles, behind the solutions and practice. Help resolve uncertainties and help equip those becoming engaged to do work required. Identify / reject silos. Unpack

the pitfalls of politics - short-termism isn't, self-interest, etc. Understand target creep, the case for 280 ppm., the 'Road Maps' for generating energy from water, wind and sun, how to stop burning things. Consider 'radical' adjustments - new standards (white goods, cars, etc), new legislation / regulatory frameworks / policies at work and practices at home. Filter decisions through safe climate lens.

5. Failure is not an option = the Can Do approach. Be alert to it, recognise the signs, talk about it, develop feedback mechanisms and practices. Maintain filter for strategic optimism and truly transformative change. Identify and tap capabilities and capacity to solve complex problems.

### **Being Fully Heard**

6. Harness the Arts and engagement strengths of our society's artists and creatives. Train for Non Violent Creative Action. Unleash / exercise imagination. Share art practices as part of a change management strategy. Run a series of workshops for artists and activists (like Forever Swarm's Creative Factory - CoP21 Paris). Play with/develop new words and language (as through Bureau of Linguistical Reality).
7. Value personal stories to reach people emotionally and motivate them to act. Share knowledge, tips, resources, the art of Restorative Living. Find voices to break silences and people power stories to galvanise.
8. Forge connections, develop shared goals around the moral imperative/inspiring vision/other points of connection than can help find the 'In'. Find ways to introduce safe climate to the goals and priorities of people's own lives, organisations, businesses, households. Show moral benchmarks in sustainable living and reciprocity. Explore legally backed impetus to "take into account the risks of climate change to business as usual." Check against the concept of improve-ability.

### **Prioritising Emergency Mode**

9. Support Climate Emergency field workers to manage expectations re funding / payment, to survive financially and psychologically, to enable ongoing contributions. Explore possibilities. Develop a Survivors' Guide. Establish a Grameen style bank/loan facility. Create a Transformative Fund.
10. Prepare and support people to step into Emergency Mode with skills to live and work in the context of the fearful threat; understand the severity of impacts; understand motivations (our own and those of others), draw on work such as from TCM ; weave in the importance

of a sense of connection and resilience in preparation for action, understand the before, during and after of Emergency Mode and the role of reprioritising and staying on track. Expectation setting. Manage optimism and pessimism. Demythologise overwhelm. Find right-wingers who can reach, recruit, represent or lead concerned conservatives who are not yet being represented. Help create the super-majority to deliver the bipartisan support so an Emergency Mode can be initiated and strongly supported paving the way for Whole Systems Change and the restoration of Safe Climate conditions.

11. Run reality checks on e.g. the ramifications of Emergency Mode or the social, economic or political turbulence or the ‘statist’ interventions that are anticipated or the measures that could be needed to avert the climate catastrophe—all the while keeping a weather eye on self-blocking.

### **Big Picture Tapestry**

12. Foster the emergence of restorative/regenerative living and inspire a conscious desire for change through exploring the wisdom and reinvigoration of philosophies relevant to the existential threat. Promote the ‘safe climate’ conversation through experiences and events such as festivals (e.g. SLF), courses for restorative/regenerative living in the suburbs and guides for action; convey a sense of what’s possible and help to ramp up the campaigns - Solutions Economy Campaign, Sustainability Renaissance, the Vision of a Zero Emissions World.
13. Use a range of existing modalities to engage, inspire and educate— pathways, packages, handbooks, courses, workshops and classical and special campaign skills that locate, inspire, catalyse, educate, train and facilitate urgent conveying of change knowledge to support and encourage the new leadership (Purple Sage Project, Climate for Change, Groundswell, Council of All Beings, Groupwork Institute, (UK’s) Radical Solutions Conference, BZE, TCM, etc.).
14. Develop a Guide and an Action Plan for Activists and a set of one-pagers from the science, the knowledge of the political context, the strategies involved in running a problems campaign and a solutions campaign; draw on the TCM Pledge and their Guide to Action, making it cool for young people, making sure to include guards against organisations (and individuals) over-extending. Use social media for meme transference.
15. Foster big thinking, long-term vision and drawing on big achievements of the past. Develop change knowledge and the architecture for a stripped-down Project Management approach



to a mega or (perhaps) meta campaign. People Power wins. Understand, with the help of Babushka dolls, the fractal approach of looking at the massive big picture and knowing the importance of micro roles. Work out just how many 'safe climate' people are needed and where.

16. Play a role in the development of a tapestry-like process to create a plan that will hold together mega strategies & models for change weaving the many campaigns of the mass mobilisation movement potentially into something of an overarching meta strategy to include ultimately everything and everyone needed to restore safe climate conditions. Help a new economy establish, a new language emerge to describe the emerging sustainable society and to change the conversation and the story.

Broadly, the content that emerged from the exhaustive processes employed has been divided into these twenty categories:

1. Action Plan, The Guide, Expectation setting
2. The Arts
3. Attributes, Criteria and 'conditions', Self-Care
4. Bridges, Schisms, Curiosity
5. Breadth, Values, Philosophy
6. Change, Change Knowledge
7. Cohorts, Converted
8. Collaborative Problem Solving, Working Together
9. Conference, Discussions, Culture
10. Economy, Campaign
11. Educate, access Reliable Information
12. Emergence, Emergency Mode, Urgency, Motivations
13. Fear, Threats, Overwhelm, Self-Blocking, Biases, Compartmentalising
14. Imagine, Think Big, Human capabilities, Opportunities
15. Methods, Tactical Skills, Models, Change Knowledge – convey urgency
16. New Language and Leadership
17. Personal, Personal Stories, Silences, Voice
18. Prioritising, Responsibility, Self-Audit
19. Whole Systems Change–Policy and Legislation, Legal, Interventions
20. The Ask and the Transformative Fund

The Educative Activist Framework wiki can be found at [https://sites.google.com/s/1Jcv94CbyY7kUSKdKgg2IOQyn19WXxBMd/p/1\\_hPrIju8xNCeOlzT6OjbTnrVwzg7W7qq/edit?pli=1](https://sites.google.com/s/1Jcv94CbyY7kUSKdKgg2IOQyn19WXxBMd/p/1_hPrIju8xNCeOlzT6OjbTnrVwzg7W7qq/edit?pli=1)

## 7.7 Statist intervention

---

As the time needed to fully solve the problem in other, more business led and incremental ways has been stolen and squandered, *statist* intervention now appears necessary. The intervention of neo-conservative ideologies into the working of the Federal and other governments can be seen as one form of statist intervention but begs the question – ‘who are the beneficiaries?’ I explored statist intervention applicable to a Climate Emergency and some of the context and mode implicit in that scenario. I drew on the Manhattan Project, the Marshall Plan and the concept of a ‘war-footing’ along with an Emergency Mode in unprecedented crisis, such as identified in the Apollo 13 situation and now in pandemic.

In the context of restoring safe climate, the risks involved in such an approach have to be considered, managed and guarded against; trust-worthy leaders and deep participatory democracy, commitment and resolve to prioritise ‘*climate justice*’ in the just transition can help steer the course. Human better-nature and cooperative instincts for survival can help get us through as the alternatives are unconscionable, untenable and devastating. The need for statist intervention and the role of civil society require realistic forethought and cool-headed preparation, as a significant percentage of inevitable casualties can already now be attributed to inadequate preparation.

A high level of self-blocking scepticism that the task might be unachievable and a myopic denial about the amount of time available continues to prevail presenting a problem that needs resolving. Science indicates that the window of opportunity to restore safe climate conditions is closing rapidly and before the restoration work can begin to happen in earnest, whole communities have to mobilise (and be mobilised) to push governments into effective action. It is a complicated problem – not ‘*wicked*’ so much as *layered* (Ramos 2004). To satisfy the actual speed and scale warranted and to protect species from deadly temperature spikes, solutions are urgently needed. Those spikes are likely to happen precisely because as atmospheric carbon drawdown occurs, as it must, global dimming particulates and aerosols are simultaneously removed, as they must be. But as Jacobsen (2015, transcript, p.1)

points out, that pollution is also responsible for around seven million human deaths annually as well as exacerbating the greenhouse blanket effect. They have to go, but ironically, this blanket creates some shading and cooling protection which will also go, exposing Earth to the full impact of climate change already with us, leaving it vulnerable to wild temperature variations deadly to many species, vast numbers of humans included.

Having looked beyond the movement into the science and commercial spheres and into the wider international world, this inquiry unexpectedly found there are very few people working full-time and funded on solutions to safely reverse climate change. There are also, says Anderson (2015, transcript, p.3), experts paid and expected by us to do this complex and detailed work and who are not doing it and failing us. Beyond the mobilisation work to push governments to address climate change problems, there are few organisations anywhere in the world for which tackling the solutions work to actually reverse climate change is their top, much less, their only priority.

## 7.8 Time-line tensions

---

In Australia, this work is top priority for *Beyond Zero Emissions*, *Breakthrough National Centre for Climate Restoration*, the *Save the Planet party*, *Research and Strategy for Transition Initiation (RSTI)*, *CACE* and *Cedamia*. There is also some key research on global warming reversal solutions underway at the *ANU Climate Change Institute* (<http://climate.anu.edu.au/news-events/2018-negative-emissions-conference-integrating-industry-technology-society-carbon>) the latter going beyond *Drawdown* and including *Climate Intervention* (geo-engineering).

Overseas, reports detail elements of *Solar Reflection Methods* being researched in the US and the need for the research to be non-commercial, open access and international is strongly underlined in Harvard University's *Solar Geoengineering Research Program*. (<https://geoengineering.environment.harvard.edu>)

However, the concept of solar reflection does not solve the *underlying cause* of the problem and hence cannot be an alternative to carbon reduction; it merely would help 'hold' the Earth's temperature, buying time while zero emissions and drawdown gradually produce the necessary positive effects. In case the application of the research is found to be necessary, it must be underway now so appropriate care and consideration can be taken when the time for decisions arrives; as well, governance and the appropriate institutions need to be established and equipped with skills and expertise to guide the process. Beyond these and a few isolated examples, the language of global warming reversal or safe climate restoration is quite lacking; the UK government's view on geo-engineering updated May 2018 reflects the high level of caution and reticence and the 'early days' nature of the discussion. (Business, Energy, Industrial Strategy Department 2018)

Work on stopping emissions is well supported by scientists internationally several of whom have been interviewed for this work, e.g. Mark Jacobson's *Solutions Project* at Stanford's Department of Energy and Atmosphere (US) and Kevin Anderson and (briefly) Alice Bows-Larkin in the Tyndall Centre's *Radical Solutions* work (UK). The overall lack of enthusiasm to work *on solutions* has a bad effect on morale and rendered the job of those involved in doing solutions work even harder as well

as making the lies of those dismissing the precariousness of the crisis even more probable and believable for some and hence, more reprehensible. Those working on ecosystem and species protection become more vulnerable to despair, in the knowledge that climate change has to be resolved for their work in the long-term to matter at all.

Observing what is already occurring, some scientists believe that the window for reversing climate change may have already closed, some saying it is or soon will be too late, but no-one has been prepared to say how fast the change has to be, how much time is left, other than to stress the urgency and keep saying ‘now, now, now!’ The goalposts are still inexorably moving back and in recent years, 2020 has commonly become 2030, and the way-too-late 2050 is being re-flagged making the UN’s call for action – ‘12 Years to Chaos’ – all the more alarming. (News24, 2018)

So far, human ingenuity and survival instinct has been seriously discounted; self-blocking and defeatism having led to a sense of impasse; and fake news, misinformation and doubt-mongering may appear to have triumphed. Scientific research making the case for taking atmospheric carbon back to preindustrial levels in order to reverse global warming is urgently needed. So far research on atmospheric carbon has been focussed heavily on ice and sea levels without going further to research what’s needed to actually restore safe climate conditions. No case has been made or refuted and no better ideas are being put forward. Many scientists when asked and pushed for an answer might have trouble saying safe climate restoration is ‘possible’ but they equally would be unwilling to say it is ‘not possible.’ Anderson (2015, transcript, p.13) said that “you only require one example ... a riparian view of society ... just take one example which disproves it and therefore you know you can do it differently. And we have plenty of one examples. There aren’t that many but there are hundreds.”

## 7.9 Revolutionary change IS underway

---

Meanwhile much *IS* happening in society, in business, communities, personal and political change and across all sectors; in investments, infrastructure and the economy the will for change is galvanising action; in civil society, movements such as Extinction Rebellion and campaigns in Australia (safe climate/climate rescue) and internationally, especially in Europe, the US (The Climate Mobilisation) and elsewhere around the globe, change is underway but that is hard to measure too. (See Appendix 15)

The big question remaining is *scale* and *time*.

When reports about positive transformative change occurring in China appear, such as the *peaking of coal back in 2015* and the booming uptake in electric busses, its scale is hard to compute in the context of the scale of the challenge, leaving many vulnerable to feelings of unfounded optimism and some still with suspicions leaning to pessimism. (<https://www.citylab.com/transportation/2018/05/how-china-charged-into-the-electric-bus-revolution/559571/>)

My current view, although still subject to occasional short-lived dips in confidence, is that the rapid change underway globally is beyond evolutionary change; it is equivalent to a revolution at least as big as the Agrarian Revolution, the European Renaissance or the Industrial Revolution and has a very real potential to avert disaster and create crucial, positive change. One of the hardest things - along with conveying to one and all the critical need to reprioritise now - is getting information out, regardless of whether it's encouraging or worrying. Those who do know this is an existential crisis requiring urgent transformative change often don't seem to know how urgent. Many concerned people don't know what's being done or - indeed - if anything is happening.

Governments, by and large, try not to talk about this publicly at all, nor are most of the media; politically constructed silences prevail and half-conversations mislead. Yet governments are the one institution that has to accept and declare that a '*war-*

*footing style climate emergency response*' is needed; they have to provide good messaging and good governance for their people and step up to the challenge of reversing global warming. My research has led me to conclude that one key way to get governments to engage in this urgent work is for the climate movement to expand and work far more cooperatively, collaboratively and strategically in getting messages out, growing the numbers, linking with the naturally occurring up-rising of ordinary people and hence create the necessary Super Majority.

When the support of the climate-concerned conservatives combines with that of the progressives on the left, a Super Majority will enable a robust and durable, multi-partisan emergency response to become achievable. Notwithstanding an emergency mode being even at this late stage technologically and financially within reach, the scale is undeniably huge and without a safe climate economy operating, success is not possible.

An appropriate, strongly supported, national Emergency Response can wholeheartedly tackle the problem with a view to solving it. (Appendix 16) Once a Super Majority is in place, the emergency response can be rolled out, allowing governments and people to get on with the still daunting job of repairing the climate and reversing global warming rapidly, transforming the world's economies from carbon-based to clean/renewable energy as fast as possible and the myriad of other work that will need to flow on from there, much of which can no doubt be multi-tracked. Transforming stationary energy and then transport, built environment, industrial agriculture, consumerism, waste streams - requires the participation of anything and everything associated with carbon emissions and the health of the Earth's whole systems, especially of those involved in sequestering, locking down and sinking carbon, including the oceans.



## 7.10 Opting for a successful outcome

### The Next Wave

- 6 To restore safe climate conditions for all people, species and civilisation
  - 5 To reverse global heating and get drawdown happening
  - 4 To transform rapidly through a fit for purpose Emergency Response Mode
  - 3 To create ‘super majority’, non-partisan support for urgent government action
  - 2 To catalyse and support the next wave of action and activists.
- Step 1: To build a strong collaborative movement and a set of useful tools (e.g. an EAF)

The Educative Activist is strategically optimistic, tactically pessimistic and very aware of the critically short time-frame. She/he sees clearly the narrow chance still available to achieve an amazing result. This could be our species’ finest hour.

The extreme urgency means an Emergency Mode is now warranted. In order to rapidly build the groundswell that will rapidly mobilise whole communities to understand, demand and adopt an Emergency Mode, a comprehensive approach is needed. This framework is about equipping the next wave of people for that work.

The ‘Mobilising Whole Communities’ research asked key questions about responses needed to the existential threat posed by global warming.

Each section and question provoked a myriad of hurdles, opportunities, tasks and gaps to be filled for such a framework to be comprehensively applied. For an adequate safe climate restoration response to be made possible all these considerations and more need to be thoroughly examined.

The EAF is primarily for climate emergency practitioners, activists and the movement to help them fill knowledge gaps, prepare for an Emergency Response

Mode and be supported in their work in the field.

It is also for concerned citizens and awakened society who just want to adopt restorative and generative lifestyles, understand better the urgency and the way through the disruption and develop their self expression, their art, their voice and their people power muscles; people who might be asking themselves, ‘what is the best contribution I can make in this context?’

Change knowledge developers and implementers and big picture thinkers and mega/meta strategists are much needed and the EAF is intended to reach and support those ready for the task or already active and to identify and nurture those with the attributes indicating their potential.

To fast-track reaching a Super Majority, strong signs exist that the climate movement can converge in a collaborative mega-strategy, which would entail each organisation continuing their specific work in the shared context of the climate emergency. Various smaller collaborations already exist demonstrating this strength. Anti-coal campaigns, the call to protect the Great Barrier Reef, marches and events that have been collaboratively organised in the past. The Climate Activist Alliance (Portland, OR, USA) was inclusive and met weekly. (See Appendix 17)

Importantly, this would mean incorporating in their internal and external communications the need to create a response commensurate in speed and scale to the urgency and scope of the problem to be solved. The climate emergency message can, on its own, be alarming. To gain maximum cut-through the word ‘emergency’ is attached to the positive goal of safe climate restoration; the *solutions* and the *plan*.

The *Plan* has to be able to hold the mega-strategies and models for change together. Weaving into the significant majority-mobilisation movement the wisdom of hindsight and experiences from recent history in a framework of alignment and collaboration around Radical Solutions, a picture soon starts to form. Numerous ‘*steps before*’ and a need to multi-track adds further complexity to an already complex conceptual plan, but the need for the Super Majority that can give the green light to an Emergency Response stands out as a central plank on this platform for change. The elements of both a *Problems* and a *Solutions* campaign exist in all the current good work underway and need to run simultaneously and complementarily. To assist in the development of a Mega Strategy, the *Educative Activist Framework*, both naturally and deliberately full of work ‘*yet-to-be-done*,’ to be effective, requires wide input, shared vision and *copy-left* ownership within the commons.

Building a strong sense of community and collective action with positive framing and an optimistic vision unlocks the potential for emergence; it requires many elements, including learning from experience and doing some things differently from what has been done before. Less an uprising against recalcitrance, this may be more a ‘*Risorgimento*’ (see glossary) integrating and cooperating to resolve the threat and reverse global warming. (Watch News 24, 2018b) Fully understanding the threat, holding a strong, shared, inspirational vision and with a plan and the commitment to do everything we can, restoring safe climate conditions is possible.

When the time comes for the *Emergency Mode* period to finally conclude, a transformation supported by a new, *no place for waste*, Circular Economy – thriving such that all species can thrive – should be well underway. Caroline Lambert – European Commission, speaking on waste as a valuable resource.

*“At the same time as the Paris Agreement was signed in December 2015, the European Union launched its Circular Economy Package, a transformational drive to create an economic system that is restorative and regenerative by design. In a circular economy, there is no place for waste. End of life products, materials, nutrients and water feed into a new use cycle thereby minimizing the use of virgin resources, associated emissions and energy use. Since then, the European Union has raced ahead with specific legislation and measures and achieved many key milestones including tabling single plastic use bans in May 2018.” (Lambert, 2018 para 1)*

Discussion to this end and development of models is underway, the *Educative Activist Framework* is taking shape. Receptivity to the notion that ‘*Systems thinking, Sentient Connections and Fractals of Transformative Change can yet build a regenerative bridge to a timely Sustainability Renaissance*’, words from original Thesis Outline v7, is growing and, in any case, choosing to succeed means that “*Failure is not an option.*” (Kranz, 2000 Title of book)



# SECTION 5

## OTHER BITS

---

APPENDICES

REFERENCES

GLOSSARY

ACRONYMS

WEBSITES

ACKNOWLEDGE-  
MENTS

DEDICATION

# APPENDIX 1



# INTERVIEW QUESTIONS

## Appendix 1

### Interview Questions

Meshing & refining these questions continued as analyses of interviews, insights & other materials were brought in and condensed further.

#### **Values-based Living**

A Title: *Foster the Emergence of Restorative Living*

This is how those to be mobilised are mobilised

#### **Scale and Momentum**

B Title: *Enabling Scale and Momentum of Social Change*

This is at the campaigns end in the big picture

#### **People Power**

C Title: *People Power*

This is what the mobilisers / practitioners have to have, and do, and work through

#### **Change Knowledge**

D Title: *Change Knowledge*

These are the practitioners, their practices & what they need to know

#### **Meta-Strategies**

E Title: *Meta-Strategies for Safe Climate Restoration*

This is how to pull it all together larger scale

#### **The New Leadership**

F Title: *The New Leadership*

This is what's coming through and what's needed

#### **Effective Breakthrough**

G Title: *Effective Breakthrough*

This is how the practitioners & new leaders deliver the mega strategies



## Values-based Living

A Title: *Foster the Emergence of Values-based Living*

This is how those to be mobilised are mobilised

In the context of the moral imperative—what we want to sustain and why—this inquiry is set in an educative and activist framework seeking values-based behaviour change—including personal transformative healing—capable of catching on with potential to be widely replicated for maximum benefit. What are the crucial conditions, change strategies, techniques and ideas that successfully foster the emergence of ‘restorative’ philosophies implicit in Values-based Living? How to catalyse people into living and acting in ways and pace consistent with a Climate Emergency?

1. What do we want to sustain and why is this a moral imperative?
2. What is the values-based behaviour change that is sought?
3. How is an educative activist framework built around the context of the moral imperative?
4. To be inclusive of personal transformative healing?
5. To help overcome self-blocking?
6. To be capable of catching on with potential to be widely replicated for maximum benefit?
7. To catalyse people into living and acting in ways and pace consistent with a Climate Emergency and to successfully foster the emergence of ‘Restorative’ philosophies implicit in Values-based Living what are the:
  - i. Crucial conditions
  - ii. Change strategies
  - iii. Techniques
  - iv. Ideas

*How does this show up in my current (or recent) life?*

*The alchemy of mobilisation starts with the raw ingredients ...*

*What’s in the individual to begin with? Values, worldview, identity*

*What reservoirs and receptors do they have? Conscience, morals, emotional maturity*

*How infectious is the message? Conscious or unconscious*

*What is the group dynamic at play? Emergence / connected or isolated*

## Scale and Momentum

B Title: *Enabling Scale and Momentum of Social Change*

This is at the campaigns end in the big picture

The specific social conditions needed to establish a sustainability-generating culture that can be consolidated into the economic and political landscape to enable social change on the scale commensurate with the challenge. In the framework of climate change urgency, while breakthroughs are sorely needed to help bring about rapid transformation, what are the personal and social change strategies, techniques, ideas and skills that inspire and build the Momentum of Change.

1. In the context of climate change urgency and sorely needed (rapid transformative) breakthroughs
  - i. What is a sustainability-generating culture?
  - ii. How is this culture established?
2. What specific social conditions
  - i. Can be consolidated into the economic and political landscape
  - ii. Enable social change at a scale commensurate with the challenge
3. What is involved in inspiring a momentum of change?
4. What are the personal and social elements needed to Build Momentum
  - i. Change strategies
  - i. Techniques Ideas Skills

*How does this show up in my current (or recent) life?*

*Philosophy underpinning restorative living .. honest sense of responsibility for actions and consequences and bequeathing*

*Ramping up means pushing the memes, messages and buttons; speaking on behalf of ground birds*

*Speaking out about the importance and value of momentum – building and maintaining*

*Source and acquire skills and expertise, practice*

## People Power

C Title: *People Power*

This is what the mobilisers / practitioners have to have, and do, and work through

This question considers the personal attributes, self-awareness and stories of those who seek to engage and mobilise individuals and communities and the strategically important roles, essential skills and conditions needed to achieve a successful outcome. Understanding people's every-day lives, routines and motivations or going beyond rational arguments to engage emotions can be as vital as being courageous when confronting tough challenges and being unafraid to stare down opposition.

1. Of those who seek to engage and mobilise individuals and communities what are the:
  - i. personal attributes
  - ii. self-awarenesses
  - iii. stories
2. To achieve a successful outcome what are the necessary
  - i. Strategically important roles
  - ii Essential skills
  - iii. Conditions
3. To go beyond rational arguments to engage emotions...
4. To be courageous when confronting tough challenges...
5. To be unafraid to stare down opposition...

How does it help to understand people's

  - i. Every-day lives
  - ii. Routines
  - iii. Motivations

*How does this show up in my current (or recent) life?*

*Why do stories or looking for attributes, roles, skills, matter?*

*My story*

## Change Knowledge

D Title: *Change Knowledge*

These are the practitioners, their practices & what they need to know

What do we need to know about the process of conveying Change Knowledge? What change knowledge must be conveyed for the rapid transformation in the climate change emergency? Where can expertise be found with useful synergy and tools appropriate for the challenge? What are the criteria for change knowledge developers / practitioners? Who can create the multiple strategies / multiplier effect and assist in the rapid development of the language needed by the implementers (the educators, trainers, consultants and communicators)?

1. What is Change Knowledge?
2. What do we need to know about the process of conveying it?
3. What are the criteria for change knowledge developers / practitioners?
4. Where can be found
  - i. Expertise
  - ii. Useful synergy
  - iii. Tools appropriate for the challenge?
5. What change knowledge must be conveyed for the rapid transformation in the climate change emergency?
6. Who can create the multiple strategies / multiplier effect
7. Who can assist in the rapid development of the language needed by the implementers?

*How does this show up in my current (or recent) life?*

*How do practitioners and change knowledge developers differ from mobilisers?*

*How are strategies and new language be (rapidly) shared*

## Meta-Strategies

E Title: *Meta-Strategies for Safe Climate Restoration*

This is how to pull it all together larger scale (sustainability renaissance)

A central element of my inquiry is the potential for emergence and the development of meta-strategies able to create the social and whole system transformational change at a pace rapid enough to restore a safe climate future. In this big picture context the strategies for climate restoration; the models, the politics and other elements needed for whole system transformational change; and the social change models relevant to the global emergency, specifically the climate emergency, are discussed.

1. What is emergence?
2. What is a meta-strategy?
3. Meta-strategies relevant to
  - i. Safe climate restoration
  - ii. The big picture global sustainability / climate emergence
  - iii. Rapid whole system transformational change

Include what

- i. Elements
- ii. Social change models

*How does this show up in my current (or recent) life?*

*Thinking big*

*Sweating the detail*

*Considering the fractals*

## The New Leadership

F Title: *The New Leadership*

This is what's coming through and what's needed

Whether from top down or bottom up big picture strategists, thought leaders and whole systems thinkers find, engage and enable others to also take strategically important roles and responsibilities delivering meaningful movement forward. How do they help people embrace their own sense of responsibility, step up into their own leadership potential and catalyse them to be the thought leaders, communicators, networkers, talent scouts and recruiters the movement needs?

1. Where is meaningful movement forward occurring?
2. What are the roles and responsibilities of :
  - i. Top down actors
  - ii. Bottom up actors
  - iii. Big picture strategists
  - iv. Thought leaders
  - v. Whole systems thinkers
3. How do they find, engage, enable and catalyse others to also take strategically important roles as:
  - i. Thought leaders
  - ii. Communicators
  - iii. Networkers
  - iv. Talent scouts
  - v. Recruiters
4. How do they engage Australian confidence
5. How do they help people
6. Embrace their own sense of responsibility
7. Step up into their own leadership potential

*How does this show up in my current (or recent) life? How do pockets of this work broaden from their own core work to invite and engage and share with others? How does 'the only way' play out? Where are the resources to support a process of reflective thinking, inner / group work and broad-scale multi-organisational collaboration? What are the peak bodies doing?*

## Effective Breakthrough

G Title: *Effective Breakthrough*

This is how the practitioners & new leaders deliver the mega strategies

A positive framing and optimistic vision for what the future can be can help build a strong sense of community & collective action to help overcome major blocks and difficulties and support resilience of initiatives and of individuals in tumultuous times. How can inappropriate diversions, “new” business-as-usual solutions or an ineffective crisis mode be avoided? Does achieving breakthrough and delivering change require doing something different from what has gone before? What simple practical guide to actions and innovations—social and technical—can help solve problems implicit in the climate emergency?

1. What’s the difference between ‘delivering change’ and ‘achieving breakthrough’?
2. Does delivering change require doing something different from what has gone before?
3. Does achieving breakthrough require doing something different from what has gone before?
4. How does Positive Framing and holding an Optimistic Vision for What the Future Can Be help:
  - i. Build a Strong Sense of Community
  - ii. Build Collective Action
5. How can:
  - i. Major blocks and difficulties be overcome?
  - ii. Resilience of initiatives and of individuals in tumultuous times be supported?
  - iii. Inappropriate diversions be avoided?
  - iv. “New” business-as-usual solutions be avoided?
  - v. An ineffective crisis mode be avoided?
6. What innovations—social and technical—can help solve climate emergency problems?
7. Can a Simple Practical Guide to Actions be created?

*How does this show up in my current (or recent) life?*

*Are facilitators savvy with climate emergency and the ‘movement’ skilled to bring divergent trains of thought together or at least enable ideas to be fully expressed and potentially well communicated?*



# APPENDIX 2

---

# REQUEST FOR AN INTERVIEW

## Appendix 2

### Request for an Interview

#### Dear

As you (may) know I have undertaken a professional doctorate through The Melbourne Institute of Experiential Creative Arts Therapy (MIECAT) and The OASES Graduate School (Organic Integration of the Aesthetic, Social, Ecological & Spiritual) on the Mobilisation of Whole Communities to Restore a Safe Environment.

#### Purpose of this research

I am seeking to understand and rapidly convey knowledge, ideas, strategies and insights on this topic from eight participants and this (draft) letter is inviting you to be interviewed by me as a participant in this research. The project overall will be exploring:

- The role of thought leadership, top-down and bottom-up action, and movements
- Ways to locate, catalyse and engage Australian confidence, sense of responsibility and leadership potential
- How to optimise effectiveness and avoid work or diversions that don't deliver transformational change
- The development of an education framework and an activist framework to achieve maximum engagement
- The development of a meta-strategy to create the social change needed to restore a safe climate future
- And outlining the evolving philosophical metamorphosis implicit in restorative lifestyles

I believe time is critically short and there is a need to globally communicate *work in progress* in order to foster multi-organisational collaboration sharing the '*learnings so far*' and combining strengths and resources where possible. Just as we no longer have time for incremental change we also no longer have time for studies like this to be completed to full polish before sharing what is being discovered.

## Background

This study is addressing the ultimate engagement of almost ‘everyone everywhere’ in the social and structural change urgently needed to restore a safe climate and ensure a sustainable future for ‘all people, all species and all generations’. It especially addresses the *initial engagement of ‘enough’ people* to get the transition into full swing with momentum such that sweeping change is fully supported in ‘enough’ of the community, the government sector of politicians and public servants serving our society and ‘enough’ of the business sector to overcome the barrier of resistance currently in place and allow government to do this job unhampered.

The work focuses on ‘Mobilising whole communities to live in a way that will restore a safe environment’ based on

- values-based behaviour change (what do we want to sustain and why?)
- identifying the most effective models and elements relevant to the global sustainability emergency and, within that, the climate emergency and
- avoiding ineffective or inappropriate alternatives (e.g. “*new*” (tweaked) business-as-usual or ineffective *crisis* mode).

The daunting nature of the necessary scale, scope and speed of the transition becomes less so as we understand the different capacity that can be drawn from human beings when they are operating in “emergency mode” – a clear headed, highly strategic and effective, often collaborative, cooperative way of surmounting seemingly insurmountable problems.

The goals encapsulated in this work are new and different from the historical approach that has been taken to the ‘problems’ over past decades. The goals are accepting of the greatest urgency – a climate emergency – and so are largely rejecting of incremental change. The short timeframe for action, in the absence of scientifically researched conclusions, is based on the Precautionary Principle. Safe Climate Australia’s much-anticipated forthcoming “How Fast” Project will provide the scientific basis for the timeframe. Whether longer or shorter the time factor will still be a major factor in a change of this scale, of the whole system. The thinking behind the Transition Decade is that this is about as fast as we can

conceivably make this change happen if we are to at least reduce the pain and disruption and maintain the goals of justice and equity.

As Threat and Opportunity are often portrayed as being two sides of the same coin, the tight timeframe brings with it a fresh approach. It involves critical understanding about what needs to happen with a clarity that has no room for compromise or dilution. The vision that is emerging and becoming shared is to do with what we would like to see happen – i.e. a decisive move away from dystopia to a safe climate, sustainable environment and, implicit within that vision, a just world. The perception of the limitations of what is '*politically possible*' is understood as a barrier to action that cannot be countenanced when there is also clarity *that failure is not an option*. The commitment to rapid whole system change flows from this.

The work to date has been focused on engaging others with ideas. The ideas encapsulated in the concept of the transition to restore a safe climate and the transformation of the whole system comprising systems within systems require a grasp of the complex big picture and its many component parts right down to the minutiae of our social and environmental living practice.

The study will explore models for mobilisation in an iterative, action research process. It will bring together approaches to creating engagement and mobilisation of people and whole communities and examine what is working and what isn't. It will look at the underlying passion and purpose of key workers in this field and access their wisdom around their own understanding of what has or hasn't worked for them as social activists and why. It will examine the role of leadership; of top-down action, support and encouragement; of social and labour movements, grass roots and community groups; and of the interplay of top-down and bottom-up processes and the conditions necessary for optimal engagement of each. All are important in different ways and, in this context of the biggest challenge humankind has ever faced, all vital to the best end result.

Whole system change, the nested nature of systems within systems, the complexity and its effect and the meta-strategy thinking needed to deliver the critical breakthroughs will be contextual to this study.

## Who are the participants?

The pool of participants will only include people who are working in the “safe climate wing” of the movement; i.e. to rapidly transform Australia – “whole system change” – to a sustainable, zero emissions and safe climate economy and society. They will be drawn from the quite small pool of those working fairly single-mindedly on the transition (to restore the conditions necessary for a safe climate) and the full transformative change. The transformative change being constructed is a rapid move from the unsustainable systems that have been developed and are symptomatic of ‘business-as-usual’ to a sustainable set of systems within systems. Whole system change refers to the whole overarching system in our human-centred world (and the nested systems comprised within it) that must (but currently fails) to interconnect compatibly with the systems of the bio-diverse natural world (e.g. hydrological, climatic, oceanographic, atmospheric and so on).

Participants are selected on the basis of their current work in this field and the work they have been engaged on that has brought them to this point and has helped to equip them with the perspicacity, skills and experience to apply to this current challenge.

## Successes and failures

In their work to engage others with these crucially important ideas, the participants draw on their own work and their lived experience, their knowledge, insights and wisdom, skills and training, their creativity and an array of personal attributes. This is the well-spring that enables them to find the successes, work through and learn from failure and to persevere and survive in the maelstrom of information, action, inaction, reaction and distraction that affects progress towards goals. The results of the work to date are mixed. It is patently obvious that at this stage we are running fast in the wrong direction with emissions continuing to escalate. However there are successes there to see too and they need to be illuminated and drawn on as well. “Signs of the Renaissance”, “Signs of the Revolution” and a sense of an imminent tipping point in the right direction provide inspiration, nourish hope and help balance the terrifying scenarios of the “other” way – the road we’re currently committed to going down.

The many missed opportunities and failures are grist to the mill and the understanding

that comes from them goes directly to the constantly emerging strategies and the action research / change implementation that is underway.

“It’s like scientific experimentation where early in the piece the ‘failures’ overwhelmingly dominate the scene. But my science teachers always said that there was never a truly “failed” experiment **from the point of view of science** because it is from the failures that you learn enough about the system to begin at some point to craft success strategies.”

Philip Sutton

## Your input

Drawing on your experience, this research will explore your current work and seek to understand your vision and plans. As one of the participants you will be given a couple of broad conversation starters to kick off the conversation however in all 8 (up to 10) people will be interviewed and the results of the first interview may change the framing of the second interview and so on. I’m interested to unpack the theory behind the practice of you all.

I wish to tap into your perspectives, major insights, frustrations, inspirations and thoughts about whatever you are drawn to of the following that you want to focus on:

1. particular personal attributes and conditions needed to deliver a successful outcome in engagement and mobilisation of individuals and communities in the context of what has or hasn’t worked
2. what is needed to secure a breakthrough in the context of current major blocks and difficulties
3. the emergence or development of meta-strategies able to deliver rapid whole system transformational change
4. what constitutes a sustainability-generating culture, the social conditions – what’s needed and how to achieve it
5. personal and social change strategies and techniques, ideas and skills
6. the rapid conveying of change knowledge including through education, training, consultation & communications
7. strategically important roles including communicators, networkers, catalysts, talent

scouts and recruiters

8. steps involved in supporting initiation and effective follow-through in other people, organisations and sectors

## The process

The process will be based on one to one interviews. The interviews will be framed in Grounded Theory where the first interview is built upon and the interview prompts change as the process continues.

It will involve drawing, mapping, note-taking in highly interactive, taped discussions. For interstate interviews, technology such as skype and online, interactive white-boarding might be necessary. Photos of whiteboard work and the research participants perhaps with their favourite books will be taken.

The process is expected to take less than ten hours of the participants' time. It will involve (30 minutes) reading of the background material and questions prior to an initial interview of about two hours. A follow up reconnection interview is anticipated (one to one and a half hours) and the time required for the reading of the final report (30 minutes).

Following the interviews I want to analyse the data qualitatively to arrive at themes which I expect will be helpful to the movement.

The potential benefits to

- a) **the participants** - Opportunities for reflection, for seeing (with greater detail) their work as part of a larger movement, for seeing their work recognised as a useful contribution to this research. Potentially for expanding their understanding about the broader context and how their own work might reach out to reinforce that. Learning about the similar and different experiences of their peers being asked to consider the same questions.
- b) **to humanity in general** - The unprecedented nature of the challenge and also of the ways of meeting it can be shared very usefully to inform and support other attempts in similar vein, to avoid duplication, to bootstrap research and action globally and to accelerate the learning *as it occurs* and with the benefit of hindsight.



Your involvement will include

- Understanding the nature of the research and agreeing to sign the Consent Form (attached)
- Reading this document carefully, preparing your thoughts & the major point(s) on which you wish to elaborate
- Engaging in an interview of 1 to 2 hours that I will tape and may also film in February 2012
- Reading through the transcript when produced and finalising it as needed

I look forward to discussing this with you soon and hope that you will be interested and able to be part of this work.

*Giselle*

16<sup>th</sup> January 2012

***Participant Consent and Release For***

I, \_\_\_\_\_, understand that

*Giselle Wilkinson*

is currently conducting research into:

***Mobilising Whole Communities to Restore a Safe Environment***

as part of work leading to a Professional Doctorate in Experiential and Creative Arts Practice at the MIECAT

I understand what is requested of me, as described on page 1.

I agree to participate in the research on the understanding that:

1.  I would like to remain confidential OR  
 I am happy to be identified in this study
2. Research and data collected during the study may be published or provided to other researchers unless I stipulate otherwise in writing
3. I may change my mind and require that my name is not used unless approved is given by me in writing
4. I may request confidentiality be preserved at any time during the study to within two months of the data or interview transcripts being provided to me
5. I may I waive the requirement for confidentiality at any time or by stating such in the box below
6. I may withdraw from the process at any time within two months of the data or interview transcripts being provided to me and if I request it, data from me will be destroyed.

Name of participant: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of researcher: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

If you have any queries contact:

Giselle Wilkinson – gw@gisellewilkinson.id.au 0428 373 111

Supervisor: Jan Allen – jan@miecat.org.au

Supervisor: Jacques Boulet – jacques@oases.org.au

Chair of ethics committee via admin at MIECAT – admin@miecat.org.au

# APPENDIX 3



# THE INTERVIEW SCHEDULE

## **Appendix 3**

### **The Interview Schedule**

#### **Philip Sutton**

(i) (iii) 26<sup>th</sup> & (iv) 27<sup>th</sup> Feb and (v) (vi) 2<sup>nd</sup> & (vii) (viii) (ix) (x) (xi) 24<sup>th</sup> Mar 2012 at Murundaka Heidelberg Heights, Melbourne. (NB roman numerals denote separately recorded responses to interview questions)

#### **Luke Taylor**

13<sup>th</sup> Apr 2012 in the Edinburgh Gardens, Fitzroy Melbourne

#### **Professor Frank Fisher**

24<sup>th</sup> June 2012 at his home in Clifton hill, Melbourne

#### **Piers Verstegen**

26<sup>th</sup> Nov 2012 at Murundaka, Heidelberg Heights, Melbourne

#### **Chris Jordan**

16<sup>th</sup> Feb 2014 at Murundaka, Heidelberg Heights, Melbourne

#### **Adrian Whitehead**

24<sup>th</sup> May 2014 at Murundaka, Heidelberg Heights, Melbourne

#### **Professor Kevin Anderson**

22<sup>nd</sup> April 2015 at the Manchester Railway Station café, Manchester, England

#### **Margaret Klein Salamon**

26<sup>th</sup> May, 2015 at the Grey Dog Café, Union Square, Manhattan, New York City, USA

#### **Climate Coalition**

15<sup>th</sup> June 2015 Portland, Washington, USA

#### **Professor Mark Jacobsen**

28<sup>th</sup> June 2015, Energy & Atmosphere, Stanford University, San Francisco, California USA

# APPENDIX 4

---

# NATIONAL SUMMIT 2011 WHOLE SYSTEMS CHANGE

## Appendix 4

### National Summit Communiqué

#### **Communiqué**

### **Transforming Australia National Summit**

#### **on whole system change**

#### **Geelong Conference Centre**

#### **29<sup>th</sup> September - 2<sup>nd</sup> October 2011**



The 2011 Transforming Australia Summit in Geelong, Victoria was held to bring together people who wish to help accelerate Australia's transformation to an ecologically sustainable and socially healthy society.

The Summit reflects the growing concern among diverse groups that humanity's global systems are environmentally, socially and economically unsustainable and that profound cultural and economic transformation is necessary. Many individuals and groups in Australia and internationally are already working to build understanding about how this transformation can and will occur.

Around 60 people attended: scientists, educators, communicators, civil society leaders, NGO leaders, philosophers, farmers, researchers, activists, engineers, religious leaders, architects, social entrepreneurs, and youth leaders. The attendees all came together to develop a unifying platform to help bring about transformative change in Australia.

The aim of the Summit was to:

- Bring together influential leaders from a wide range of organisations and perspectives, each working on our evolution to a viable society;
- Create an opportunity for participants to reach a new level of awareness, agreement, collaboration and effectiveness in accelerating transformation;

- Forge an overarching vision and action plan for rapidly accelerating Australia's transformation to environmental and social sustainability; and
- Develop a national initiative focused on whole system change.

The Summit asked two basic questions:

- How will we create a transformational movement that leads to an environmentally and socially sustainable system?
- How will we work together in order to be more effective in this endeavour than we can be alone?

The Summit undertook to engage in a process of building a movement through developing principled partnerships among individuals and organisations committed and working towards transformational change.

Participants agreed with the following core views and values:

- Humanity is facing an ecological emergency
- It is necessary, possible and desirable to create a safe and healthy environment and society
- Because the problems are systemic, they require systemic solutions – the holistic transformation of our unsustainable global system into a sustainable system
- Because we live in an interconnected system that is largely driven by values, environmental sustainability is impossible without social and economic justice.

People's attendance and participation at the Summit showed the existing commitment to doing the work and making the sacrifices required to create a sustainable future for Australia.

The approach towards transformation agreed by the Summit participants was:

- A sustainable society will have a structure similar to that of a healthy ecosystem: networks of mutually beneficial relationships that support diversity and resilience.
- An effective self-organising transformational movement is most appropriately based on a network-centric partnership model with organisations and individuals aligned around a shared vision and goals and empowered with processes and holistic solutions to take autonomous action.



The Summit sought to reach general agreement in principle on a common narrative and vision (where we are and where we need to go); process and pathways (how we can get there); and action (what we will do to achieve our shared goals).

The Summit participants will continue to work together with others to act on this vision. A more detailed report of outcomes and plans will be released in coming weeks.

# APPENDIX 5



**TO  
ACHIEVE  
SHARED  
CONVICTION**

## Appendix 5

### Detailed exploration of work needed to achieve strong, shared conviction

This line of questioning, what we want to sustain and why, will catch on when linked to others in educating and activating situations, round tables, workshops, discussion groups and kitchen table conversations. Events need to be planned so the questions can be answered from both a worldview and the point of view of each individual. All will have answers and will identify issues that can be connected to the threat of climate change. Each person, when connected to the desire to avoid catastrophic climate change can begin to consider the goal of safe climate restoration as a shared goal. Being connected to something that matters helps enormously when a bold ask is needed or there are opportunities to be grabbed.

It is really critical that the Sustainable Living vision shows evidence of progress and advanced standards of living that come with renewable energy at the core of our energy source, our zero emissions homes and our mass public transport system.<sup>1</sup>

A problem Luke Taylor identifies is that many people, when they think about sustainability, don't have that vision. Many still just think 'turn off the light bulb'. This means they are vulnerable to having a fear button pushed at the psychological moment before they even have the opportunity to understand what is being put forward. There are two key components of the vision of Restorative Living people that need to understand. One is about a zero emissions impact (a zero impact release) *and* the other is it still maintains a standard of living that people aspire to or have already. The vulnerability experienced when extrapolating from turning off light bulbs to an easily conjured mental picture winding the clock 'back to the stone age' makes it all too easy for anyone wanting to invoke fear. If no other strong vision has been put forward just mention the 'horse and cart' cliché and watch people run a million miles in the wrong direction.

The prospect of Restorative Living has to be attractive, desirable, even *cool* to a range of different demographics and be presented in a way cognisant of their (current) frameworks and world view. Aspects of life such as the need for privacy or for promotion of behaviour need to be taken on board. Things like sanctity, tradition, privilege may need to be respected or perhaps challenged. It all has to be made easy (or appear to be easy) to adopt these new behaviours and this will involve breaking it down into little steps.

1 A couple of useful reference books casting from the present plausibly into a far more sustainable future are Jonathon Porritt's book, *The World We Made*, *The Story of Alex McKay in 2050* and Paul Hawken, et al, *Drawdown*, The most comprehensive plan ever devised for reversing global warming.

To communicate these loaded dichotomies effectively – the ‘Disaster Alley’ dystopia (Dunlop and Spratt 2017) and the ‘Restorative Living’ utopia (bottom-up) – can be very personally challenging for practitioners many of whom desperately want to turn their audience on but are afraid of turning them off. One of the activists in the Portland-based Climate Coalition<sup>2</sup> in Oregon commented that it can be hard to know what to do when for example, people focus on their own personal issues that are, in fact, diversions from the real conversations that we need to be having. Sometimes no doubt a deliberate ploy, often too this can be the result genuine confusion.

One strategy is simply work with who we are, with the network and resources we have, our skills, experiences, qualifications, hunches, whatever study we’ve done and stay within the zone of our expertise, freely acknowledging the things we don’t know. We don’t have to change ourselves into something else and we don’t have time to anyway. Practitioners have to practice and find, as Philip says, the successful conversation openers, the ‘step in’, and the questions that will keep the discussion open and progressing constructively.

When people *don’t* want to hear what they *don’t* want to know, credibility can be challenged. I am not a physicist or climatologist. I happily defer to the people I speak with who are, those who know and can verify the relevant science, some of whom are amongst the many scrupulously referenced, peer-reviewed published authors in the field.

‘Emergence’ happens when conditions that spark interest are created or coalesce and when supports and processes are in place so that emergence itself is ignited and nurtured. For emergence to be deliberately fostered, a generative ‘space’ can be developed with the conditions enabling thoughts to flow, information to be exchanged, ideas to be explored and creativity to be supported. In this environment emergence can have a contagious effect spreading from multiple points of origin in multiple directions, becoming more robust and generative, catalysing creative expressions of the philosophy of restorative living. It can build on itself, underpinned by previous generations who have committed to long periods of development and of struggle while embracing a wide variety of different causes together forming the Cultural Creatives movement.

The philosophy of living sustainably brings with it the awareness of the inextricable connection between the social and the environmental. The practice of siloing the environment and environmentalism only serves to enable those wishing to diffuse the importance of environmental sustainability providing the wriggle room necessary to avoid the full implications, accountabilities and responsibilities.

---

Wider holistic solutions naturally fall out of the work of restoring a safe climate and have to be addressed. They are in fact necessary for the long-term successful implementation of the central solutions. At the same time there are valid warnings about the dismissive response when there is a perception that other issues are piggy-backing onto climate change. Naomi Klein's coupling of climate change and capitalism in "This Changes Everything" received a lot of criticism mostly from conservatives. Although it can be viewed as being merely opportunistic it can also be seen as integrally related. The impact on the planet stemming from the way capitalism has come to be expressed in the current neo-conservative ideological models is obviously far from a piggy-back.

# APPENDIX 6



# SOUTH AFRICA'S CAMPAIGN STREAMS

## Appendix 6

### South Africa's combination of campaign streams

Janet Cherry, one of South Africa's foremost white activists, helped Luke Taylor identify four main streams in the South African campaign that led to change.

"She's always been quite modest in her analysis of the civil disobedience campaign and its role in creating regime change and agnostic to a degree on what the major factors outside the civil disobedience campaign were. One of them was the militant struggle that was going on.

MK—'Spear of the Nation'—was a militant campaign that, from what Janet tells me, was really dysfunctional and badly organised. They were training at one stage in Botswana or Namibia and maybe even Zimbabwe. They came across the border. They made some really bad mistakes. They shifted the campaign from more militant to more sabotage rather than out and out armed conflict. It moved more to the cherry picking sabotage from some of the original ideas. Janet doesn't underestimate or discount that this had an influence. She says she thinks it did."

Another major factor that then grew out of the violence rising either through the MK work or just frustrations coming out through townships, particularly through fit young people, was the rise of the UDF. People were just sick of the violence. "We need to get our sh\*t organised. We need to get a non-violent civil disobedience campaign up and running so that people can key themselves into something that's going to be useful and we're going to stop burying people". That was their aim.

As well as the militant civil resistance campaign, the UDF, internal political pressure was happening through the ANC. They were still trying through political means, even though that was incredibly difficult. The ANC was a banned body, not recognized, not on the radar at all. Anyone who stood up and declared them-self ANC would be put into gaol or wiped out. It was incredibly difficult but it was there and was playing behind the scenes.

And then the other thing that a lot of people say was the key thing was the international campaign that Australia was involved in to possibly quite a large degree. Certainly according to Prime Minister at the time, Bob Hawke, who was quite proud of what he did there and believed we were involved in a leading capacity. Also important was the former president of South Africa, Mbeki, who was exiled in the UK, and worked overtime on the international stuff. Obviously there was also a big campaign in the United States and various different countries and sanctions and all sorts of things. The international influence was huge and an important campaign stream.



“So it’s interesting for us to look at that. As Janet said, she thinks that all those things really played into what created the change in the end.”

There was a number of international social justice NGOs that took up the kind of generic campaign to Free Nelson Mandela. That was the lead, as we probably remember at the time. The key message that was being communicated was linked in to the end of apartheid. It became the face of the campaign, it was what everybody wanted to do and he was the symbol for getting regime change. As we remember the sequence of events, they released Nelson Mandela first and then they took the ban off the ANC and then Mandela stood for the Presidency and they went to the polls and the rest is history. A lot of people obviously think that apartheid still exists; it’s just economic apartheid rather than the social apartheid.

# APPENDIX 7

---

## BZE'S 'SECRETS TO SUCCESS'

## **Appendix 7**

### **'secrets to success'**

With the help of some of the others involved Philip had a go at analysing the secret to BZE's success and generated a list.

1. Being goal driven and sharing the goals and strategy with the whole organisation
2. Having a very energetic "can do" culture
3. Focusing on very concrete practical questions; working flatout to not sound waffly
4. Being prepared to work on what will actually solve the climate crisis (restore a safe climate) by working for changes at the needed scale and speed, without compromising on the basics
5. Building in lots of expertise
6. Getting out and spreading the message and recruiting actively all the time
7. Combining the open source software mode of involving large numbers of skilled and passionate people BUT holding it all together by having quite tight control over some of the core strategy and key tactical ideas (but doing the control in the open rather than through manipulation)
8. Building and building and building the organisation and its capability - both steadily and being able to take big leaps when the opportunity presents
9. Recognising that to make a radical thing happen in full you need support from conservatives as well (without watering down the goal) - and that the support of conservatives is often won by being technically competent and solving problems rather than compromising on goals
10. Audaciously and opportunistically making alliances with unlikely partners (many apparently conservative, some apparently radical) without allowing the alliances to result in a watering down of BZE's goals or key strategies
11. Being tenacious and not taking 'no' for an answer
12. Having a mix of people in the organisation and having people who are friends of BZE who help the organisation hold all these strategies together and that help it course-correct before any mistakes become too damaging
13. Being a learning organisation - by sharing what has been learned with the whole team (e.g. using the team email lists)

---

Les Robinson [Enabling Change] contributed another list from the process and discussions in the BZE analysis. He says that change spreads when:

1. The buzz is positive (i.e. the new behaviour is being talked about positively in social networks)
2. It answers desires (i.e. the behaviour is a way for people to act on their frustrated hopes aka live their values)
3. You build people's self-efficacy or confidence in their own ability to act (often the best way to do this is by building an enabling environment)
4. People are invited to act by trusted peers
5. Trial leads to satisfaction i.e. the new behaviour actually generates results that are satisfying, even if the satisfactions weren't the ones they originally hoped for

Of course this could be applied to staff motivation in a conventional organisational context:

- IF the staff and supporters are having positive, enabling conversations; and
- IF the organisation's work is a way for staff and supporters to live their values; and
- IF people are learning all the time, have good role models, and not given tasks that overwhelm them; and
- IF they are invited to act by people they trust; and
- IF the organisation has an adequate supply of wins,
- THEN staff and supporters will be highly motivated.

# APPENDIX 8



# ENGAGING THE RIGHT

## Appendix 8

### What conservatives care about, working through self-blocking, engaging the right – ‘Ah I get it’.

When the world view you construct is universalist involving a love and care for everyone and everything, seeing the world at risk will alarm you. Twenty million species and seven billion people under threat will fill you with passion and make your heart bleed.

When your world view is not constructed with such universalist ethics you will become incredibly passionate at the point where it affects whatever it is that you are concerned about – your family, your kids, your ethnic group, your neighbourhood, your nation, the ‘race’, whatever turns you on. Your caring could be in the context of your religion, your belief system, your relationship to god or to deities or ancestors, or to whatever it is that you venerate. Whatever way you construct it, if you can see that this issue relates to what you deeply care about then, even if you’ve got a fairly narrow frame of caring, the minute the connection is made there’s no reason why you should be any more watered down than anybody else.

A focus on an imminent economic crash is also a compelling magnet for many people who, up to now, haven’t found the threat that’s relevant to them, at least not to the extent that they feel passionate about it enough to become active. Intellectually they may be very concerned about the ice melting and aspects of dangerous climate change but when the talk is about their superannuation going overnight or the next big recession or depression that is when they’re suddenly wide awake.

Philip thinks the problem is that the people on the right have not been really listening and have been blocking off. “*But*”, he says, “*the question is ‘are there people from the right who naturally have a bit of credibility?’ The sort of people they would expect to take leadership from?*” Engaging the right requires going across the road, so to speak, to meet people and talk to everybody well enough in order to find out what, if anything, has really turned them on that’s going to get their passionate engagement; saying ‘*they’re ready on that side when you’re ready on this side*’. There is apprehension that the conversation really only cherry picks the one or two things that really fires their minds, something like economic seizure for example, and that the opportunity to explore more deeply is missed and the effort wasted. There are no guarantees that there’s going to be even a listener there much less an actor come out of it but Philip’s response to that is “*So support them; equip them.*”

Philip says, “*There is a good chance that they won't believe in the same things that are catalyzing the climate change activists and the safe climate restoration proponents so the task is: that – whatever the issues are you end up talking about – food security or military security or financial security or stability, viability, competitiveness, any of the things – our job is to be able to link it back to the issues of climate change, stability, whatever, so that they can say, ‘Ah! I get it’.*”

Conservatives will almost certainly have to hear the climate emergency message from people in whom they can put faith into, who have credibility for them. But, if the question is what is our role as people who are concerned about the climate and sustainability issues the answer is – to provide the access. What is needed is for the people who would be influential with the right wingers to communicate with those people to help them see the connection between their concerns and global warming / climate change / sustainability. When that happens we can expect it to take off.

But should it be left to the right-wing to solve? Philip doesn't think so “*because one of the other things that's happened is that, having denied environmentalism for so many years, a lot of people from the right have to save face over the issue and one way to save face is to rub the face of the greens into something. So in other words they'll almost want to cause pain to some of the greens. For example, there was a right-wing environmental group that formed to be basically a kind of a climate change focused conservative party but, over the course of a couple of years, they actually evolved until they changed their name to be the pro-nuclear party. That they could all get together and feel very conservative and then differentiate themselves tribally from these other greens by this critical marker of being pro-nuclear was really instructive.*”

As a society we are collectively going to have to have the capacity for good common sense and robust thinking and to not need to be in a sort of antagonistic sparring match for the sake of it. The argument about national security, for example, basically brings the people from the right and the left who can understand the security issue together to a bi-partisan position. They then deliberately focus attention on the things that it is possible to differentiate around. Hence the arrival of Luke Taylor's film, ‘Home Front’.

Although the two concepts are highly related, the green economy is bigger than just arguing for green jobs. We are talking about a paradigm shift in terms of these economies.



# APPENDIX 9

---

## FRANK FISHER ON 'URGENCY'

## Appendix 9

### Frank Fisher on 'Urgency'

Frank Fisher, friend and mentor, explained to me his problem with urgency. Not that he didn't see and feel the urgency regarding climate change. It was more that he was concerned that those of us, the tiny group in the so-called 'developed' world (much less in the whole 'developing' world), we, who think in terms of planetary vulnerability and the need to do something about it, hold the right attitude of humility and commitment. We have to stand in our integrity holding a conscious awareness moment to moment and speak our truth. My voice has no more right, in a democracy, to be out there, being strident, but it does have a right and it has to be there.

Understanding humility took me to the origins of the word and, there it was again, that Latin root '*humus*' meaning 'ground'. The humility Frank was describing to me, not "junk humility", he clarified, would be found in a person standing for what she believes in for as long as it takes, for as long as there's life left in her to stand her humble ground. It was in this context we mulled over the concept of humans, of society and the question around the idea of the human condition to be 'improved'. This was a recent notion in the history of humans, one that Frank believed rose from the business of urgency. There were probably only a handful of people on the planet thinking along these lines he said. Without careful consideration, this idea of improvability can lead to manipulating and controlling knowledge and *imposing* something on others rather *than letting them come to a conclusion themselves*.

We decided to tackle what had been a sticking point between us. Frank was of the belief that we just have to live with the incapacity to change ourselves fast. I have a problem with the idea of giving up on the need for rapid transformative change and for letting people figure it out for themselves. On the one hand time is short and vested interests and neo cons are manipulating and controlling knowledge to steer people *away* from those realisations; as well a range of other reasons stopping otherwise rational people for taking rational actions. On the other hand, that we have examples of the human capability to do this when we need to, is accepted. This is in a context (global warming) where the lag factor means that although people will no doubt act appropriately when the reality hits, the problem is the reality will hit when it is too late to turn things around. The lag factor is known by only so few, those that do know must speak out about it. And I believe, in all humility, and here I apologise to those who feel I intrude upon them and impose my views, that we have to brave this one, if for no other reason than to be a voice for all those impacted who can't speak; the voiceless, the children, future generations and the whole sentient world.

---

Frank worried that the modern concept of improve-ability lacks genuine humility. Exploring this we came to agree that struggling to achieve things being ‘less bad’ than otherwise (imagine if that struggle didn’t occur at all) and improving things through that struggle does not mean forcing the ‘less bad’ upon people. Not with brute force which is what Frank was worried about, “at the point of a gun, or even more subtle ways through the kind of coercion where parents force children or as men have done to women, the wealthy to the poor; as still happens” he said. The struggle to ‘improve people’ and make things less bad is not through manipulation, coercion, deceit or duplicity. It is about standing on the ground in integrity, holding hope and strongly stating the case saying in courage and all humility: ‘This is what I believe.’

In a context of urgency it is not enough to incrementally evolve to a higher level of enlightenment although that has been the pattern for we humans, patchy but consistent over time. Given time we might get there, wherever there is, but we are faced with the challenge, right now, to step-up and fast track our growing up. Many believe we are capable of doing this and I activate myself in the hope that we are. Fast-tracking the cultivation and development of our culture requires education and training to improve our practices and for our collective betterment.

# APPENDIX 10

---

**CHRIS  
JORDAN'S  
ART DEPICTS  
HUGE  
STATISTICS**

## Appendix 10

### Chris Jordan's art depicts huge statistics

The process is based on repetition. The artist scales the same camera on a tripod and makes changes using the same piece being photographed (e.g. a plastic bag). They then use Photo-Shop which makes it very easy to make variants in colour and tone—darker, lighter and different colours which can all be organised into a palette in a folder. Then a grid is laid and from there, says Chris, “it’s mostly just tedium”.

To see just how effective his work is it is a worthwhile experience to go to his website and look at how they speak to the scale of consumerism and some of the consequences. His pieces on mobile phones, brown paper bags, plastic bottles, cups, can, pesticides and Americans in gaol are impressive.

Chris Jordan's works include (include links):

**MOBILE PHONES** - A 2 x 3 metres print in vivid detail of a picture of thousands of stars in a swirling galaxy made up of 426,000 cell phones representing the number consumed (shredded) in the US every day. “A drop in the river.”

**AMERICANS IN GAOL IN THE USA** - Six 10 x 23 feet (3 x 7 metres) panels depicting the 2.3 million Americans incarcerated in 2005. The US has the largest prison population of any country in the world.

**BROWN PAPER SUPERMARKET BAGS** - A forest of tree trunks comprising the 1.14 million brown paper supermarket bags that Americans use in one hour (and also pointing to the consequences of the contents with their abundance of plastic packaging too).

**PLASTIC CUPS** - Plastic cups photographically ‘stitched’ together into long tubes, bent in angles and made to look like a chemical factory representing the 1 million plastic cups used in US airline flights alone every six hours.

**PLASTIC BOTTLES** - 2 million plastic bottles—enough to cover 8 football fields—equalling 5 minutes of consumption in US (and per capita consumption in Australia is about the same) was made to look like an ocean. 2.4 million pounds of ocean plastic per hour painted into an image of Hokusai’s “The Wave”.

**ALUMINIUM CANS** - 106,000 aluminium pop soda soft drink cans ... 30 seconds of can consumption in the US.

**PLASTIC BAGS** - A huge print of Botticelli's Venus, 8 feet (2.5 meters) x 13 feet (4 metres), comprising 240,000 plastic bags representing 10 seconds of global plastic bag consumption. Venus is the goddess of love, of Earthly love – love of mother earth. Born from the sea as a fully-grown woman, the Ocean is her mother. Chris made one change to Botticelli's picture. He filled one plastic bag with water and placed a tear of sadness in her eye.

**PESTICIDES BEES** - Depicts 213,000 bees, equal to the number of pounds of toxic chemical pesticides applied to plants and soils around the world every 20 minutes. Over 1 billion pounds of pesticides are introduced into the environment in the US each year, and approximately 5.6 billion pounds are used worldwide.

**SILENT SPRING** - Depicts 183,000 birds, equal to the estimated number of birds that die in the United States every day from exposure to agricultural pesticides.

**CARBON** - 2018 8 x 15 feet in four panels (each 40" x 96") Depicts 2,400,000 pieces of coal, equal to the number of pounds of carbon dioxide being emitted into the Earth's atmosphere every second by the human burning of fossil fuels.

His work is interactive and dynamic slowly taking the viewer into and out of the inner detail of the piece. Being digital Chris can make the work zoom in and out as a way of showing the relationship between the individual and the collective. "You can stand back and see the collective impact and then zoom in close to see the individual's impact".

**E PLURIBUS UNUM** - Chris collaborated with Paul Hawken producing from this piece so beautifully representing a mandala of the mind-boggling number of civil society organisations working to make the world a better place. Hawken believes there could be two million organisations. My experience of this gorgeous piece was one of wonder and immense gratitude. I could *see* what it was that I felt part of. I could almost see the names of my own organisations in there. It was gratifying and continues to be extremely reassuring.

# APPENDIX 11



# THE PORTLAND CLIMATE COALITION



## Appendix 11

### The Portland Climate Coalition

Candid exploration with activists from the Portland, Oregon -based Climate Coalition (2015) talking of their sometimes heart-breaking challenges gave rise to this topic, *Under Siege*, and the 15 strategies that fell out of it.

#### UNDER SIEGE

Ask Google where all the fossil fuel projects are happening in Australia and scroll through the many maps. The picture is complicated but clearly overwhelming. If those set on turning the money interests away from coal, oil, gas, lignite, uranium, tar sands, etcetera towards solar, wind, wave, tide, geo-thermal and so on are feeling besieged it is no wonder. The word ‘overwhelm’ is unhelpful to me in this context. It feels like it leads to an insurmountable barrier, an overwhelming obstacle—one I’ve met before. It feels heavy and enervating. Being besieged on all sides is a dire predicament which is a fair enough description of how things are but sieges can end and the besieged can save themselves by various means, fair and foul, without surrendering. Thoughts of the French Underground come to mind.

The activists I met with in Portland, Oregon were under pressure with twenty-eight projects in the states of Washington and Oregon alone that were happening or proposed “*coming into us right now into the Pacific North West*”. These were all fossil fuels to be shipped to Asia coming primarily from the tar sands Canada but also from areas of drilling for oil and fracking for gas which is very explosive with a lot of propane and butane in it. People were rightly very concerned about trains derailing and exploding. Forty-seven people were killed this way and the town of Lac-Mégantic in Quebec was destroyed. Heavy trains, inadequate tracks, highly explosive cargo. ...

When meeting with the Climate Coalition in June. That year they were talking about the Dakota Pipeline that has since become world famous as an example of the state using armed force in support of large multi-national corporate interests and against its own citizens at Standing Rock. They spoke of the plan to build a two hundred and thirty-two mile pipeline through the entire state of Oregon to move natural gas to an export terminal on the coast at Coos Bay. The unions, the media and local business interests were applying a lot of pressure for it to go ahead but, in December 2016, the Federal Energy Regulatory Commission finally rejected the terminal proposed in 2004. The Canadian company Veresen said it wasn’t giving up and in January, post election, a handful of Congressmen and women were urging the Trump administration to give it a second look. The fracking fields are in Utah so its not surprising that three of the six representatives were from

Utah, also one from Wyoming, one from Arizona and one from Oregon.

I mention this detail because the crisis is global, the consequences are global and yet the people are somewhere local. It is numbers of individuals here, there and elsewhere, making these fateful decisions. By doing so they are refusing to take on board the need for a responsibility of far greater priority than the value of the company shares and a handful of jobs. In this case the people are Mia Love, Jason Chaffetz and Chris Stewart of Utah, Liz Cheney of Wyoming, Paul Gosar of Arizona and Kurt Schrader of Oregon.

Coos Bay is to be the biggest LNG terminal on the West Coast but in 2019 spending has been slashed while permits were still being sought and, coincidentally LNG prices in Asia have plummeted. Oregon also had the biggest proposed coal export terminal in North America. It was happening there because the people of the First Nations and other reasons made it more difficult getting it out of British Columbia and the laws in California and Washington are more stringent which made it much cheaper and easier to come through Oregon. Oregon is one of the most progressive states so they knew they were up for trouble and the Climate Coalition was definitely giving it to them. A report in 2017 in the Statesman Journal indicates their success in stopping this and other large projects.

I first heard the saying “No jobs on a dead planet” in 1999. No truer word said. Except perhaps “You can’t eat money”.

Back then in 2015 the activists told me they had just been in touch with some coal activists in Russia. It is hard to imagine how much greater the sense of threat must be in the context of heavy oppression when even talking, much less taking action, is highly risky. I met a Russian coal activist in Paris and also the producer of the movie about Russia’s coal story screened there for the COP21 in the ‘Cost of Coal’ Film Festival. He admitted he was very scared. Bad things happen there. People’s houses are burnt down if they get in the way and refuse to leave. Not that optional housing is offered. It isn’t. The story of the might of the coal corporations against the stand taken by groups of people has consistent threads of courage and tragedy, human life lost and corporations delivering the dollars to their owners. And occasionally of wins and triumphs, of David beating Goliath, as laws and legal precedents slowly catch up with the reality of what’s at stake.

The recent advice given in Australia by the Sydney silk, Noel Hutley, putting all company directors on notice that they need to be considering climate change when they make decisions for their shareholders adds legal strength to the arm of the movement. Already court cases are being run in the United States. When we consider how many people are directors it is evident that this has

a broad sweep and will hopefully have a good effect on awareness of responsibilities and start to assist change.

While positive strides are coming through the fossil fuel frenzy continues and the activists and actively concerned citizens, up til now always too few in number, have every reason to feel besieged.

I had gone there to meet these activists to learn how they did their good work. I had actually sought a Churchill Fellowship to go there for that reason a couple of years earlier so was glad to have the opportunity to visit at last. When I said that they laughed and said “And we thought you were going to tell us.”

As the discussion continued various bits of strategy emerged from all of us which combined into a very solid plan. Although Portland has a strong base nevertheless, as everywhere, a few more individuals to help action all the parts would make a big difference.

Strategy headings:

1. BUY TIME
2. MOUNT CASE
3. BUILD HOPE / HOLD OPTIMISM
4. MOBILISE
5. REMOVE BARRIERS
6. ENGAGE CONSERVATIVES
7. SUBVERT MEDIA
8. LINK ACTIVISTS
9. BRING WHAT YOU'VE GOT
10. LINK CONCERNS TO CLIMATE
11. UNDERSTAND COMPLEXITY
12. NOTICE EMERGENCE
13. WIDER CONTEXT
14. REINFORCE STORIES

# APPENDIX 12



**THE**

**TWENTY**

**MILE**

**MARCH**

## Appendix 12

### The Twenty Mile March

The business world has delved deeply into the elements of effective change strategies as businesses try to stay ahead of the competition and Philip Sutton has widely explored such strategies. As a change strategy designed to build momentum he offers the Twenty Mile March from Geoffrey Moore's Great By Choice as a high value concept to put in place the specific conditions needed to bring about a desired outcome.

Philip recommends each business, organisation or movement work out a strong set of Twenty Mile March criteria and principles to provide the Twenty Mile March discipline for its endeavour. He notes there is a period of time in the business before this formula is in place. In this case the adoption of the Twenty Mile March modality is in support of the motivation to restore safe climate conditions.

The strategy is to inspire and build a momentum of transformative change at a sufficiently rapid scale and pace. Preparation involves firstly becoming familiar with the concept, process and strategy of "The 20 Mile March" technique and then inventing a plan. The plan includes developing a formula and set criteria and establishing principles to support the exploration, invention and high performance capability. Philip says, "Given that this experimental / ramping up first stage is at the start, it is what delivers the Twenty Mile March paradigm and must be done properly." Once the plan is reasonably well established, the different organisations just get on with doing it in their many different ways.

He says the Twenty Mile March could be applied to three sorts of projects.

1. Projects which you anticipate just doing and rolling out over and over. Some of them would fit the Twenty Mile March approach because they're actually genuinely achieving what you really want to achieve and bringing it back to the transformative change idea.
2. Projects that might be well done, well executed and involving lots of people but at the end of the day they just don't create the paradigm shift. Transformative change needs to be defined, the desired outcomes identified, the initiatives that constitute the Twenty Mile March planned and implemented in order to achieve a breakthrough.
3. Projects that might appear to be trivial and, by themselves, unlikely to make the change, may be door openers if this activity enables a person to go from state 'A' to state 'B' where in state 'B' they're actually prepared to take on the big change. Some door openers might hit the button for a person enabling them to see a different way.

# APPENDIX 13



ON

GEO

ENGINEERING

## Appendix 13

### On Geo Engineering

#### Five voices: Hunt, Caldiera, Monbiot, UK Government & Harvard University

##### 1. Dr Hugh Hunt

*The Conversation, November 19, 2015*

#### **Blocking out the sun wont fix climate change but it could save us some time**

Could we directly engineer the climate and refreeze the poles? The answer is probably yes, and it could be a cheap thing to achieve – maybe costing only a few billion dollars a year. But doing this – or even just talking about it – is controversial.

Some have suggested there is a good business case to be made. We could carefully engineer the climate for a few decades while we work out how to reduce our dependency on carbon, and by taking our time we can protect the global economy and avoid financial crises. I don't believe this argument for a minute, but you can see it's a tempting prospect.

#### Reflecting the sun

One option might be to reflect some of the sun's energy back into space. This is known as Solar Radiation Management (SRM), and it is the most viable climate engineering technology explored so far.

For instance we could spray sea water up out of the oceans to seed clouds and create more "whiteness", which we know is a good way to reflect the heat of the sun. Others have proposed schemes to put mirrors in space, carefully located at the point between the sun and the Earth where gravity forces balance. These mirrors could reflect, say, 2% of the sun's rays harmlessly into space, but the price tag puts them out of reach.

Perhaps a more immediate prospect for cooling the planet is to spray tiny particles high up into the stratosphere, at around 20km altitude – this is twice as high as normal commercial planes fly. To maximise reflectivity these particles would need to be around 0.5 micrometres across, like the finest of dust.

We know from large volcanic eruptions that particles injected at high altitude cool the planet.



The 1991 eruption of Mount Pinatubo in the Philippines is the best recent example. It is estimated that more than 10m tonnes of sulphur dioxide were propelled into the high atmosphere and it quickly formed tiny droplets of sulphuric acid (yes, the same stuff found in acid rain) which reflected sunlight and caused global cooling. For about a year after Pinatubo the Earth cooled by around 0.4°C and then temperatures reverted to normal.

I was involved recently in the SPICE project (Stratospheric Particle Injection for Climate Engineering) and we looked at the possibility of injecting all sorts of particles, including titanium dioxide, which is also used as the pigment in most paints and is the active ingredient in sun lotion.

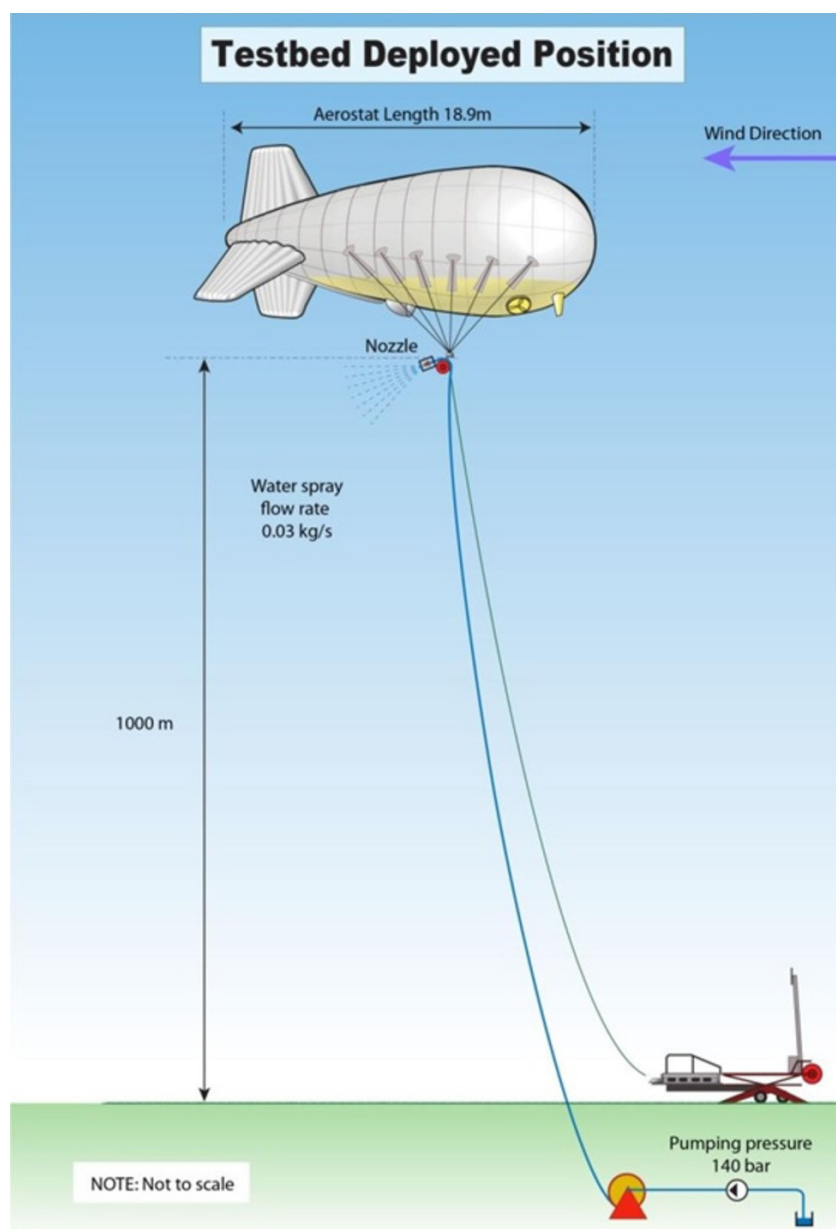


Fig. 57 *Testbed Deployed Position*. Diagram. Hugh Hunt. 2015

The experiment to validate models of tether dynamics was cancelled. Hugh Hunt, CC BY-SA

The technology to deliver these particles is crazy – we looked at pumping them in slurry up to 20km into the air using a giant hose suspended by a huge helium balloon. A small-scale experiment was cancelled because even it proved too controversial, too hot. Imagine if we demonstrate that this technology can work. Politicians could then claim there was a technical “fix” for climate change so there would be no need to cut emissions after all.

But this isn't a ‘quick fix’

There are so many problems with climate engineering. The main one is that we have only one planet to work with (we have no Planet B) and if we screw this one up then what do we do? Say “sorry” I guess. But we're already screwing it up by burning more than 10 billion tonnes of fossil fuels a year. We have to stop this carbon madness immediately.

Engineering the climate by reflecting sunlight doesn't prevent more CO<sub>2</sub> being pumped into the atmosphere, some of which dissolves in the oceans causing acidification which is a problem for delicate marine ecosystems.

There is therefore a strong imperative to remove the 600 billion tonnes of fossil carbon that we've already puffed into the air in just 250 years. This is known as Carbon Dioxide Removal (CDR).

We must work fast to cut our carbon emissions and at the same time we should explore as many climate engineering options as possible, simultaneously. However while reflecting sunlight may be an idea that buys us some time it is absolutely not a solution for climate change and it is still vital that we cut our emissions – we can't use climate engineering as a get-out clause

<https://theconversation.com/blocking-out-the-sun-wont-fix-climate-change-but-it-could-buy-us-time-50818>

## 2. Ken Caldiera

*The Guardian – Guardian sustainable business Technology and Innovation,  
Thursday 12 February 2015*

### **Geoengineering: it could be a money-making opportunity for business**

If the intelligence community feels it is important to learn more about “climate intervention”, might not the same be true for the business community?”

I ask why the people, the community at large wouldn't also have an important reason to learn more about climate intervention.

“The longer we take to transform our energy system so it no longer uses the sky as a waste dump, the more likely that we will have to rely on climate intervention technologies.”

<https://www.theguardian.com/sustainable-business/2015/feb/11/climate-engineering-money-opportunity-business>

## 3. George Monbiot

*Published on Guardian's website 2nd Sept 2011*

### **The Balloon Debate**

It's atmospheric liposuction: a retrospective fix for planetary over-indulgence. Geo-engineering, which means either sucking carbon dioxide out of the atmosphere or trying to shield the planet from the sun's heat, is an admission of failure, a failure to get to grips with climate change. Is it time to admit defeat and check ourselves into the clinic?

This is not to suggest that we should dismiss all geo-engineering techniques out of hand. But, like liposuction, none of those being proposed are simultaneously safer, cheaper and more effective than addressing the problem at source. This means reducing our greenhouse gases. A good diet and plenty of exercise are better than the knife.

<http://www.monbiot.com/2011/09/02/balloon-debate/>

## 4. The UK government's view on geo-engineering

### UK Geoengineering Position Statement

Covering What is geo-engineering? Research, development and deployment; Greenhouse Gas Removal; Solar Radiation Management; Regulation; and further Reading

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/709819/UK\\_Geoengineering\\_Position\\_Statement\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/709819/UK_Geoengineering_Position_Statement_.pdf)

## 5. Harvard University

Publications include:

### Highlights of the Findings of the U.S. Global Change Research Program Climate Science Special Report

<https://science2017.globalchange.gov/chapter/executive-summary/>

Horton, J B., Reynolds, J L., Buck, J., Callies, D., Schäfer, S., Keith, D., and Rayner, S.

### “Solar Geoengineering and Democracy.”

Global Environmental Politics (2018): 5-24. Publisher's Version abstract + solar\_ geoengineering\_and\_democracy.pdf.pdf

### “A New Tool to Address Climate Change”

Short video, <https://geoengineering.environment.harvard.edu>

<https://geoengineering.environment.harvard.edu/about>

+ events, research projects, publications, how to get involved.

# APPENDIX 14



# THE OATH OF PARIS

## Appendix 14

### The Oath of Paris

#### **CITIZENS OF THE EARTH: LET US CREATE OUR OWN POWER!**

WE, Citizens of the Earth, coming from many countries, cultures and traditions on Earth, gathered in Paris at this historic moment, witnesses of global warming, the degradation of natural resources indispensable to life on Earth, growing inequalities among humans, are committed to the preservation of the conditions for present and future generations to enjoy a dignified life.

Empowered by our wisdoms and cultures, and having mobilized our capacity to launch multiple initiatives around the world to open the path towards the Great Transition, we note with apprehension, despite the remarkable achievement of COP21 which we celebrate, the insufficiency of the process of negotiations under the guidance of the United Nations from 1992 to 2015, to produce an agreement that would be as ambitious, courageous and binding as necessary to avert the most destructive consequences of climate disorder on Humankind and our Planet, long foreseen by scientists, and whose evidence is increasingly undeniable.

It is time to acknowledge that the system of citizens' representation through nation-states only, and through multilateral organizations composed only of nation-states, and the de facto global power of an illegitimate corporate and financial oligarchy, is far from sufficient to preserve and manage the Earth's borderless common goods, such as air, water, oceans, land and forests, upon which the well-being of humans and all forms of life depends.

We must create a new sphere of political action that acknowledges the diversity of peoples but also the People of the Earth as a unity. We must urgently build a global public sphere aimed at the middle- and long-term horizons, capable of taking into account the interests of future generations. In decision-making, we must take into account the planet's scale and a minimum timeline of two generations, or even seven, according to the wisdom of the indigenous peoples of North America.

It is time, therefore, to take a further step in enabling our human family to ensure its common destiny, first by preventing the destruction of the planet that nourishes us. This means launching a constitutional process that, based on the United Nations Universal Declaration of Human Rights, fulfills that declaration by recognizing the rights and responsibilities of each and every human being towards others and towards nature, not only as citizens of nation-states, but also as one People of

the Earth whose destiny strictly depends on the health of this magnificent and fragile planet.

These rights of planetary citizenship cannot continue to be hostage to economic and political institutions that have proved incapable of resisting the power of dominant oligarchies, and that delay the implementation of urgent measures needed to avoid social and ecological disaster. We therefore propose the creation of a citizen's power complementary to nation-states, which takes the responsibility for the future of humankind on Earth. And we commit ourselves to build this power together with all those who share in the urgency of taking sustainable action in the middle and long terms, free from the pressure of oligarchic lobbies.

We pledge to seek together the forms of organization and expression of this citizen's power through further international gatherings of citizens. We will meet again in the Thematic World Social Forum in Porto Alegre, in January 2016, and in the World Social Forum, in Montreal, in August 2016, as well as in all the gatherings of the international network of "Dialogues en humanité" in different locations throughout the world, in order to focus on uniting all peoples in the defense of Life, beginning with our common humanity, and also on building bridges towards the official recognition of this citizen's power by nation-states, the UN and international agencies in order to prevent the influence of lobbies contrary to the pursuit of the human journey on Earth.

Thus, we commit ourselves together, to fulfill this solemn oath:

by dedicating our capacities, creativity, competence and intellectual, emotional, artistic, immaterial and material resources to the immediate acceleration of the Great Transition towards renewable, non-polluting sources of energy, forsaking fossil fuels and destructive modes of production and consumption; and the establishment everywhere, and at all levels, of an equitable, socially just economy that respects life, health, the fostering of human potential, biodiversity, and all terrestrial and marine ecosystems, upon which the survival of humankind depends.

We take this oath, as we leave Paris, not to separate ourselves from each other in heart or spirit; to maintain our ties through all possible means of communication; to gather wherever possible as circumstances allow; to put pressure on all powerful institutions, public or private, corporate and financial, local, national and multilateral, to take responsibility for their actions and policies and their consequences for Life on Earth; to cooperate with networks of fellow citizens in implementing the vital and urgent goals mentioned above; and finally to reinforce our ties of friendship, sisterhood and brotherhood, solidarity and mutual support in order to extend this global network of citizens fully committed to this mission, actors in the emergence of a global civil society, parties to a Global Ecological and Social Contract, warrants of this oath and this commitment, in our name and for the



protection of future generations.

Each and every citizen of the Earth confirms this solemn oath by signature, in Paris and throughout the world.

Paris, December 12, 2015

# APPENDIX 15

---

# KEEPING CLIMATE ACTION ON TRACK

The **Climate Reality Project** was founded by Al Gore in 2006. It produced the info graphic below after the 2015 Paris CoP21.



The **Climate Action Tracker (CAT)** was founded in 2009. It tracks progress towards the Paris Agreement goals of holding warming well below 2°C and pursuing efforts to limit warming to 1.5°C. It is a consortium of Climate Analytics, NewClimate Institute and Ecofys.

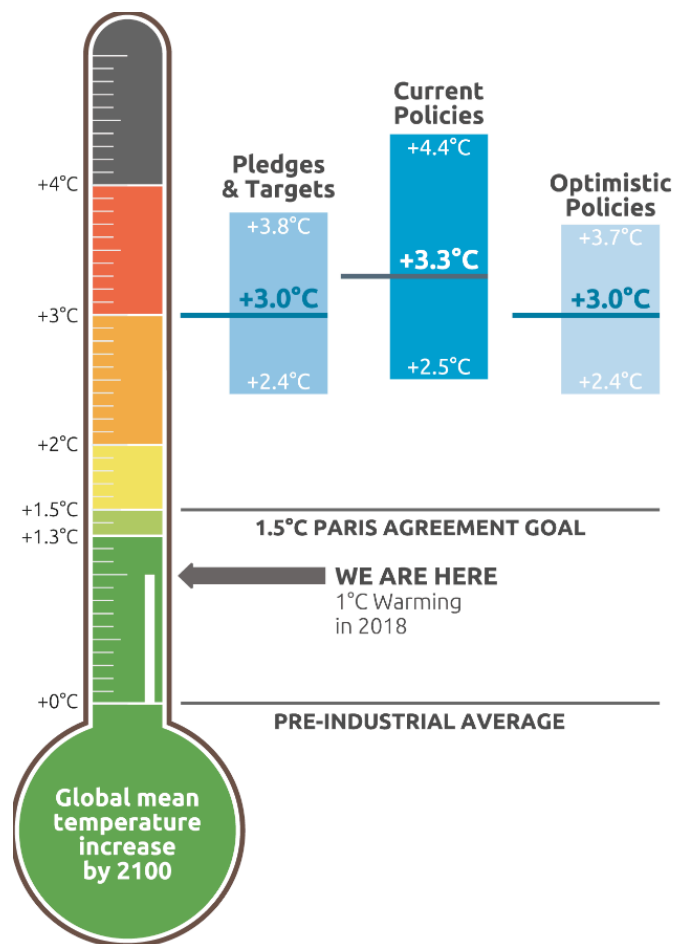


Fig. 59 (Above) *The Climate Action Tracker (CAT) Infographic. 2009*

Fig. 58 (Left) *The Climate Tracker. Infographic. The Climate Reality Project, 2006*

# APPENDIX 16



# SUPER MAJORITY

### Appendix 16

#### Infographic re the concept of the Super Majority

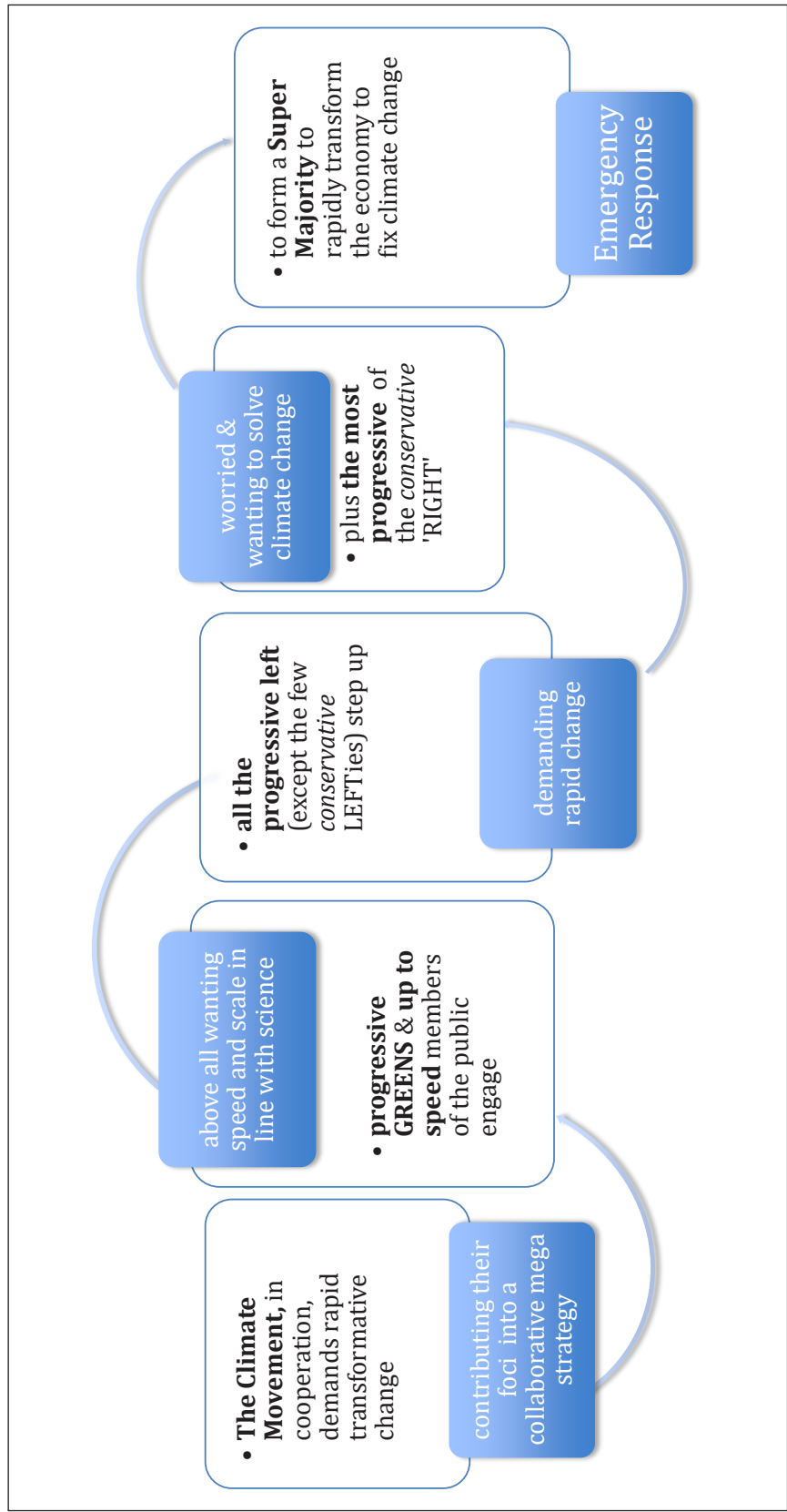


Fig. 60  
 The Concept of  
 Super Majority.  
 Infographic.  
 G Wilkinson, 2018

# APPENDIX 17



# COLLABORATIVE MEGA STRATEGY

## Appendix 17

### Collaborative Mega Strategy

How an organisation becomes climate-restoration-ready by

- campaigning more or less *as usual*
- with a slightly or significantly reframed Climate Emergency Response message,
- identifying its part in the Movement
- and promoting Solutions consistent with the Climate Emergency

This info graphic is about other organisations stepping in to the Collaborative Mega Strategy becoming Climate Restoration Ready and able to bring their focus and collaborate.

"Becoming Climate Restoration Ready"

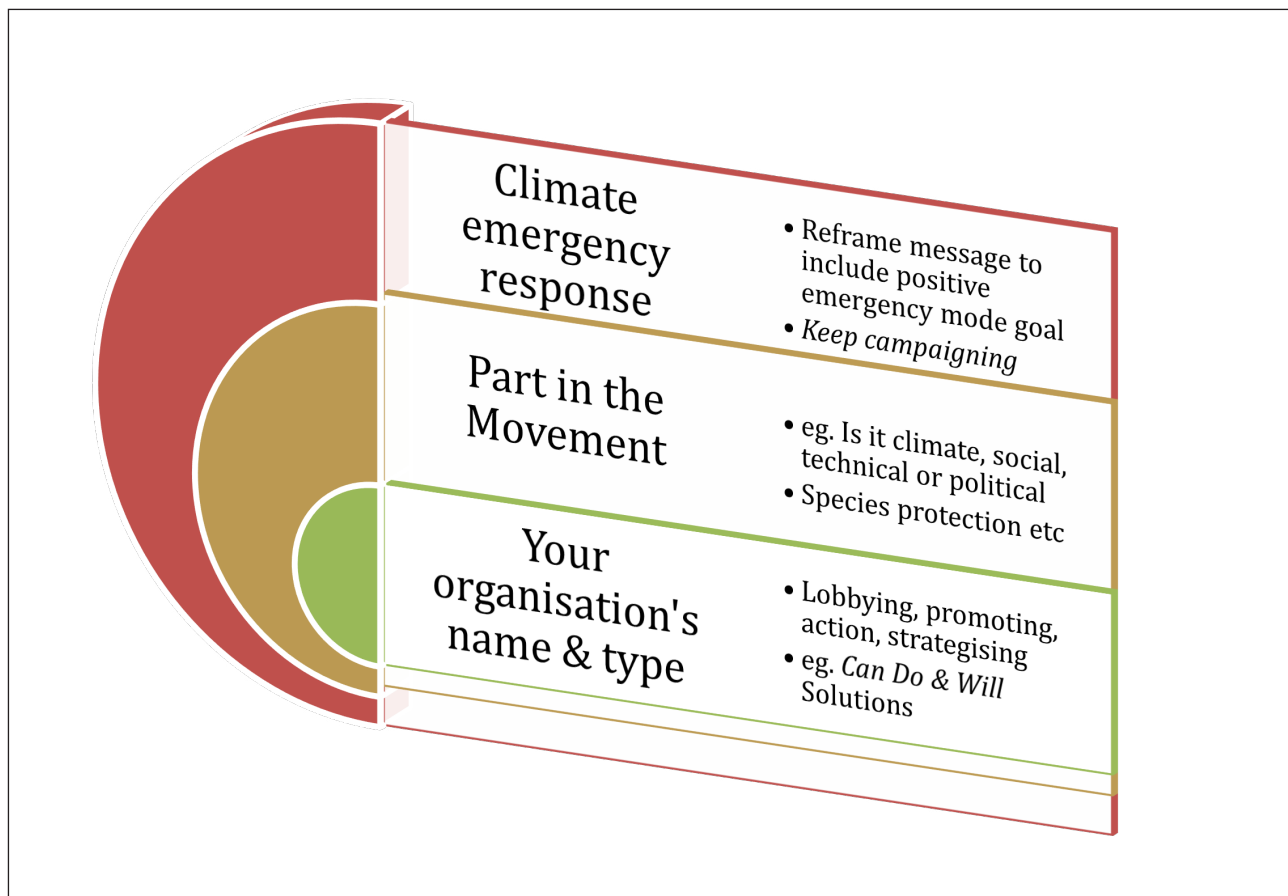


Fig. 61 *Collaborative Mega Strategy*. Infographic. G Wilkinson, 2018



# APPENDIX 18

---

## NATIONAL CLIMATE EMERGENCY SUMMIT 2020

## Appendix 18

### Collaborative Mega Strategy

#### A CALL FOR AUSTRALIA

### THE SAFE CLIMATE DECLARATION

INITIATED AT THE NATIONAL CLIMATE EMERGENCY SUMMIT 2020

This Declaration calls for a new approach to climate action in Australia, a response to match the scale of the threat as climate-warming impacts escalate across Australia and around the world.

#### CLIMATE IMPACT

Australia's 2019-20 megafires are a harbinger of life and death on a hotter Earth. The climate is already dangerous — in Australia and the Antarctic, in Asia and the Pacific — right around the world. The Earth is unacceptably too hot now.

The impacts of climate disruption are more severe than previously projected. At 1.5°C warming relative to pre-industrial levels, now likely only a decade away, the Great Barrier Reef will be lost, sea levels will be heading for a rise of many metres, and tipping points will be at hand for Greenland, and for the Amazon and other carbon stores.

The current Paris Agreement emission reduction commitments, if implemented, are a path to 3.5°C warming by 2100, possibly earlier. This could increase to 4–5°C when long-term climate-system feedbacks are considered. National security analysts warn that 3°C may result in “outright social chaos”, and 4°C is considered incompatible with the maintenance of human civilisation.

Leading scientists warn of a “Hot House Earth” scenario, a planetary threshold that may exist at a temperature rise as low as 2°C, in which further warming becomes self-sustaining. The challenge now is to return to a safe climate by cooling the Earth whilst avoiding tipping points which may initiate further warming.

This requires an emergency response, where climate is a primary concern of leadership at all levels.

#### FAILURE OF LEADERSHIP

Influential global leaders including political, corporate, media and financial leaders have deliberately refused to accept the overwhelming scientific consensus on climate change and its risks, using predatory delay to prolong an unsustainable economic system. Driven by perverse short-term incentives and lacking the imagination to understand the implications, they have placed humanity in extreme jeopardy.

Many of Australia's leaders are particularly culpable, having done everything possible over the last three decades to prevent the development of serious climate change policy, internationally and domestically, and to protect the fossil fuel industry. Notwithstanding the fact that Australia is the world's fourth largest carbon polluter, exports included, and one of the countries most exposed to climate change.

The first duty of a government is to protect the people, their well-being and livelihoods. Instead, Australian governments have left the community largely unprepared for the disasters now unfolding, and for the extensive changes required to maintain a cohesive society as climate change impacts escalate.

### **STRENGTHENING DEMOCRACY**

In framing solutions to the climate emergency, a stronger democracy is needed, not weaker. The rights of citizens need to be protected to ensure that people are treated with respect, and treated fairly.

Climate change and its solutions will have profound implications for Australia – its peoples and its lands and waters. It is therefore critical to achieve and secure truly meaningful processes that empower indigenous voices, leadership and knowledge.

### **ADDRESSING THE CLIMATE THREAT**

Australians collectively have a duty of care to protect people, nature and civilisation, both locally and globally. Calls to contribute to solutions to the climate threat need to be fair, taking account of people's capacity.

Climate change is a global problem requiring unprecedented levels of global cooperation. It obviously cannot be solved by Australian acting alone, but Australia must be fully committed to such cooperation.

Priorities for action include:

- **Cutting greenhouse gas emissions rapidly to zero.** All fossil fuel expansion to be stopped immediately; policies which encourage fossil fuel use halted and subsidies removed; and the existing industry wound down rapidly with adjustment programmes for frontline communities. Strategies to minimise methane emissions need to be implemented urgently.
- **Drawing down** atmospheric carbon concentrations to a safe level from the current 413 ppm level through actions that include redesigning agricultural and forestry practices and implementing extensive soil, estuarine and ocean carbon sequestration.

- **Working to prevent tipping points and damage** while the zero emission and drawdown goals are being achieved.
- **Integrating adaptation and resilience measures** into the economic restructuring needed to restore a safe climate and repair ecosystems.

Early action is essential. The prevalent idea of a gradual transition to net zero emissions by 2050 is not tenable. A far faster transition is required, using measures appropriate to an existential threat.

Climate change must be accepted **as an overriding threat** to national and human security, with the response being the highest priority at national and global levels.

## INITIATING SIGNATORIES

### HEALTH & ADVOCACY

**Kerryn Phelps**

### POLITICS & ECONOMICS

**John Hewson**

### POLITICS & SOCIAL CHANGE

**Peter Garrett**

### SOCIAL CHANGE & RESEARCH

**Carmen Lawrence**

### STRATEGY & BUSINESS

**Ian Dunlop**

### ADVOCACY & SOCIAL JUSTICE

**Tim Costello**

### RISK & POLICY

**Greg Mullins**

It is in Australia's self-interest to demand far greater global action on climate change, and to lead by acting itself. It makes no sense to build our economy on fossil fuel resources, practices and technologies which are unsustainable, particularly when Australia has some of the best clean energy resources and opportunities in the world.

This requires leadership which understands the challenge and the opportunities, and is totally committed to accelerating the emergency transition to a safe climate economy. This will not happen with leaders who do not even accept climate change as a priority.

**The signatories to this Declaration call on all Australians to join with them in building leadership that embraces the need for such emergency action.**

In particular, we will:

- Emphasise the importance of a **non-partisan approach** that embraces people of all political parties and sectors of society who are committed to science-based policies that make climate a first priority of government and of the community;
- Emphasise the value of a **non-partisan government of national unity** on climate;
- **Hold current political leaders to account** if they fail to protect the Australian people;
- Take action to **empower Indigenous voices and leadership**;
- Take action to **strengthen democracy and citizen rights**;
- Give priority to **engaging with the business community** to build understanding of the real nature of the risks and the pace of change required;
- Work to **mobilise and connect all sectors of civil society** to make a powerful contribution;
- Work to **reinvigorate public administration** and governance skilled and willing to drive the political and economic transition;
- Advocate tirelessly in public to **build understanding and community capacity** to drive change;
- Support the formation of a specialist taskforce to set out a **road map for Australia's emergency transition** to restore a safe climate.

# REFERENCES



- AAP. (2007). Mount Alexander Sustainability Group Inc. Zero Net Emissions by 2025.
- ABCNewsOnline. (2009). Fire threat adds to heatwave chaos. ABC News Online.
- Abram, D. (2012). *The spell of the sensuous: Perception and language in a more-than-human world*. New York: Vintage.
- Aidt, M. (2017). Ian Dunlop: Community, institutional and corporate leadership essential.
- Aidt, M. (2018a). Climate Policy Procrastination's 30 Year Anniversary. Retrieved from <http://climatesafety.info/procrastination30years/>.
- Aidt, M. (2018b). Councils respond to the climate emergency. . Retrieved from <http://climatesafety.info/theclimateemergencyplan/>
- Aldhous, C., Bonnier, T., Holyoake, D., & Noor, O. (2016). Report Creative Factory. Forever Swarm. Reported under Creative Commons license CCBYNCND.
- Alinsky, S. D. (1980). *Rules for radicals. A pragmatic primer for realistic radicals*. USA: Vintage.
- Allen, J., & Rumbold, J. E. (2004). Postcard conversations: a dialogue about methodology. (4). *Qualitative Research Journal*, (2)
- Aly, W., & Stephens, S. (2018). Does democracy stand a chance against neo-liberalism? . In W. A. a. S. Stephens (Ed.), *Radio National's The Minefield: ABC*.
- Anderson, K. (2015). Duality in climate science. *Nature Geoscience*, 8, 898-900.
- Argyris, C. (1985). *Strategy, change and defensive routines*. Pitman Publishing.
- Armistead, A., Goodman, H., Spratt, D., & White, S. (2020 Feb). Australian local government climate emergency declarations: A preliminary survey. Paper presented at the National Climate Emergency Summit, Melbourne Town Hall.
- AustralianDemocracy, M. (2018). Australia's Prime Ministers. Gough Whitlam In office. Retrieved from <http://primeministers.naa.gov.au/primeministers/whitlam/in-office.aspx#section1>
- Bakan, J. (2012). *The corporation: The pathological pursuit of profit and power*. UK: Hachette.
- Barker, J. A leader is a person you will follow to a place you wouldn't go to by yourself.
- Barnosky, A. D., Matzke, N., Tomiya, S., Wogan, G. O., Swartz, B., Quental, T. B., . . . Ferrer, E. A. (2011). Has the Earth's sixth mass extinction already arrived? *Nature*, 471(7336)(471(7336)), 51-57 quote on page 56. doi:10.1038/nature09678
- BBC. (2019). Earth's Atmosphere. Retrieved from <http://www.bbc.co.uk/schools/gcsebitesize/science/aqa/earth/earthatmosphererev1.shtml> .Retrieved from <https://www.bbc.com/bitesize/guides/zxy4xfr/revision/1>
- Bird, B. (Writer). (2015). *Tomorrowland*. In D. Lindelof (Producer). Burbank, California, USA: Walt Disney Studios.
- Bochner, A. P. (2000). Criteria against ourselves. *Qualitative inquiry*, 6(2), 266-272.
- Boulet, J. (2018). The 'new naturalists': What humans (and humanists) can learn from them. . *The Australian Humanist*. (129).
- Bows-Larkin, A. (2015). All adrift: aviation, shipping, and climate change policy. *Climate Policy*, 15(6), 681-702. doi:10.1080/14693062.2014.965125
- Bows-Larkin, A. (2015). Climate Change is Happening-Here's How We Adapt. In TED talk. <https://www.ted.com/talks/>: TED.



- Breakthrough. (2014). National Centre for Climate Restoration Retrieved from <https://www.breakthroughonline.org.au/about-1> Retrieved from <https://www.breakthroughonline.org.au/publications>
- Breeze, N. (2018) Climate Restoration is Now Needed! Interview with Sir David King/Interviewer: N. Breeze. Envisionation, UK.
- Brown, L. R. (2006). PLAN B 2.0 Rescuing a Planet Under Stress and a Civilization in Trouble. NY, USA: Earth Policy Institute.
- Brundtland, G., Khalid, M., Agnelli, S., Al-Athel, S., Chidzero, B., Fadika, L., & Singh, M. (1987). Our common future '\Brundtland Report'. Retrieved from Oxford UK: [https://www.are.admin.ch/are/en/home/sustainable-development/international-cooperation/2030agenda/un-\\_milestones-in-sustainable-development/1987--brundtland-report.html](https://www.are.admin.ch/are/en/home/sustainable-development/international-cooperation/2030agenda/un-_milestones-in-sustainable-development/1987--brundtland-report.html)
- Bryson, B., & Matthews, R. (2003). A short history of nearly everything (Vol. 33). NY: Broadway Books.
- Buranyi, S. (2018). The Turn of the Tide. Suddenly the world is united in hating plastic. How did that happen? The Guardian, p. 44.
- Burnham, A., & Anderson, K. (2018). Green Summit Paper presented at the Greater Manchester Green Summit.
- BusinessEnergyIndustrialStrategy. (2018). The UK Government's View on Greenhouse Gas Removal Technologies and Solar Radiation Management ("Geoengineering"). Retrieved from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/709819/UK\\_Geoengineering\\_Position\\_Statement\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/709819/UK_Geoengineering_Position_Statement_.pdf)
- Campbell, K., Gulledge, J., McNeill, J. R., Podesta, J., Ogden, P., Fuerth, L., . . . Mix, D. (2007). The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change. Retrieved from <https://www.csis.org/analysis/age-consequenceshttps://www.cnas.org/>
- Capra, F. (2008). The science of Leonardo: Inside the mind of the great genius of the Renaissance. NY, USA: Anchor.
- Cardilini, P. A., & Sutton, P. (2020). Delivering Maximum Protection: An effective goal for a climate emergency response. Paper presented at the National Climate Emergency Summit, Melbourne Town Hall. [https://52a87f3e-7945-4bb1-abbf-9aa66cd4e93e.filesusr.com/ugd/148cb0\\_4653e474083644efac4b55cc3ae08ddf.pdf](https://52a87f3e-7945-4bb1-abbf-9aa66cd4e93e.filesusr.com/ugd/148cb0_4653e474083644efac4b55cc3ae08ddf.pdf)
- Carrington, D. (2013). Australia adds new colour to temperature maps as heat soars. The Guardian. Retrieved from <https://www.theguardian.com/environment/damian-carrington-blog/2013/jan/08/australia-bush-fires-heatwave-temperature-scale>
- Carrington, D. (2017). Arctic stronghold of world's seeds flooded after permafrost melts. The Guardian. Retrieved from <https://www.theguardian.com/environment/2017/may/19/arctic-stronghold-of-worlds-seeds-flooded-after-permafrost-melts>
- Carrington, D. (2018a). Leaders move past Trump to protect world from climate change. The Guardian. Retrieved from <https://www.theguardian.com/environment/2018/oct/16/leaders-move-past-trump-to-protect-world-from-climate-change>
- Carrington, D. (2018b). Oceans suffocating as huge dead zones quadruple since 1950, scientists warn. The Guardian. Retrieved from <https://www.theguardian.com/environment/2018/jan/04/oceans-suffocating-dead-zones-oxygen-starved>

- Carson, R. (2002). *Silent spring.*: Houghton Mifflin Harcourt published an anniversary edition in 2002.
- Chang, C. (2018). Government urged to face policy ghosts of the past. *News.com.au*. Retrieved from <https://www.news.com.au/technology/environment/climate-change/government-urged-to-face-policy-ghosts-of-the-past/news-story/084bc1b6e1cec0673d499c53cd6f3a16>
- Christoff, P. (2013.). *Four degrees of global warming: Australia in a hot world*. Oxon, UK and NY, USA: Routledge.
- Clark, D. (2012). How long do greenhouse gasses stay in the air? *The Guardian*. Retrieved from <https://www.theguardian.com/environment/2012/jan/16/greenhouse-gases-remain-air>
- Clarke, J., & Corner, A. (2016). *Talking climate: From research to practice in public engagement* . In. UK: Palgrave McMillan imprint.
- Claxton, G. (1998). *Hare brain, tortoise mind – Why Intelligence Increases when you think Less* . . London: Fourth Estate.
- Clugston, R., Calder, W., Corcoran, P. B., Vilela, M., & Roerink, A. (2005). *Teaching sustainability with the Earth Charter*. Frankfurt, Germany, Amsterdam, The Netherlands: Peter Lang KIT publishers, BV.
- Corbyn, Z. (2019). Discrediting science is a political strategy. *The Guardian*.
- Cornell, S. (2019). A scientific story that matters.
- Corner, A., Roberts, O., & Pellisier, A. (2015). How do Young People Engage with Climate Change? Towards more Effective Communication with 18-25 year olds. Retrieved from
- Crane, R. B. (Producer). (2017). *Murundaka Cohousing Community: From I to We (Part 1)*. Retrieved from <https://vimeo.com/209862036>
- Crotty, M. (1996). Phenomenology and nursing research. pps.1–29.
- DarebinCouncil. (2016). *Solar Programs, Solar Savers Program*. In *Darebin Environment and Sustainable Transport: Caring for the Environment*. Darebin, Melbourne, Australia: Darebin City Council.
- DarebinCouncil. (2017). *Darebin Climate Emergency Plan (draft)*. City Sustainability and Strategy. Retrieved from <https://www.yoursaydarebin.com.au/climateaction>
- Davis, C., & Ellis, C. (2008). Autoethnographic Introspection In *Ethnographic Fiction: A Method of Inquiry*. In P. Liamputtong & J. E. Rumbold (Eds.), *Knowing differently: Arts-based and collaborative research methods*. (pp. pps.99-117). NY USA: Nova Science Publishers.
- Day, S., Angus, K., & Zomer, R. (2004). *EcoShout - Climate Emergency Network*. Retrieved from <http://www.ecoshout.org.au/green-environmental-social-justice-active-groups>Retrieved from <http://www.ecoshout.org.au/active-groups/climate-emergency-network>
- De Blas, A. (2009). *Australia's Safe Climate Vision The purpose, work and events of Safe Climate Australia*. . Melbourne: ABC Radio National.
- De Quincey, C. (2000). Intersubjectivity: Exploring consciousness from the second person perspective. *Journal of Transpersonal Psychology*, 32(32).
- DeGrasse Tyson, N., Druyan, A., Braga, B., & Pope, B. (2014). *Cosmos: A spacetime odyssey*. National Geographic Series.

- Denzin, N. K., & Lincoln, Y. S. (2008). Introduction: The discipline and practice of qualitative research. In *Handbook of Qualitative Research* (3rd. ed., pp. pp 1 –33).
- Dick, B. (1982a). *Managing Change*. Paper presented at the Manager and Organisation Development, Noosa Heads, Sunshine Coast, Queensland.
- Dick, B. (1982b). *The management of conflict*. Paper presented at the Manager and Organisational Development, Noosa Heads, Sunshine Coast, Queensland.
- Dick, B. (1991). Educating the change agents. *Studies in Continuing Education*, 13 (2), 139-152.
- Dick, B., & Dalmau, T. (1999). *Values in action: Applying the ideas of Argyris and Schön* (2nd. ed.). Chapter Hill Qld: Interchange Publications.
- Dodgen, D., Donato, D., Kelly, N., Greca, A. L., Morganstein, J., Reser, J., . . . R. Ursano. (2016). The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. . In Ch. 8: Mental Health and Well-Being. (pp. 217–246): U.S. Global Change Research Program, Washington, DC.
- Dunlop, I., & Spratt, D. (2017). *Disaster Alley: Climate Change Conflict & Risk*. In (pp. p. 21). Melbourne, Australia Breakthrough National Centre for Climate Restoration.
- DuPont, Y. R., Jeffery, M. L., Gütschow, J., Rogeli, J., Christoff, P., & Meinhausen, M. (2017). Equitable Mitigation to Achieve the Paris Agreement Goals. *Nature*, 7(1), 38.
- E., G., Rossiter, J., & Simpson, J. (2013). *Sunshine Coast Environment, extraordinary people and places*.
- Ellyard, P. (2013). *Destination 2050: a concepts bank and toolkit for future-makers*. South Yarra, Melbourne: TPNTXT.
- Engler, M. (2013). The Machiavelli of Nonviolence: Gene Sharp and the Battle Against Corporate Rule. *Dissent*, 60 (4), 59-65. Retrieved from <https://www.dissentmagazine.org/issue/fall-2013>
- Escott, A., & Quante, H. (2014). *Bureau of Linguistical Reality - A dictionary for the Future present*. Retrieved from <https://bureauoflinguisticalreality.com>
- Festinger, L. (1962). *A theory of cognitive dissonance* (Vol. 2): Stanford university press.
- Fisher, E., Jones, J., & Von Schomberg, R. (2006). *Implementing the precautionary principle: perspectives and prospects*. In. UK: Edward Elgar Publishing.
- Flannery, T. (2009). Australian bushfires, when two degrees is the difference between life and death. *The Guardian*. Retrieved from <https://www.theguardian.com/environment/2009/feb/10/australia-bush-fires>
- Flannery, T. (2010). *The Weather Makers: The history & future impact of climate change*. Melbourne: The Text Publishing Company.
- Flannery, T. F. (2011). *Here on Earth: An argument for hope*. Melbourne: The Text Publishing Company.
- Franklin, M. A. (2012). Know thyself: Awakening self-referential awareness through art-based research. *Applied Arts and Health*, 3(1), 87-96.
- Frick, W. B. (1990). The symbolic growth experience. A chronicle of heuristic inquiry and a quest for synthesis. *Journal of humanistic psychology*, 30 (1), 64-80.
- Friedman, T. (2013). Without Water, Revolution. *Sunday Review*. Retrieved from <https://www.nytimes.com/2013/05/19/opinion/sunday/friedman-without-water-revolution.html?pagewanted=all>
- Fritze, J. G., Blashki, G. A., Burke, S., & Wiseman, J. (2008). Hope, despair and transformation: climate change and the promotion of mental health and wellbeing. *International journal of mental health systems*, 2(1), 13.
- Gergen, K. J. (2009). *Relational being: Beyond self and community*. Oxford UK: Oxford University Press.

- Gilbert, E. (2016). *Big magic: Creative living beyond fear*. New York, USA: Penguin.
- Gilding, P. (2011). *The great disruption: Why the climate crisis will bring on the end of shopping and the birth of a new world*. USA: Bloomsbury Press.
- Gilding, P. (2018). It's not too late to act on climate change. *The Age*. Retrieved from <https://www.theage.com.au/national/victoria/it-s-not-too-late-to-act-on-climate-change-20180911-p50318.html>
- Giorgio, G. (2014). *Ars Moriendi*. *Qualitative Inquiry Journal*, 20(1), 23-26.
- Goldberg, M., van der Linden, S., Maibach, E., & Leiserowitz, A. (2019). Discussing global warming leads to greater acceptance of climate science. *Proceedings of the National Academy of Scientists of the United States of America (PNAS)*, 116(30), 14804-14805. doi: <https://doi.org/10.1073/pnas.1906589116>
- Goleman, D. (2006). *Social Intelligence – The new science of human relationships*. NY, USA: Hutchinson.
- Groueff, S. (1967). *Manhattan project: the untold story of the making of the atomic bomb*. Boston, USA: Little, Brown and Company, Macmillan.
- Hamilton, C. (2015) *Geoengineering*/Interviewer: N. Breeze. YouTube.
- Hamilton, C., & Kasser, T. (2009). Psychological adaptation to the threats and stresses of a four degree world. *Four degrees and beyond*. Paper presented at the Four Degrees and Beyond, Oxford University.
- Hancock, T. (2016). How albatrosses taught photographer Chris Jordan how to grieve. Retrieved from <http://www.honolulumagazine.com/Honolulu-Magazine/July-2016/How-Albatrosses-Taught-Photographer-Chris-Jordan-How-to-Grieve/>
- Hansen, J., Kharecha, P., Sato, M., Masson-Delmotte, V., Ackerman, F., Beerling, D. J., . . . Rockstrom, J. (2013). Assessing “dangerous climate change”: required reduction of carbon emissions to protect young people, future generations and nature. . In: *PloS one*, 8 (12), e81648.
- Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. In. Durham: Duke University Press.
- Hart, D. (2016). *Climate Guardians in Paris*. Retrieved from <https://www.youtube.com/watch?reload=9&v=WUXcTNH-0V8>
- Hartworth, C., & Hartworth, J. (2005). Keeping families together: maintaining positive relationships between children and parents in prison. A study in the North East of England. . Retrieved from <http://www.barefootresearch.org.uk/about/why-barefoot/>
- Hasham, N. (2018). Marginal federal seats in the firing line over climate change inaction. *Sydney Morning Herald*. Retrieved from <https://www.smh.com.au/politics/federal/marginal-federal-seats-in-the-firing-line-over-climate-change-inaction-20181030-p50cvx.html>
- Hawken, P. (2007). *Blessed Unrest: How the Largest Social Movement in History Is Restoring Grace, Justice, and Beauty to the World*. NY, USA: Penguin Putnam Inc.
- Hawken, P. E. (2017). *Drawdown: The most comprehensive plan ever proposed to reverse global warming*. NY, USA: Penguin Books.
- Hawkins, R., Hunt, C., Holmes, T., & Heweg-Larsen, T. (2008). *Climate safety*. Retrieved from UK: <http://publicinterest.org.uk/download/archive/climatesafety.pdf>.
- Hayes, K., Blashki, G., Wiseman, J., Burke, S., & Reifels, L. (2018). Climate change and mental health: Risks, impacts and priority actions. . In (Vol. 12 (1), , pp. 28. ): *International journal of mental health systems*.
- Heimans, J., & Timms, H. (2018). *New Power*. Aus: Macmillan Publishers.

- Hender, M. (2017). Climate Emergency Declaration and Mobilisation in Action - CEDAMIA. Retrieved from <https://www.cedamia.org/>Retrieved from <https://www.cedamia.org/local-council-action-kit/>
- Henson, D. F. (2013). Wrangling space: The incoherence of a long-distance life. *Qualitative Inquiry journal*, 19(7), 518-522.
- Herbert, F. P. (1965). *Dune*. UK: Republished in 2010 by Hachette.
- Heron, J. (1992). Feeling and personhood: Psychology in another key. In. London, UK: Sage.
- Heron, J., & Reason, P. (1997). A participatory inquiry paradigm. *Qualitative inquiry*, 3((3)), 274-294. .
- Hoegh-Guldberg, O., Jacob, D., Taylor, M., Bindi, M., Brown, S., Camilloni, I., . . . Zhou, G. (2018). Impacts of 1.5°C Global Warming on Natural and Human Systems. Retrieved from <https://www.ipcc.ch/sr15/chapter/chapter-3/executive-summary-chapter-3/>
- Hogan, M. (Writer) & M. Hogan (Director). (2006). *Kanyini*. In M. Hogan (Producer). Australia: Entertainment One.
- Holthaus, E. (2014). Is Water Scarcity Destabilising Iraq? *Future Tense Hot Zone*.
- Holthaus, E. (2017). Ice apocalypse. *Grist Magazine*.
- Hopkins, R. (2009). *The transition handbook: Creating local sustainable communities beyond oil dependency*. Foxhole, Dartington, Totnes, Devon, UK: Green Books Ltd.
- Howard, R., & Grazer, B. (Writers). (1995). *Apollo 13*. In: Imagine Entertainment. A Universal Picture.
- Hunt, H. (2015). Blocking out the Sun wont solve Climate Change but it could Buy us Time. *The Conversation*.
- IndependentAustralia. (2013). Cumulative List of Funding and staffing cuts to services, staff, funding and programs by Campbell Newman LNP Government 2012. Independent Australia. Retrieved from <https://independentaustralia.net/wordpress-opt/wp-content/2013/01/aaaalist-of-cuts-to-public-community-services-jobs-13-01-13.pdf>
- Irvine, J. (2016). Company Directors to Face Penalties for Ignoring Climate Change. *Sydney Morning Herald*, Business section.
- Jacobsen, M. Z., Delucchi, M. A., Bauer, Z. A. F., Goodman, S. C., Chapman, W. E., Cameron, M. A., . . . Yachanin, A. S. (2017). 100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World. *Joule*, (1), 108-121.
- Jacobson, M. Z., Cameron, M. A., Hennessy, E. M., Petkov, I., Meyer, C., Gambhir, T. K., . . . Delucchi, M. A. (2018). 100% clean and renewable Wind, Water, and Sunlight (WWS) all-sector energy roadmaps for 53 towns and cities in North America. *Sustainable Cities and Society*, 42, 22-37.
- Jasonoff, S. (Writer). (2018). A New Tool to address Climate Change, Solar Geoengineering. In Harvard's Solar Geoengineering Research Program's Video. Science and Technology, Harvard University, Cambridge, Massachusetts, USA.
- Jayasimha, B., & R.L., N. (2010). *2010 Change and Knowledge Management* (2nd ed.). India: Excel Books.
- Jeworrek, T. J. (2018). A Stormy Year: Natural catastrophes 2017 Analyses, assessments, positions. In T. J. Jeworrek (Ed.), *Topics Geo, Natural Catastrophes 2017* (pp. p. 1): Munich Re
- Jordan, C. (Writer) & C. a. p. M. Maqueda (Director). (2017). *Albatross: a love story for our time from the heart of the Pacific*. In *The Midway Project*.
- Keith, D. (Writer). (2018). A New Tool to Address Climate Change, Solar Geoengineering. In Harvard's Solar Geoengineering Research Program's Video. Applied Physics and Public Policy, Harvard University, Cambridge, Massachusetts, USA.

- Kilvert, N. (2019 Aug 19). Australia is the world's third largest exporter of CO<sub>2</sub> in fossil fuels, report finds. ABC Science News.
- Kirkwood, J. (2009). Motivational factors in a push-pull theory of entrepreneurship. *Gender in Management: An International Journal*, 24(5), 346. doi:<https://doi.org/10.1108/17542410910968805>
- Klein, J. A. (2008). Two Centuries of Process Safety at DuPont. Retrieved from
- Klein, N. (2014). *This changes everything: Capitalism versus Climate*. NY, US: Simon and Schuster.
- Klein-Salamon, M., & Silk, E. (2014). Climate Mobilisation. Truth based, whole society, emergency speed. In: The Climate Mobilisation TCM website.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Michigan, USA: Prentice-Hall.
- Korten, D. (2006). *The great turning: from empire to earth community*. Sterling, VA: Kumarian Press.
- Kotter, J. (2008) The Importance of Urgency/Interviewer: P. Michelman. Harvard Business Digital Review, Harvard University, USA.
- Kranz, G. (2000). *Failure is not an option: Mission control from Mercury to Apollo 13 and beyond*. NY, USA: Simon and Schuster.
- Lakoff, G. (2004). *Don't think of an elephant!: Know your values and frame the debate*. North Carlton, Australia: Scribe publications.
- Lambert, C. (2018). Growth Within: The EU Circular Economy vision, re-designing the future. In. Public event presented by Australian – German Climate and Energy College, Melbourne University.
- Loughnan, M., Tapper, N., Phan, T., Lynch, K., & McInnes., J. (2013 ). A spatial vulnerability analysis of urban populations during extreme heat events in Australian capital cities. Retrieved from Gold Coast
- Lovelock, J. E., & Margulis, L. (1974). Atmospheric homeostasis by and for the biosphere: the Gaia hypothesis. *Tellus - Institute for a Great Transition*, 26(1-2), 2-10.
- Luft, J., & Ingham, H. (1955). *The Johari window, a graphic model of interpersonal awareness*. University of California, Los Angeles UCLA USA.
- Lynas, M. (2008). *Six degrees: Our future on a hotter planet*. London National Geographic Books.
- Machiavelli, N. (16th century). *The Prince*: Published 1992 by Dover Publications.
- Macy, J., & Johnstone, C. (2012). *Active hope: How to face the mess we're in without going crazy*. California U.S.: New World Library.
- Marcuse, H. (1965). *Repressive Tolerance* In *A Critique of pure tolerance* by Wolff, Barrington Moore & Marcuse. NY USA: Beacon Press.
- Marshall, G. (2014). *Don't even think about it: why our brains are wired to ignore climate change*. USA: Bloomsbury.
- Marshall, G., & Corner, A. (2015). *Starting a new Conversation on Climate Change with the European Centre Right.A Practical Toolkit*.
- Maslow, A. H., & Wirth, A. G. (1966). *The psychology of science – a reconnaissance*. NY USA: Harper and Row.
- McGrail, S. (2007). Urgency turns into emergency. *The AGE*. Retrieved from <https://www.theage.com.au/business/urgency-turns-into-emergency-20070219-ge496f.html>
- McKibben, B. (2010). *Eaarth: Making a life on a tough new planet*. Carlton Australia: Black Inc.
- McMahon, N. (2013, February 10). *The Share Market*. Sydney Morning Herald. Retrieved from <https://www.smh.com.au/national/the-share-market-20130209-2e5rt.html>



- McNiff, S. (2012). Introduction : Opportunities and challenges in art-based research. *Journal of Applied Arts & Health*, 3(1), 5-12.
- McNiff, S. (2013). Introduction: A critical focus on art-based research. *Journal of Applied Arts and Health*, 4(1), 5-12.
- Meadows, D. H., Meadows, D. L., Randers, J., & Behrens 111, W. (1972). *The Limits to Growth*. USA: Potomac Associates - Universe Books.
- Metzinger, T. (2009). *The ego tunnel: The science of the mind and the myth of the self*. NY USA: Basic Books.
- Milman, O. (2014). Emissions Go Down, Jobs Go Up Under ‘Polluter Pays’ Carbon Tax. *The Guardian*. Retrieved from <https://www.theguardian.com/environment/2014/dec/24/australia-records-biggest-emissions-drop-in-a-decade-as-carbon-tax-kicks-in/>
- Mitchell, K., Carlisle, S., Butcher, D., Eade, R., Edwards, P., Elliott, M., . . . McEwan, P. (2017). *Common Issues Panel Report - Section 7 Social Impacts – Other Housing Options 7.6 and Findings 7.7* Retrieved from [https://www.planning.vic.gov.au/\\_\\_data/assets/pdf\\_file/0017/121805/SHRSAC-Common-Issues-Report.pdf](https://www.planning.vic.gov.au/__data/assets/pdf_file/0017/121805/SHRSAC-Common-Issues-Report.pdf)
- Monbiot, G. (2011). *Balloon Debate*. George Monbiot website.
- Monbiot, G. (2016). *How did we get into this mess?: politics, equality, nature*. London and New York: Verso.
- Monbiot, G., & Marshall, G. (2015) *Climate Change with George Monbiot and George Marshall/Interviewer: G. Monbiot*. *The Guardian Live*.
- Moor, G. (1991). *Crossing the chasm, marketing and selling disruptive products to mainstream customers*. USA: Harper Business.
- Morton, J. (2018). *Don’t Mention the Emergency- making the case for Emergency Climate Action* In. Melbourne Australia: Darebin Climate Action Network.
- Morton, T. (2016). *Dark ecology: For a logic of future coexistence* . Columbia University Press.
- Morton, T. (2017). *Humankind: Solidarity with Nonhuman People*: Verso.
- Moustakas, C. (1990). *Heuristic research: Design, methodology, and applications*. In. California, USA: Sage Publications.
- Moustakas, C. (1994). *Phenomenological research methods*. California USA: Sage Publications.
- Murray, C., & Bly Cox, C. (2004). *Apollo – The behind-the-scenes story of one of humankind’s greatest achievements*. Burkittsville, Maryland, US: South Mountain Books.
- Museum, H. (2020). *The Du Pont Company on the Brandywine*. *Company Chronology 1801 to 1834*. Retrieved from <https://www.hagley.org/research/digital-exhibits/company-chronology-1801-1834>
- NASA. (2017). *Global climate change: vital signs of the planet*. Retrieved from <https://climate.nasa.gov/news/2876/new-studies-increase-confidence-in-nasas-measure-of-earths-temperature/>Retrieved from <https://climate.nasa.gov/evidence/>
- News24. (2018a). *Economics of climate change, innovation win Nobel Prize’*. Retrieved from <https://www.news24.com/Green/News/watch-un-gives-2030-as-climate-change-deadline-20181009>
- News24. (2018b). *UN gives 2030 as climate change deadline*. Retrieved from <https://www.news24.com/Green/News/watch-un-gives-2030-as-climate-change-deadline-20181009>
- NOAA. (2005, August 5, 2019). *Trends in atmospheric carbon dioxide - Recent monthly average Mauna Loa CO2*. National Oceanic and Atmospheric (NOAA) and Earth System Research Laboratory ( ESRL) Global Monitoring Division-Global Greenhouse Gas Reference Network. Retrieved from <https://www.esrl.noaa.gov/gmd/ccgg/trends/>Retrieved from <https://www.noaa.gov/about/organization>



- Novel, A. (2015). The Place To Be. Retrieved from <http://www.placetob.org/about/> <http://www.placetob.org/about/>
- Oreskes, N., & Conway, E. M. (2011). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. NY USA: Bloomsbury Press.
- Oreskes, N. (2019). *Why Trust Science*.
- Ortega, M., Lowe, I., & Helmrich, M. (2011). *The Australian Environment: Landscape as Art and Inspiration*: T&G Publishing Pty, Limited.
- Pearce, F. (2005). Turning up the heat. The week the climate changed *New Scientist*, 188(2521), pps. 52-53.
- Pearce, F. (2007). With speed and violence: Why scientists fear tipping points in climate change . In: Beacon Press.
- Pearce, F. (2010). *The Climate Files. The Battle for the Truth about Global Warming*. In: Random House UK Limited.
- Pearce, F. (2019). The changes could be abrupt and irreversible. We don't know where things may end up. *New Scientist*, 243((3247)), 39-41.
- Pearman, G. I. (1980). Carbon dioxide and climate: Australian research. In *Carbon dioxide and climate: Australian research* (pp. 217). Canberra: Australian Academy of Science.
- Phillips, G. A. (2013). Speaking Barbara: Poetry and Historical Ethnographic Fiction. *Qualitative Enquiry*, 19 (6), 451-460.
- PopeFrancis. (2015). Pontifical on Climate Change and the Common Good. In: Pontifical Academy of Social Sciences.
- Porrirt, J. (2013). *The world we made: Alex McKay's story from 2050*. In. London, UK: Phaidon Press.
- PriceWaterhouseCoopers. (2011). *Protecting Human Health and Safety during Severe and Extreme Events: A National Framework*. Australian Government
- Ramos, J. (2006). Conceptualising agency through the world social forum process: a layered analysis of alternative globalisation. Paper presented at the Community Development in a Global Risk Society conference, Melbourne, Victoria, Australia. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.470.4082&rep=rep1&type=pdf><http://researchbank.swinburne.edu.au/vital/access/manager/Repository/swin/http://actionforesight.net/wp-content/uploads/2016/03/JRamos-DeakinCDconf.2006.pdf>
- Ramos, J. M. (2004). Deep Participation and Causal Layered Analysis. In Inayatullah & S (Eds.), *The causal layered analysis (CLA) reader* (pp. pp. 495-505). Taiwan: Tamkang University Press.
- Rampton, J. (2017). Different Motivations for Different Generations of Workers: Boomers, Gen X, Millennials, and Gen Z. Retrieved from <https://www.inc.com/john-rampton/different-motivations-for-different-generations-of-workers-boomers-gen-x-millennials-gen-z.html>
- Randall, B. (2009). The land owns us. In. USA: The Global Oneness Project.
- Randers, J., & Gilding, P. (2010). The one degree war plan. *Journal of Global Responsibility*, 1(1), 70-188.
- Raworth, K. (2017). Exploring doughnut economics – Seven ways to think like a 21st century economist. In. London UK: Cornerstone.
- Ray, P. H., & Anderson, S. R. (2001). *The cultural creatives: how 50 million people are changing the world*. NY USA: Three Rivers Press Harmony Books.
- Reinhardt, S., & Steele, L. (2006). A brief history of Australia's tax system. In: Australian Government. The Treasury.
- Riley, T. (2017). Just 100 companies responsible for 71% of global emissions, study says – A relatively small number of fossil fuel producers and their investors could hold the key to tackling climate change. *Sustainable Business* The Guardian.

- Ripple, W. J., Wolf, C., Newsome, T. M., Galetti, M., Alamgir, M., Crist, E., . . . scientists. (2017). World Scientists' Warning to Humanity: A Second Notice. *BioScience*, 67(12), pps 1026-1028. doi:<https://doi.org/10.1093/biosci/bix125>
- Roads, J. M. (1987). *Talking with nature: sharing the energies and spirit of trees, plants, birds, and earth*. Tiburon, California: H.J.Kramer Book with New World Library.
- Robèrt, K. H. (1997). *The natural step: A framework for achieving sustainability in our organizations*. (3 ed.). University of Michigan: Pegasus Communications, Incorporated, 1997.
- Rockström, J., Steffen, W., Noone, K., Persson, A., Chapin 111, F. S., Lambin, E. F., . . . Foley, J. A. (2009). A safe operating space for humanity: identifying and quantifying planetary boundaries that must not be transgressed could help prevent human activities from causing unacceptable environmental change, argue Johan Rockström and colleagues. *Nature, international journal of science*, 461 (7263), 472-476.
- Romm, J. (2012). Syria: Climate Change, Drought and Social Unrest. Retrieved from <https://thinkprogress.org/syria-climate-change-drought-and-social-unrest-3db624b8dd76/via@thinkprogress/> Retrieved from [https://thinkprogress.org/syria-climate-change-drought-and-social-unrest-3db624b8dd76/](https://thinkprogress.org/syria-climate-change-drought-and-social-unrest-3db624b8dd76/via@thinkprogress) via @thinkprogress Retrieved from <http://thinkprogress.org/romm/2012/03/03/437051/syria-climate-change-drought-and-social-unrest/>
- Romm, J. (2013). Syria's climate warning to the world. *Renew Economy - Clean energy, news and analysis*. Retrieved from <https://reneweconomy.com.au/syrias-climate-warning-to-the-world-81152/>
- Romm, J. (2019). The most important thing you can do right now to fight climate change, according to the science. Retrieved from <https://archive.thinkprogress.org/the-most-important-thing-you-can-do-right-now-to-fight-climate-change-according-to-science/>
- Rose, A. (2012). *Madlands: A journey to change the mind of a climate sceptic*. Carlton, Australia: Melbourne University Press.
- Ruitenbergh, R. (2019). Climate Changed World to become Hotter than Expected updated French Climate Models Show.
- Sandsal, B. (2014). *Harraga*. London, UK: Bloomsbury.
- Schön, D. A. (2017). *The Reflective Practitioner – How professionals think in action*. In. USA: Routledge.
- Scott, J. P. (Writer). (2016). *Age of Consequences. Climate. Change. Conflict*. In S. Robinson (Producer). USA: Gravitas Ventures. © 2016 Flashpoint Films.
- Seba, T. (2014). *Clean Disruption of Energy and Transportation: How Silicon Valley Will Make Oil, Nuclear, Natural Gas, Coal, Electric Utilities and Conventional Cars Obsolete by 2030*. USA: First Beta edition.
- Seed, J., Macy, J., Fleming, P., & Naess, A. (1988). *Thinking like a mountain: Towards a council of all beings*. BC, Canada: New Catalyst Books.
- Seligman, M. E. P. (1991). *Learned optimism: How to change your mind and your life*. In. NY USA: Random House.
- Senge, P., Scharmer, C. O., Jaworski, J., & Flowers, B. S. (2005). *Presence – exploring profound change in people, organisations and society*. London, UK: Nicholas Brealey.
- Sharp, G. (2005). *Waging non-violent struggle: 20th century practice and 21st century potential*. In. Boston, MA, US: Extending Horizons Books.
- Sinclair, U. *Fascism is capitalism plus murder*.
- Skolimovski, H. (1994). *The Participatory Mind: A New Theory of Knowledge and of the Universe*. London: Penguin/Arkana.

- Smith, R. (2016, March 24). Cheap real estate: is co-housing in Australia the solution in high property prices. Herald Sun. Retrieved from <https://www.heraldsun.com.au/lifestyle/home-garden/cohousing-would-you-share-your-home-with-a-complete-stranger/news-story/59efc008fefa86b10f5c444a82c6d3b2>
- Spratt, D. (2008). Climate Code Red. Retrieved from <http://www.climatecodered.org/>
- Spratt, D. (2009). Degrees of Delusion. *New Internationalist*, para 1 online.
- Spratt, D. (2012). Brightsiding: climate is a bad strategy. In *Climate Code Red Melbourne Australia*.
- Spratt, D., & Sutton, P. (2007). The Big Melt. Lesson From the Arctic Summer of 2007. *Asia Pacific Journal*, 5(11).
- Spratt, D., & Sutton, P. (2008). *Climate code red: The case for emergency action*. North Carlton, Australia: Scribe.
- Stainforth, D. A., Aina, T., Christensen, C., Collins, M., Faull, N., Frame, D. J., & Piani, C. (2005). Uncertainty in predictions of the climate response to rising levels of greenhouse gases. . 433 (7024), 403.
- Steffen, A. (2017). The Last Decade and You. A raw manifesto for the new climate movement. . Retrieved from <https://thenearlynow.com/the-last-decade-and-you-489a5375fbe8> Retrieved from <https://thenearlynow.com/> Retrieved from <https://medium.com/>
- Steffen, W. (2009). Climate change 2009: faster change and more serious risks. Retrieved from [https://www.preventionweb.net/files/11032\\_climatechangefasterchangeandmoreser.pdf](https://www.preventionweb.net/files/11032_climatechangefasterchangeandmoreser.pdf)
- Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., . . . Schellnhuber, H. J. (2018). Trajectories of the Earth System in the Anthropocene. 115((33)), 8252-8259. doi:<https://doi.org/10.1073/pnas.1810141115>
- Suzuki, S. (1992). Rio de Janeiro Earth Summit 1992. In: *The 1992 United Nations Conference on Environment and Development*.
- Suzuki, S. (2012). Rio+20 talk. Paper presented at the The 2012 United Nations Conference, Rio de Janeiro, Brazil. <https://www.youtube.com/watch?v=1FmSxmpitBA>
- Taylor, L. (Writer). (2019). HOME FRONT Part One: Existential Gamble In L. Taylor (Producer), *A Breakthrough Production*. Melbourne, Australia: Breakthrough- National Centre for Climate Restoration.
- Taylor, M. (2014). *Global warming and climate change – what Australia knew and buried ... then reframed a new reality for the public*. Canberra, Australia: ANU Press.
- Thatcher, M. (1988). *Protecting Our World*. Paper presented at the Conservative Party Conference, Conference Centre, Brighton.
- Thatcher, M. (1998). *Speech to conservative party conference*. In. UK: Margaret Thatcher Foundation.
- TheClimateMobilisation. (2018). *Dispatch: Berkeley Climate Emergency Town Hall*. Retrieved from <https://www.theclimatemobilization.org/blog/2018/9/4/dispatch-berkeley-climate-emergency-town-hall>
- TheNaturalStep. (1987). *The Natural Step – global network accelerating the transition to a truly sustainable society*. In. Sweden.
- TheRoyalSociety. (2014). *Is the current level of atmospheric CO2 concentration unprecedented in Earth's history? Climate change: Evidence and Causes*.
- Thumb, T. (2014). *The Story of the Bushmen of the Kalihari*. Retrieved from <http://www.tomthumb.org/979/the-story-of-the-bushmen-of-the-kalahari/>
- Thunberg, G. (2019). *The disarming case to act right now on climate change*. In: TED talk.
- Todd, M. (2019). *Extinction Rebellion's tactics are working. It has pierced the bubble of denial*. Retrieved from <https://www.theguardian.com/commentisfree/2019/jun/10/extinction-rebellion-bubble-denial-climate-crisis>

- Tsing, A. L. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton University Press.
- Tufford, L., & Newman, P. (2010). Bracketing in Qualitative Research. *Qualitative Social Work*, 0(0), 1–17. doi:DOI: 10.1177/1473325010368316
- UN. (2017). United Nations Factsheets - People and Oceans, Marine Pollution, Biodiversity, Climate Change. Paper presented at the The Ocean Conference, New York. <https://www.un.org/sustainabledevelopment/wp-content/uploads/2017/05/Ocean-fact-sheet-package.pdf>
- UNESCO. (1992). Rio Declaration. Paper presented at the World Summit on Sustainable Development., Rio de Janeiro, Brazil.
- UNFCCC. (2015). Adoption of the Paris Agreement In C. o. P. (CoP21) (Ed.), *UN Framework Convention on Climate Change (CoP21) (FCCC/CP/2015/L.9/Rev.1 ed.)*: United Nations.
- UnionofConcernedScientists. (1992). World Scientists' Warning to Humanity. Paper presented at the The Forum on Religion and Ecology at Yale. <http://fore.yale.edu/publications/statements/union/>
- Urgenda. (2015). *Urgenda Foundation v State of the Netherlands litigation against the Kingdom of the Netherlands (2015 – 2018)*
- Urgewald. (2017). *Unfriend Coal*.
- Vallet, É., & David, C. P. (2012). Introduction: The (re) building of the wall in international relations. *Journal of Borderlands Studies*, 27(2), 111-119. doi:pdf/10.1080/08865655.2012.687211
- Van Susteren, L. (2018). The psychological impacts of the climate crisis: a call to action. In (Vol. 15 (2), pp. 25-26): *BJPsych international*.
- VCOSS. (2013). *Feeling the Heat, Heat waves and Social Vulnerability in Melbourne*. Retrieved from Melbourne, Australia: <https://vcoss.org.au/wp-content/uploads/2018/10/Heatwave-Report-2013-FINALc.pdf>
- Wade, N. (2009). *The faith instinct: How religion evolved and why it endures*. NY USA: Penguin Press.
- Wahl, D. (2016). *Designing regenerative cultures*. London, UK: Triarchy Press via PublishDrive.
- Watts, J., & Carrington, D. (2018). The Age of Extinction, Special Report. *The Guardian Weekly*. Retrieved from <https://www.pressreader.com/>
- Wheatley, M. J. (2017). *Who do we choose to be?: facing reality, claiming leadership, restoring sanity*. Oakland, California: Berrett-Koehler Publishers.
- Whetton, P., Karoly, D., Watterson, I., Webb, L., Drost, F., Kirono, D., & McInnes, K. (2014). *Australia's climate in a Four Degree World. Four Degrees of Global Warming: Australia in a Hot World*. London: Routledge.
- White, A. (2014). The blackouts during Victoria's heatwave didn't happen by accident. *The Guardian*. Retrieved from <https://www.theguardian.com/environment/southern-crossroads/2014/jan/17/heat-wave-australia-record-breaking-climate-change-bushfires-melbourne>
- Whitehead, A., & Edwards, B. (2013). *A campaign to save this small blue planet. Policies seeking nonpartisan support*. Retrieved from <http://www.voteplanet.net/policies.html>
- Whitehead, A., & Edwards, B. (2017). *Council and Community Action on Climate Emergency. CACE*. Retrieved from <http://www.caceonline.org/>
- Wilford, A. (2011). All you need is to be open. In *TEDX Brisbane: TEDX Brisbane*.
- Wilkinson, G. (1985 ongoing). *The Collection: diaries, notebooks, journals, poetry, artwork, photographs*.

- Wilkinson, G. (2006). Accelerating Sustainable Change. Paper presented at the Australia Pacific Extension Network Regional Conference, Beechworth Victoria. [http://www.regional.org.au/au/apen/2006/refereed/5/2935\\_wilkinsong.htm](http://www.regional.org.au/au/apen/2006/refereed/5/2935_wilkinsong.htm)
- Wilkinson, G. (2008). *The Conscious Cook, sustainable living and eating.*: Brolga.
- Wilkinson, G. (2009). Exploring contrasts: Brazil Australia. Melbourne, Australia: YouTube.
- Wilkinson, G. (2010). AVATAR at Errinundra Plateau Brown Mountain, East Gippsland. Melbourne, Australia: YouTube.
- Wilkinson, G. (2011). Mobilising Whole Communities to Restore a Safe Environment. Ethics application.
- Wilkinson, G. (2020). The Educative Activist. In MIECAT (Ed.), *Framework for Safe Climate Restoration* (May 2019 ed.). Wiki: Self-published on [sites.google.com](https://sites.google.com).
- Williams, D. R. (2019, 22nd April 2019). Earth fact sheet. Retrieved from <http://david.r.williams@nasa.gov> Retrieved from <https://nssdc.gsfc.nasa.gov/planetary/factsheet/earthfact.html>
- Willis, P. (2001). The “things themselves” in phenomenology. *Indo-Pacific Journal of Phenomenology*, 1(1), 1-12. doi:10.1080/20797222.2001.11433860
- Wiseman, J., & Edwards, T. (2009). Melbourne Sustainable Society Institute. In: Melbourne University.
- Wohlleben, P. (2016). *The Inner Life of Animals: Love, Grief, and Compassion—Surprising Observations of a Hidden World*. Vancouver, British Columbia, Canada: Greystone Books Ltd.
- Wright, M., & Hearps, P. (2010). *Zero Carbon Australia Stationary Energy Plan: Australian Sustainable Energy*. In. Melbourne: Melbourne Energy Institute, University of Melbourne.

# Glossary

---

References pertaining to glossary inclusions can be found in the relevant text itself.

## Adaptation

This approach, when considered as our only option, has, in fact, fuelled the *normalising of overshoot* that has seen the goal posts continuously move as adequate action on climate change has failed to occur. It is based on a belief, not supported by most scientific information available, that ecological collapse is simply not possible (ref 2.8).

Adaptation, such as building sea walls etc., is now necessary however to protect assets and populations and to buy time while we race to catch up on preparation for catastrophic climate change impacts and simultaneously maximise efforts to halt and then reverse global warming. Those still wishing for and believing in *adaptation* feed resistance to considerations of reversing global warming (perhaps assuming the task is impossible) and the measures this requires. For them, it may not be until the reality sinks in, and ‘adaptation’ is revealed as a mirage, that hope for ‘*restoring safe climate conditions*’ can finally be kindled. As mentioned, the high level of motivation needed depends on *fully* understanding threat, risks and consequences.

## Albatross

Building resilience involves facing our fears (ref 4.3.3). One of Chris Jordan’s awareness-deepening practices is disclosing his personal story of coming through a crisis of self-doubt and the pain of facing his fears sharing his journey and some of his experiences in nature since that awakening. He made a movie ‘*Albatross*’ filmed on Midway Island deftly bringing implications of the Pacific ‘Garbage patch’ into the viewer’s consciousness as we gaze through his lens, examining the plastic-filled stomach contents of dead chicks and then look into the trusting eyes of the beautiful Laysan Albatross.

## Albedo Effect

The albedo effect (albedo Latin meaning *white*) refers here to the reflective effect of great expanses of ice at the north and south poles the presence of which reflects significant proportions of solar radiation and the absence of which results in large expanses of dark blue areas of water which instead absorbs solar radiation causing the warming at the poles to be many times greater than that at the equator. The depositing of black carbon as soot on the ice of the North Pole and elsewhere also contributes to reduce the reflectiveness of white ice and correspondingly absorb heat.

Ways of protecting the biosphere from lethal temperature spikes will need to be found (ref 4.3.7). Solar radiation methods, discussed further in the concluding chapter, replacing the *albedo effect* of the lost ice caps, will have to be explored fully and candidly. This means that with the *precautionary principle* in place, a clear risk-analysis and a rock-solid commitment to ‘safe passage’ needs to also be fully explained.

**Alchemy**

“A seemingly magical process of transmutation, creation or combination.” Artists and activists, in a natural alchemy of creativity, had revealed an extraordinary potential unleashing genius for clever disruptions, exploding toxic myths and fostering a new story. Being drawn to facts and data for their relevance in transformative change-making and as elements in the co-creation, the alchemy, of a preferred future, it seemed highly likely that many ‘facts’ or ‘data’ would be wrapped in their own transformative process and that I was part of their process as much as they were part of mine (ref 3.3 and 6.7).

**Anthropocene**

from *anthropos* meaning relating to human kind and *kainos* ‘new’. The homeostasis that has supported humans since the most recent ice age throughout the Holocene epoch for the last 11,700 years is now being radically changed as the Earth responds to the excess of carbon. This very recent period during which humankind’s influence has become so profound is referred to as the *Anthropocene* (ref 2.6)

**Apollo 13**

The Apollo Story (4.2.2) gives a valuable account of ‘the behind-the-scenes story of one of humankind’s greatest achievements’ (and human capabilities) in which *failure was not an option*. It provides an example of human capability in solving challenging, unprecedented and difficult problems.

Apollo 13 was a multi module spacecraft with three astronauts. When the malfunction happened and the side blew out, the only people who could actually do anything to get the astronauts back home, in the end, were the astronauts themselves because they were in charge of the space ship. Houston operated as a phenomenal think-tank. It had around 70 people, spacecraft simulators and a huge network of experts, operating in conjunction with the astronauts. The astronauts could spit problems at the think tank and have the whole team back on Earth working like crazy trying to figure out solutions. Then solutions would be fed back up to the astronauts who would decide whether to try them out.

The credibility of NASA was in its high technology, brainpower and fully focused geni of the highest order. The heart commitment that ran throughout the NASA program was solid; no human life would be sacrificed for the sake of the space program or any other grand ideas. This created a high level of faith in the team and trust in their intelligence. Suggestions sent up to the astronauts, three also brilliant people, would have been received as optimally credible. A suggestion would have been fully considered by them with their own prodigious intelligence and first hand knowledge of their situation right up until it became evident that it would or wouldn’t work. Their first reaction would have been an embracing of the suggestion with a keen desire that it prove to be a solution. There would have been no doubts, or suspicions or credibility



issues. They utilised the gravity of the moon as the one-chance to slingshot back into Earth's atmosphere at exactly the right trajectory (References from Apollo). Drawing from this extraordinary event the concept of a 'Virtual Houston' is as a 'Resource Think Tank' providing real and psychological support as did the NASA experts to the astronauts in the crippled Apollo 13 spacecraft. A network of 'experts' to help give online advice, support, resources etcetera to new groups and people facing challenges that others may have already faced or who have tricky questions would help build credibility in suggestions made, trust in the team, faith and confidence that 'Failure is not an Option'.

### Archeologist

Poem: The Modern Archeologist (Wilkinson, 2016): *"I've been stumbling around for years finding clues. I am now venturing forth with trepidation. I must cross over to uncover what I have sensed. I hope for great treasure."* (ref 3.5)

### Atmospheric composition

Atmospheric composition (by volume, dry air): 16 March 2017  
Major: 78.08% Nitrogen (N<sub>2</sub>), 20.95% Oxygen (O<sub>2</sub>), Minor (ppm): Argon (Ar) - 9340; Carbon Dioxide (CO<sub>2</sub>) – 400; Neon (Ne) - 18.18; Helium (He) - 5.24; Methane (CH<sub>4</sub>) - 1.7; Krypton (Kr) - 1.14; Hydrogen (H<sub>2</sub>) - 0.55. Numbers do not add up to exactly 100% due to round off and uncertainty. Water is highly variable, typically makes up about 1% (ref 2.1).

### Attributes

The list of attributes may include being solutions-oriented; curious; analytical; imaginative; creative; determined; thoughtful; strategic, collaborative co-operative and positive; also honouring the 'and' in preference to 'either/or'; practicing "can do" and not easily taking 'no' for an answer; questioning rules and championing rights and principles and seeking to live one's values (ref 5.4.3)

### Auto-ethnography

*The threads of my lived experience revealed through auto-ethnography required teasing out.*  
The study of characteristics, differences and relationships (Ref 3.5.2)

### Axiological

The philosophical study of value – ethics, aesthetics, notions of worth (ref 3.2)  
Expressed at the commencement of my candidature:  
*The global sustainability emergency requires a rapid transformation encompassing the whole of society if a safe climate future is to be restored. Everyone everywhere, future generations and a planet-full of species are involved. The opportunity to avert a worldwide climate disaster of epic proportions and to instead usher in a sustainability renaissance, exists and with it the moral imperative to give it our best shot. This entails mobilising whole communities to change from a 'business-as-usual' to a 'safe-climate' economy, a sustainable way of living and to undertake now to change the economy from carbon-dependent to 100% renewable energy.*  
(Wilkinson, 2011)

### Babushka doll

Babushka in Russian is an old woman or grandmother. Babushka dolls or matryoshka dolls are a set of nested dolls of anywhere between 5 to 30. In this analogy they are used to represent the layers of complexity around climate change from the very big natural planetary systems, down

through environmental, ecological, social, national, economic, to the community, family and personal levels of transformative change (ref 5.5 and 7.6).

- Back cast from Success** Is to look to the future with the benefit of hindsight indicating capabilities and capacity to surmount very big problems have been demonstrated to exist in the past and therefore can be sought and potentially drawn on now.
- Bracketing** To move beyond emotions, experiences and beliefs to more objectively inquire into current influences (ref 3.6).
- Backlash** Discouragement of questioning, over-reaction to challenge, de-sparking the spirit, the Walnut and the Sledgehammer. Can include e.g. being threatened with funding cuts, the ‘John Mercer effect’ (ref 4.3.1 and 4.3.7)
- Beyond Zero Emissions (BZE)** BZE, intuitively understanding that *quite often people wont own a problem until they think that solutions are possible* used basically textbook solutions. They knew that the social dynamics tend to drive these things and that by having at least knocked over the some of the big arguments on the technicalities they had opened a lot of people’s minds to be prepared to understand the science of it, which made that work so critical and such a high priority (ref 2.9, 2.10, 4.3.3 and 7.8)
- Biocentrism** Bio meaning “life” from PIE root \*gwei- “to live”; centric meaning “having a center (of a certain kind); centered on.” (ref 7.1)
- Bioneer** Playing on the word pioneer meaning a person who is among the first to research and develop a new area of knowledge, bioneers share a vision of a just and connected world, are passionate and are coming together acting to create a better world. Well known self acclaimed bioneers include Jane Goodall and David Suzuki (ref 6.9).
- Biophilia** This term made popular by psychoanalyst Erich Fromm in the 1960s, refers to the biological drive towards self-preservation (bio- ‘life’ and philia- *feeling friendly toward*’) suggest humans possess an innate tendency feeling friendly to/seeking connection with nature and other forms of life. *“Fromm’s biophylia beckons us much further than a mere evolutionary explanation – towards a new unity, one with another, and of all with the Gaian whole”* (Flannery, 2011, p.108) (ref 5.2).
- Biosphere** The regions of the surface and atmosphere or Earth occupied by living orgnisms (ref Ch 2 and Ch 4).
- Bipartisan** Call for federal bipartisan support. *“Climate change is an international, national and local concern and Victorian councils want and expect the Australian Government to develop policy settings that will ensure Australia can reach zero net emissions before 2050. (...) We call on the Government to develop policy that is informed by credible science and to become a leader in climate change policy.”*  
*“There is an urgent need for the Government to show strong leadership, to trust in science,*

*and to support regulatory settings that foster innovation and investment in clean energy. A steady, evidence-based approach that has bipartisan support is essential.”* MAV submission to Government to Review of Climate Change Policies, May 2017 (ref 2.9 and 4.3.4)

- Breakthrough** Breakthrough - National Centre for Climate Restoration Australia, is an independent think tank that develops critical thought leadership to influence the climate debate and policy making. Breakthrough’s mission is to develop and promote strategy innovation and analysis that is essential to deliver safe climate restoration. (see below under ‘s’).  
Time has run out for half measures and it is now imperative that work begins to restore safe climate conditions as fast as humanly possible - this will require action at emergency scale and speed.  
Contributors and writers draw upon peer reviewed science to provide commentary and analysis on high end risk management issues and response pathways. Breakthrough uses an overarching framework to guide its work across ethics, science, economics, politics and culture.  
Breakthrough is a leading body in safe climate restoration and draws on local and international expertise. Breakthrough publishes innovative thinkers, produces original communications, and hosts thought-provoking events for a variety of audiences.  
Breakthrough has been formed on a non-political party platform and is based in Australia.  
Breakthrough is funded by private individual donations, and grants where available (ref 2.9).
- Bricolage** Construction or creation from a diverse range of available things. Weaving. Quilt (ref 3.6)
- Bright-siding** When dangerous things are made light of, bad news is unmentionable and good news is marketed—has serious consequences. It represents a strategic failure to communicate. . . . We have achieved a collective cognitive dissonance where the real challenge we face is excluded from discourse. There is no solution within the politics-as-usual frame; and there is no developed frame outside of it. (Spratt, D. 2012) (ref Introduction)
- Business As Usual (BAU)** The existing state of business affairs. In our current system this BAU means fossil fuels are the main source of energy in a timeframe inconsistent with safe climate restoration which must urgently switch to 100% renewables (ref 4.3.1 and 5.2)
- Capability** Skills and resources, - reserves we can find in ourselves. Refer to human brilliance in other daunting situations (refer 4.3.2).
- Capacity** The maximum we can bring ourselves to engage, to do. Subjective in the perception of current real constraints (ref 4.3.6 and 5.5).
- Carbon sink** Sequestering (locking) carbon molecules into vegetation (trees), soil, oceans, etc. As ‘carbon sinks’ the oceans are fast becoming saturated with carbon dioxide absorbed from the atmosphere which, when dissolved, becomes carbonic acid acidifying the oceans (ref 2.2 and 7.6)
- Circular Economy** *“At the same time as the Paris Agreement was signed in December 2015, the European Union launched its Circular Economy Package, a transformational drive to create an economic*

*system that is restorative and regenerative by design. In a circular economy, there is no place for waste. End of life products, materials, nutrients and water feed into a new use cycle thereby minimizing the use of virgin resources, associated emissions and energy use. Since then, the European Union has raced ahead with specific legislation and measures and achieved many key milestones including tabling single plastic use bans in May 2018.” Waste is a Valuable Resource. Growth Within: The EU Circular Economy vision, re-designing the future. Australian – German Climate and Energy College, Melbourne University (ref 7.10).*

### **Clathrates**

Vents that can be deep underwater or in permafrost that emit methane (ref 2.5).

### **Clean Disruption**

e.g. Tony Seba’s *Clean Disruption* indicates the extremely rapid transformation that can take place. He purports this will happen with the electric and driverless car (ref 2.11 and 6.9).

### **Climate Coalition, Portland Oregon, 2015**

I spoke with one older man expressing his dismay and frustration at not being able to get his point across when speaking to groups at public meetings. I was meeting with some of the courageous and stalwart activists and kyaktivists at the Climate Coalition Meeting in Portland Oregon and had just mentioned George Marshall’s research on talking to conservatives. It raised anguish. The Portland activist said, *“I think that’s an example of skills that people need. I don’t know whether I can ever have them.”* He had an engineering background and loved numbers. He said going over the numbers was right up his alley. *“It’s the kind of thing that I treat as comfort food. It lets me know where I stand. It makes me feel good about control over the situation at one level.”* But he went on to say that his experience in trying to talk to people was just so difficult. He wanted to take them through the numbers but would find that it was *“turning them off from the conversation instead of turning them on.”* He struggled on trying to find their personal issues and points of connection as this seems like the best way to go but, for him, *“I don’t know – to me those are sort of extremes of methods.”* He badly wanted to bring people together to understand and address the base problem but he confessed, *“I don’t know how to get there.”* It is the nature of the climate change discussion that so often those who have had little involvement in the discussion come at it from almost idiosyncratic angles. *“It seems like the way you build your numbers and the way you build your successes is by picking individual battles and fighting them, not as climate battles, as individual battles that are offending someone in some particular way.”* An analysis of this conversation led to Strategy #9 in a series of to a series of 15 strategies coming out of that meeting (ref 4.3.7 and Appendix 11).

### **Cognitive dissonance**

Cognitive dissonance is seen in the fascinating ability humans have of knowing something with one part of the brain and being able to ignore it with another. From Latin *cognoscere* “to get to know, recognise,” Taken over by psychologists and sociologists after 1940 cognitive dissonance was understood as “psychological distress caused by holding contradictory beliefs or values”. The concept developed and term coined by US social psychologist, Leon Festinger (1957) (ref 2.7)

- Countenance** Late 15c. “to behave or act,” Sense of “to favor, patronize” is from 1560s from notion of “to look upon with sanction or smiles.” (ref 1.7 and 7.5)
- Daesh** So as not to give them any status the French identify them merely as “cut-throats” (ref Ch.6).
- Darebin City Council** Motion 56. Climate Change. Submitting Council: Darebin City Council [www.mav.asn.au](http://www.mav.asn.au)  
That the MAV recognise that:  
(a) we are in a state of climate emergency that requires urgent action by all levels of government, including local councils  
(b) human induced climate change stands in the first rank of threats to humans, civilisation and other species  
(c) it is still possible to restore a safe climate and prevent most of the anticipated long-term climate impacts – but only if societies across the world adopt an emergency mode of action that can enable the restructuring of the physical economy at the necessary scale and speed;  
(d) the MAV has a particular role in assisting local governments in this regard.  
77% of voting municipalities supported this motion put by Susan Rennie (Darebin) (ref 4.3.4).
- Dead Zones** 500 Global ocean ‘dead zones’, now cover an area the size of the UK Oceans suffocating as huge dead zones quadruple since 1950, scientists warn (Carrington, 2018) (ref 2.2).
- Disingenuous** Not candid or sincere (ref 2.11, 4.2 and 4.3.1).
- Distributed leadership** “Rather than focus on characteristics of the individual leader or features of the situation, distributed leadership foregrounds how actors engage in tasks that are “stretched” or distributed (distributed cognition) ...” [https://en.wikipedia.org/wiki/Distributed\\_leadership](https://en.wikipedia.org/wiki/Distributed_leadership) (ref 5.4 and 5.5).
- Drawdown** Removing carbon molecules from the atmosphere typically by sequestering in growing trees etc (ref 4.3)
- Du Pont** Put Safety First. They started making gunpowder around 1801 and for various reasons they became very good at safety. They had a hundred years head start on this culturally. What’s happened since, is that Du Pont has been either the inventor of methods or an earlier adopter of whatever’s the best practice for two hundred years and their safety record is absolutely astounding. The only way they could have a really, really safe working environment is by treating safety as above profit and above everything else. As their number one priority they found a way to weave it into their business success. It had to come from management, it had to then spread through the whole organisation and it had to be something where day-to-day profit making was *not* allowed to interfere with it. CEO’s of Du Pont who came in from outside discovered there was kind of a method in the madness and every CEO who’s ever taken over has kept the culture going regardless of what they first thought. A question that emerges from this is how ripe might DuPont be to change focus from workplace safety to climate safety? A company like DuPont would get the eyes and ears of the business world and be a great influencer (ref 4.3.1)

- Dystopia** An imagined place where everything is unpleasant or bad, typically a totalitarian or environmentally degraded one (ref 2.8 and 2.11).
- Eco-warrior** Warrior. Old North French *werrier* (Old French *guerroieior*) “A warrior, soldier, combatant, one who wages war.”  
Eco. Referring to the environment and man’s relation to it, abstracted from ecology.  
Eco-warrior. One who wages war in defence of the environment. Dictionary: A person actively involved in defending the environment (ref 1.11).
- Ecopreneur** Entrepreneur with ecological focus (ref 6.9).
- Emergence** (n) from Latin *emergere* “rise up” Meaning “an emerging, process of coming forth” is from 1704 (ref Ch7 and 7.6).
- Emergency mode** Mode. “manner”; from PIE root \**med-* “take appropriate measures” as in Emergency Mode (ref 1.4, 2.9, 2.11, 3.6, Ch 4 and Ch 7).
- Epiphanic** Moment of sudden and great revelation or realisation
- "Failure is Not an Option"** According to Wikipedia, Gene Kranz chose these words as the title for his autobiography (ref Ch 4 and Ch 7) because “he liked the way the line reflected the attitude of mission control”. When things went wrong failure was not an option that got put on the table. In the book, Kranz states, it was “a creed that we [NASA’s Mission Control Center] all lived by: ‘Failure is not an option’”
- Fat Tail** A probability distribution whose outcomes are represented as thick ends of ‘tails’ that form towards the edges of a distribution curve, indicating an irregularly high likelihood of a catastrophic event. See Word of the Day –<https://www.youtube.com/watch?v=OdA27-ap99s> (ref 2.2 and 4.4).
- Fractal** The meaning implied here relates most closely to the PIE root \**bhreg-* meaning to break. (n2) “kind of fern;” describes the spatial, never-ending, nested pattern, fractal geometry, which can be seen equally at the micro and macro ends of the spectrum and along it. The Babushka doll is an analogy for ‘fractal’ in this context. “*Consequently, as we observe and become aware of patterns at higher or lower levels of an organisation’s structure, we can use fractals the same way we use maps. Fractals can help us gain insights at any other level.*” (2009, Lipton, B.H., Bhaerman, S.) (ref 1.6, 5.4 and 7.6).
- Gondwanaland** A vast continental area believed to have existed in the southern hemisphere and to have resulted from the break up of Pangeaea in Mesozoic times. It comprised present day Arabia, Africa, America, Antarctica, Australia and the peninsula of India (ref 2.5)
- Greta Thunberg** [http://www.ted.com/talks/greta\\_thunberg\\_the\\_disarming\\_case\\_to\\_act\\_right\\_now\\_on\\_climate?language=en](http://www.ted.com/talks/greta_thunberg_the_disarming_case_to_act_right_now_on_climate?language=en) Greta Thunberg’s TED talk (11 minutes) The disarming case to act right now on climate change (ref Ch 2).

<b>Holocene</b>	Relating to or denoting the present epoch (ref 2.6 and 7.1)
<b>Homeostasis</b>	The tendency towards a relatively stable equilibrium between interdependent elements (ref ch 2).
<b>Inchoate</b>	Not fully formed - rudimentary, confused or incoherent (ref 1.5, 3.6 and 4.2)
<b>Isotherms</b>	Isotherms are areas on a map that have the same temperature conditions at a given time or over a given period. Mobile species, fauna, can and are moving to locations with the conditions they need. Most flora generally move more slowly. Species such as alpine flowers have nowhere to go (ref 2.2).
<b>Jevons effect</b>	A symptom of the ‘catch-22’ of technology where greater efficiencies bring down the price making technology such as air-conditioners less expensive and able to be far more prolific, encouraging greater use of electricity and even more emissions (ref 4.3.5).
<b>Johari Window</b>	A technique that helps people better understand their relationship with themselves and others. It was created by psychologists Joseph Luft (1916–2014) and Harrington Ingham (1916–1995) in 1955
<b>Kalahari Bushmen</b>	The Story of the Bushmen of the Kalahari. <a href="http://www.tomthumb.org/979/the-story-of-the-bushmen-of-the-kalahari/">www.tomthumb.org/979/the-story-of-the-bushmen-of-the-kalahari/</a> (ref 1.2)
<b>Kanyini</b>	Kanyini the principle of being. Kanyini means every living thing is family. Kanyini means we’re all responsible for each other. The teaching is passed on through story, song, dance and art. Kanyini is unconditional love with responsibility. (Aboriginal elder, Uncle Bob Randall laughed as he explained how easy it is.) (ref 1.6 and 3.3)
<b>Kyactivists</b>	Activists who work on the water in ports from kyacks (ref 2.10)
<b>Lag Factor</b>	The time between the causal event and the subsequent result or reaction (ref 2.3, 4.1 and Appendix 9)
<b>Meta-goal</b>	Denoting a higher order, over arching goal (ref 6.8 and Ch 7)
<b>Multiverse</b>	Multiples of a universe (singular) (ref Ch 3)
<b>Neo-conservatism</b>	Relating to or denoting a return to a modified form of a traditional viewpoint, in particular a political ideology characterized by an emphasis on free-market capitalism and an interventionist foreign policy (ref 2.6, 4.1, 6.7, 7.4, 7.7 and Appendix 5)
<b>No More Bad Investments</b>	Cedamia has developed legislation and a No More Bad Investments campaign. ( <a href="https://www.cedamia.org/no-more-bad-investments/">https://www.cedamia.org/no-more-bad-investments/</a> ) (ref 5.5)
<b>Non-partisan</b>	Not biased or partisan towards any particular political group (ref 4.3.4, 5.4 and Ch 6)
<b>Obfuscation</b>	Make obscure, unclear or unintelligible; bewilder (ref 2.1, 3.5, 4.3, 5.3 and 6.7)
<b>Oligarchs</b>	Very rich businessman with a great deal of political influence (ref 1.11, 2.6, 4.3 and 6.9)



<b>Overshoot</b>	Exceed targets (ref Ch 2 and Ch 4)
<b>Paradigm</b>	From late Latin <i>paradigma</i> “pattern, example”; Greek paradeigma “pattern, model; precedent example” “exhibit, represent” and from PIE root *deik “to show” “to pronounce solemnly” (ref Ch 1 and Ch 5)
<b>Parochialism</b>	A limited or narrow outlook primarily focused on a local area; narrow-mindedness (ref 5.5 and 6.8)
<b>Perverse/ contradictory government measures</b>	E.g. The 2015 UK Infrastructure Act makes it a legal duty on governments to maximise the economic recovery of petroleum from the UK’s continental shelf at the same time as the Climate Change Act 2008 made it the legal duty to minimise the production of green house gases. Monbiot, G. & Marshall, G., (2015, May 15) The Guardian (ref Ch 4 and App 18)
<b>Place To B</b>	Place To B is fully introduced in the section on civil society’s response in Paris during CoP 21. (Ch 6) It was a mobilisation hub, a meeting place, workshop space, accommodation and much more for hundreds of creatives intent on creating a new story about global warming and climate (ref 6.6).
<b>Plutocrat</b>	A person whose power derives from their wealth (ref Ch 4 and Ch 7).
<b>Precautionary Principle</b>	Niccolò Machiavelli, discussed foreign policy of the Roman Republic in The Prince (Ch. 3) stating “The Romans did in these instances what all prudent princes ought to do, who have to regard not only present troubles, but also future ones, for which they must prepare with every energy, because, when foreseen, it is easy to remedy them; but if you wait until they approach, the medicine is no longer in time because the malady has become incurable; for it happens in this, as the physicians say it happens in hectic fever, that in the beginning of the malady it is easy to cure but difficult to detect, but in the course of time, not having been either detected or treated in the beginning, it becomes easy to detect but difficult to cure. Thus it happens in affairs of state, for when the evils that arise have been foreseen (which it is only given to a wise man to see), they can be quickly redressed, but when, through not having been foreseen, they have been permitted to grow in a way that every one can see them, there is no longer a remedy.”  Aims to reduce risk and contends that those claiming ‘no risk’ cannot demand proof beyond the shadow of a doubt from those saying that there is a risk. It puts the responsibility and burden of proof on those deciding the action or inaction, the policy or program; they must show that the impact of their decision will not cause public or environmental harm (ref.2.5 and 7.4)
<b>Restore</b>	C 1300 “to build up again, repair”; Restoration. late 14c., “a means of healing or restoring health; renewing of something lost” (ref 4.3.6, 5.5.2 and Ch 7).
<b>Risorgimento</b>	Risorgimento (n.) 1889, "movement which led to the unification and independence of Italy," Italian, literally "uprising" (of Italy against Austria, c. 1850-60) (Ref 7.10).
<b>Safe climate</b>	Safe climate conditions are determined by the physics and chemistry of those atmospheric elements including CO2 and methane that have worked to maintain a global temperature range

over the past eleven thousand seven hundred years. These conditions in turn maintain the big natural systems of the frozen polar caps, the speed and behaviour of the oceanic gulf stream, the oscillations of the atmospheric jet streams, the acidity of the oceans, affecting phenomena such as el nino and el nina, temperature and rainfall patterns and the frequency and intensity of extreme weather events. Conditions that are safe existed in pre-industrial times when molecules of carbon in the atmosphere were 300 parts per million or less hence the need to restore that atmosphere to these levels and thus restore conditions that will (eventually) enable the biosphere to survive and regenerate (ref 2.6).

- Safe Climate Australia** [www.abc.net.au/radionational/programs/futuretense/australia-safe-climate-vision/3064072](http://www.abc.net.au/radionational/programs/futuretense/australia-safe-climate-vision/3064072)  
Journalist Alexandra De Blas can be heard interviewing 7 eminent guests on Australia's vision for a safe climate. ABC Radio National audio – 2009.
- Safe Climate Restoration** Safe climate restoration is defined as actions to re-instate natural climate processes that generate global average temperatures and ocean acidity that are safe for all species and for civilisation. (ie. preindustrial temperatures & acidity)
- Short termism** Most but not all western developed nations suffer short termism associated with short periods in office before elections are required. Short termism inhibits long term planning and funding of projects into the future. Scandinavian countries are noticeably less afflicted by short termism (ref 2.4, 4.2 and 7.4).
- Socialand-environmental sustainability** Writing 'Socialandenvironmental' as one word to emphasise the intrinsic inseparability of these two aspects of sustainable living
- Solar Punk** A literary movement, a hashtag, a flag, and a statement of intent about the future we hope to create. It is an imagining wherein all humans live in balance with our finite environment, where local communities thrive, diversity is embraced, and the world is a beautiful green utopia (ref 6.6).
- Solar Reflection Methods** <https://geoengineering.environment.harvard.edu> Harvard University explaining SRM, the work being done on it and why (ref 2.6, 5.5.2 and Appendix 13).
- Solutions Economy** As transformative change takes place the solutions create a new economic paradigm (Ref 4.3, 5.2 and 7.6)
- Speciescide** The annihilation of entire species of living beings
- Statist intervention** Government intervention to transform the economy to one that restores safe climate conditions becomes more necessary the longer market forces and the corporate world fail to address climate change in the ever shrinking time frame for action (ref 7.7).
- Super majority** Bipartisan super majority (ref 2.11, 4.3 and Appendix 16)

- Sustainable Development** “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” Our Common Future, also known as the Brundtland Report (ref 2.7 and 4.1).
- Synchrony** Goleman, D, (2006) Social Intelligence, The new science of human relationships, Hutchinson, NY USA  
*“A scientific lens can reveal what the naked eye can’t detect: the way that, as each friend speaks, the other’s breath subtly falls into a complementary rhythm. ... the listener’s breathing roughly mirroring that of the speaker by inhaling as the partner exhaled, or matching by breathing together. This respiratory synchrony heightens as the moment to switch speakers approaches. And during those frequent moments of levity when close friends talk, the matchup strengthens further: both begin laughing at virtually the same moment, and during laughter the rhythm of their breathing aligns remarkably.”* p.31 *“This triggering of parallel circuitry in two brains lets us instantly achieve a shared sense of what counts in a given moment. Neuroscientists call that mutually reverberating state “empathetic resonance,” a brain-to-brain linkage that forms a two-person circuitry ...”* p.43  
*“Indeed, laughter may be the shortest distance between two brains.”* p.45  
*“Locking eyes loops us. ... when two people’s eyes meet, they have interlinked their orbitofrontal areas”* p.63  
*“we cannot stop sending signals .. about what we feel. Even when people try to suppress all signs of their emotions, feelings have a way of leaking anyway. In this sense, when it comes to emotions, we cannot not communicate.”* p.85 (ref 3.3)
- Target Creep** The effect of pushing targets further into the future as action to achieve them continues to be inadequate (ref 5.5.2 and 7.6).
- The Age of Consequences** The Age of Consequences – report and movie – a tool to workshop and educate greater awareness. The Age of Consequences opens up vibrant discussion exploring the gap between how moral we think we are and how our actions and inactions affect others. Viewers are shocked with undiluted information and undeniable images. Few know that India has built a razor-wire fence around Bangladesh. How much are we willing to do on behalf of others? Peter Wolleben, author of *The Inner Life of Animals*, cites research showing stress raises cortisol levels in mice making them less empathetic to the pain of their fellow mice being tortured. Our WEIRD self-interest and lack of empathy could be partly due to our modern stressors and the potentially higher cortisol levels in our blood streams or perhaps the global landscape does not provide enough bridges to those still hard-to-find activities that feel (and are) effective.  
The Age of Consequences – Preview Panel Sherri Goodman is credited with educating a generation of U.S. military and government officials about the nexus between climate change and national security, using her famous coinage, “threat multiplier,” to fundamentally reshape

the national discourse on the topic. <https://www.wilsoncenter.org/person/sherri-goodman>; The Age of Consequences – Trailer (<https://itunes.apple.com/us/movie/the-age-of-consequences/id1213578427>) (ref 2.10, 4.3, 5.5.2 and 6.3)

- The Club of Rome** Founded 1972, was a “thinktank of scientists, economists, businesspeople, international civil servants, and politicians from five continents.” (ref 2.7)  
<http://www.abc.net.au/science/slab/rome/default.htm>
- The Quilt** A visual depiction of the bricolage of this work encompassing all the many elements into one page (ref 7.1).
- Threat multiplier** See Age of Consequences (ref 4.3, 5.5 and 6.3)
- Transition Movement** Coming out of the UK Transition Towns Movement founded by Rob Hopkins motivated by peak oil and increasingly about global warming (ref 4.3 and 6.6).
- Troposphere** The lowest region of the atmosphere, extending from the earth’s surface to a height of about 6 – 10 km (the lower boundary of the stratosphere) (ref 5.3)
- Urgency** Importance requiring swift action
- Valor** C 1300, “value, worth.” From old French *valor, valour* “valor, moral worth, merit, courage, virtue” ... from stem of Latin *valere* “be strong, be worth” (ref 1.11)
- Verisimilitude** Giving an appearance of being true or real (ref 3.5.2)
- Visceral** “affecting inward feelings,” from Middle French visceral and directly from Medieval Latin *visceralis* “internal”, from Latin *viscera*, plus *viscus* “internal organ, inner parts of the body” (ref 7.4)
- War footing** War - usual to translate Latin *bellum* was *gewin* “struggle, strife”;  
Footing. Figurative meaning “firm or secure position” from 1580s; that of “condition on which anything is established” is from 1650s (ref 1.5, 2.7, 3.6, Ch 4, Ch 5 and Ch 7).
- Whole Systems Change** Describes the changes happening on the natural level of atmosphere, jet streams, ocean currents etc and also at the human level of economic systems, resources flows, waste streams etc. and the changes that are now needed if safe climate conditions are to be restored (ref 1.7 and Appendix 4).
- Wicked** Can mean playfully mischievous or evil and morally wrong but is often used in the context of climate change to describe extremely complex problems. Can unwittingly imply problems are too hard to solve (ref 4.2, 6.6 and 7.7).
- WIKI** A website or database developed collaboratively by a community of users, allowing any user to add or edit content (ref 5.1 and Ch 7).

- 
- Zero Emissions Network** ZEN, was Adrian Whitehead and Matthew Wright located with a desk in the SLF offices. ZEN quickly evolved to become BZE (ref 2.10).
- Zero Emissions World** An inspiring vision for a Zero Waste and Zero Emissions World (ref 4.3 and 5.5.2)

# Acronyms

<b>AACTA</b>	Australian Academy of Cinema and Television Arts	<b>CM</b>	Change Management
<b>ABC</b>	Australian Broadcasting Commission	<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>ACF</b>	Australian Conservation Foundation	<b>COP</b>	Council of Parties; COP 21 – the 21 <sup>st</sup> annual meeting of the COP
<b>AMCS</b>	Australian Marine Conservation Society	<b>CR</b>	Centre right
<b>ANC</b>	African National Congress	<b>CSIRO</b>	Commonwealth Science and Industry Research Organisation
<b>ANU</b>	Australian National University	<b>CYSS</b>	Community Youth Support Scheme
<b>APEN</b>	Australasia Pacific Extension Network	<b>DCAN</b>	Darebin Climate Action Now
<b>Ar</b>	Argon	<b>DDT</b>	Dichlorodiphenyltrichloroethane (an organochlorine)
<b>AYCC</b>	Australian Youth Climate Coalition	<b>EAF</b>	Educative Activist Framework
<b>BAU</b>	Business As Usual	<b>EM</b>	Emergency Mode
<b>BBC</b>	British Broadcasting Commission	<b>ENGO</b>	Environmental Non Government Organisation
<b>BCAN</b>	Banyule Climate Action Now	<b>ER</b>	Extinction Rebellion
<b>BDC</b>	Building Design and Construction	<b>ESRL</b>	Earth System Research Laboratory
<b>BZE</b>	Beyond Zero Emission	<b>EV</b>	Environment Victoria
<b>C1300</b>	Circa 1300	<b>FOE</b>	Friends of the Earth
<b>CACE</b>	Community Action on Climate Emergency	<b>GDP</b>	Gross Domestic Product
<b>CAG</b>	Climate Action Group	<b>GSi</b>	Greenleap Strategic Institute
<b>CAHA</b>	Climate and Health Alliance	<b>H<sub>2</sub></b>	Hydrogen
<b>CANA</b>	Climate Action Network Australia	<b>He</b>	Helium
<b>CCR</b>	Climate Code Red	<b>IPCC</b>	Intergovernmental Panel of Climate Change.
<b>CDR</b>	Carbon Dioxide Removal	<b>KM</b>	Knowledge Management
<b>CEA</b>	Atomic Energy Commission (French)	<b>Kr</b>	Krypton
<b>CEDAMIA</b>	Climate Emergency Declaration and Mobilisation in Action	<b>LA</b>	Los Angeles
<b>CEN</b>	Climate Emergency Network	<b>LEAP</b>	Los Angeles – a primary climate emergency advocacy group
<b>CEO</b>	Chief Executive Officer	<b>LNP</b>	Liberal National Party
<b>CFC</b>	Chlorofluorocarbon	<b>M.ED</b>	Masters of Education
<b>CH<sub>4</sub></b>	Methane	<b>MAV</b>	Municipal Association of Victoria
<b>CKD</b>	Change Knowledge Developer	<b>MEP</b>	Member of the European Parliament
<b>CKI</b>	Change Knowledge Implementer		
<b>CKM</b>	Change Knowledge Makers		

<b>MIECAT</b>	Melbourne Institute of Experiential Creative Arts Therapy	<b>VCAN</b>	Victorian Climate Action Network
<b>MOOC</b>	Massive Open Online Course	<b>VCOSS</b>	Victorian Council of Social Services
<b>MSSI</b>	Melbourne Sustainable Society Institute	<b>WA</b>	Western Australia
<b>N<sub>2</sub></b>	Nitrogen	<b>WALGA</b>	Western Australian Local Government Authority
<b>NASA</b>	National Aeronautics and Space Administration	<b>WEIRD</b>	Western, Educated, Industrialised, Resourced, Democracies.
<b>Ne</b>	Neon	<b>WLCR</b>	Women Leaders for Climate Restoration
<b>NGO</b>	Non Government Organisation	<b>WSC</b>	Whole Systems Change
<b>NMBI</b>	No More Bad Investments	<b>WW II</b>	World War Two
<b>NOAA</b>	National Oceanic and Atmospheric Administration	<b>YCAN</b>	Yarra Climate Action Now
<b>NSW</b>	New South Wales	<b>ZEN</b>	Zero Emissions Network
<b>O<sub>2</sub></b>	Oxygen		
<b>P2B</b>	Place To Be		
<b>P2C</b>	Proposal to Contribute		
<b>PhD</b>	Doctorate of Philosophy		
<b>ppm</b>	parts per million		
<b>QLD</b>	Queensland		
<b>RMIT</b>	Royal Melbourne Institute of Technology		
<b>RSTI</b>	Research and Strategy for Transition Implementation		
<b>SCA</b>	Safe Climate Australia		
<b>SLEC</b>	Sustainable Living Education Collective		
<b>SLF</b>	Sustainable Living Foundation; National Sustainable Living Festival		
<b>SRM</b>	Solar Reflection Management and Solar Reflection Methods		
<b>T10</b>	Transition Decade Alliance		
<b>TCM</b>	The Climate Mobilisation		
<b>TED</b>	Technology, Entertainment, Design		
<b>TV</b>	Television		
<b>TWS</b>	The Wilderness Society		
<b>UDF</b>	United Democratic Front		
<b>UK</b>	United Kingdom		
<b>USA/US</b>	United States of America		
<b>USB</b>	Universal Serial Bus		



# Websites

---

For those reading in soft copy there are live links throughout the document. For those who are reading in hard copy, chapter 2.10 has live links and also includes the URL's. They are listed here too for your convenience:

<b>Beyond Zero Emissions</b>	<a href="https://bze.org.au/">https://bze.org.au/</a>
<b>Breakthrough</b>	<a href="https://www.breakthroughonline.org.au">https://www.breakthroughonline.org.au</a>
<b>Brightsideing</b>	<a href="http://www.climatecodered.org/p/brightsideing.html">http://www.climatecodered.org/p/brightsideing.html</a>
<b>CEDAMIA</b>	<a href="https://www.cedamia.org/">https://www.cedamia.org/</a>
<b>ClimAct</b>	<a href="https://climacts.org.au/home/">https://climacts.org.au/home/</a>
<b>Climate Code Red</b>	<a href="http://www.climatecodered.org/">http://www.climatecodered.org/</a>
<b>Climate Code Red - the book and the campaign</b>	<a href="http://www.green-innovations.asn.au/CCR.html">http://www.green-innovations.asn.au/CCR.html</a>
<b>Coastline Population</b>	<a href="http://science.nasa.gov/earth-science/oceanography-living-ocean">http://science.nasa.gov/earth-science/oceanography-living-ocean</a> NASA's coastlinepopulation research
<b>Community Action for the Climate Emergency</b>	<a href="https://www.caceonline.org/">https://www.caceonline.org/</a>
<b>Creative Resistance</b>	<a href="https://creativeresistance.org/about/">https://creativeresistance.org/about/</a>
<b>Deontological</b>	<a href="https://en.wikipedia.org/wiki/Deontological_ethics">https://en.wikipedia.org/wiki/Deontological_ethics</a>
<b>ESRL</b>	<a href="https://www.esrl.noaa.gov/gmd/ccgg/trends/">https://www.esrl.noaa.gov/gmd/ccgg/trends/</a>
<b>Extinction Rebellion</b>	<a href="https://ausrebellion.earth/">https://ausrebellion.earth/</a>
<b>Green Innovations</b>	<a href="http://www.green-innovations.asn.au/#intro">http://www.green-innovations.asn.au/#intro</a>
<b>Groundswell of sustainability</b>	<a href="http://sustainabilityinbanyule.com/node/1551">http://sustainabilityinbanyule.com/node/1551</a>
<b>Kalahari Bushmen</b>	<a href="http://www.tomthumb.org/979/the-story-of-the-bushmen-of-the-kalahari/">www.tomthumb.org/979/the-story-of-the-bushmen-of-the-kalahari/</a>
<b>Lighter Footprints</b>	<a href="https://lighterfootprints.org/">https://lighterfootprints.org/</a>
<b>McGrail</b>	<a href="https://www.theage.com.au/business/urgency-turns-into-emergency-20070219-ge496f.html">https://www.theage.com.au/business/urgency-turns-into-emergency-20070219-ge496f.html</a>
<b>Melbourne Sustainable Society Institute</b>	<a href="https://sustainable.unimelb.edu.au/">https://sustainable.unimelb.edu.au/</a>
<b>NOAA</b>	<a href="https://www.esrl.noaa.gov/gmd/ccgg/trends/">https://www.esrl.noaa.gov/gmd/ccgg/trends/</a>
<b>Ocean Acidification</b>	<a href="https://www.youtube.com/watch?v=il7f94v8o1k">https://www.youtube.com/watch?v=il7f94v8o1k</a>
<b>Paris Sun</b>	<a href="http://creativeresistance.org/painted-massive-sun-on-paris-streets-demands-renewable-energy-policy/">http://creativeresistance.org/painted-massive-sun-on-paris-streets-demands-renewable-energy-policy/</a>

---

<b>Portland Oregon</b>	<a href="https://brooklyn.org/archive/index.php/Detail/Object/Show/object_id/1863">https://brooklyn.org/archive/index.php/Detail/Object/Show/object_id/1863</a>
<b>Save Our Planet</b>	<a href="https://www.voteplanet.net/">https://www.voteplanet.net/</a>
<b>SAVE THE PLANET</b>	<a href="https://www.voteplanet.net/">https://www.voteplanet.net/</a>
<b>Sustainable Living Foundation (SLF)</b>	<a href="http://www.slf.org.au/">http://www.slf.org.au/</a>
<b>THE AGE OF CONSEQUENCES</b> <b>Climate change conflict</b>	<a href="https://www.youtube.com/watch?v=Ltjua10RFy4">https://www.youtube.com/watch?v=Ltjua10RFy4</a>
<b>The Climate Guardians</b>	<a href="https://climacts.org.au/climate-guardians/">https://climacts.org.au/climate-guardians/</a>
<b>The Sustainable Hour</b>	<a href="https://climatesafety.info/tag/the-sustainable-hour/">https://climatesafety.info/tag/the-sustainable-hour/</a>
<b>4 Degrees or More?</b> <b>Australia in a Hot World</b>	<a href="https://blog.csiro.au/four-degrees-of-global-warming-australia-in-a-hot-world/">https://blog.csiro.au/four-degrees-of-global-warming-australia-in-a-hot-world/</a>



# DEDICATION

---

This work spans ten years since the commencement in 2010. It is dedicated to my daughters, Mereki Grace Alice and Hannah Rain Joy, and to their late and much missed father, Iain Walker, who empowered, encouraged and engaged with my work, and I with his and ours, for well over thirty years. Iain is often to be found in this document residing in the word ‘we’ within the text. For he was there at Dharmananda, a part of the Sustainable Living Education Collective; he was there at Protestors’ Falls and when we were taught the Kalahari Bushmen’s Greeting. Together we co-created our family, successfully bonding our two children with his five others. We, and Steve Ingrouille, co-created the Sustainable Living Foundation. We co-created Earth Common Equity Housing Cooperative and the Murundaka Cohousing Community too.

With Iain’s efforts the co-housing model was recognised by the Victorian State Government as a contributing solution to many of the issues surrounding housing unaffordability and the pressing need for sustainable living. It was he who promoted intentional living and coined the probing question “Whose intention are you living?” When his *ecowarrior* and mine met we fell philosophically into step working together as trail blazers and agents of transformative change.

Iain was a model of service, humility and valour and he cared deeply about our world. He received an Australia Day award in 2019 for service to the community.

To Iain, our girls, to all his children and grandchildren; to all the grandchildren of the world; to our community, Murundaka; and to a planet full of life and sentience, where even the shadows are three dimensional entities with moods and phases of being, I say a heart-felt ‘thank-you’. You have wakened my curiosity, my search and my love and it is this that provides the generative force behind this work and all its creative drive.

May we together strive to reverse global warming and restore the conditions that are safe for all of humanity, present and future, and to all species and beings living together *with* (not on) this beautiful blue pearl of a planet, Earth.









**Allegorical** - *tumultuous times now can't be avoided but we can still steer a safer passage (transformative change) with help from navigational guides (technology) to clearer skies (global warming halted and reversed) and stabilised climate ahead.*

Fig.62  
*Finding Safe Passage.*  
Oil on linen. 2.0 x 1.5 mts.  
G. Wilkinson, 2020