

Building personal resilience for research on climate change and biodiversity loss



Balancing hope and realism

SEES HDR Conference 2018 plenary address by Dr Chris McGrath

Image: Death of a reef in the Maldives. XL Catlin Seaview Survey 16/5/2016

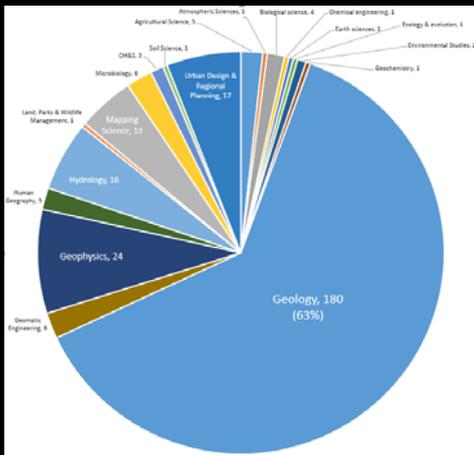
Recognise your* talent and diversity



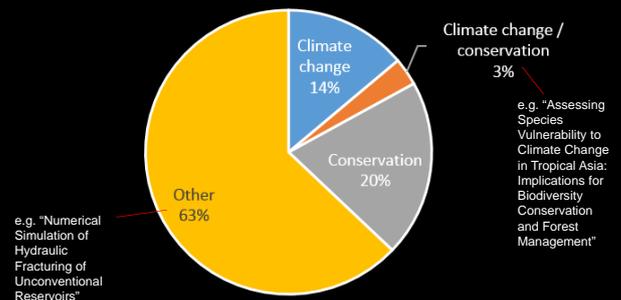
Photo: Tigilau Sali (2013)

* SEES HDR students

305 SEES HDR students in a wide range of disciplines



Nearly 40% of SEES HDR students are studying climate change and conservation topics



Even if you are not directly researching climate change and biodiversity loss, depression, anxiety, despair and burnout are common.



We all need to talk more about mental health. I hope that this presentation speaks to everyone.

OUTLINE OF PRESENTATION

PART 1: THE PROBLEM OF DESPAIR & BURNOUT

- A story.
- Climate change and biodiversity loss pose immense threats to the natural environment and society, yet the policy response to both has largely been a collective shoulder shrug.
- We are drowning in data already and more data seems unlikely to change ingrained political antipathy, apathy and inaction.
- Given this, how can researchers manage feelings of personal despair and burnout?

PART 2: FINDING YOUR ANSWER

- (5) Strategies for SEES HDR researchers to cope in the face of ongoing inaction on climate change and biodiversity loss

A story
(about me and you)

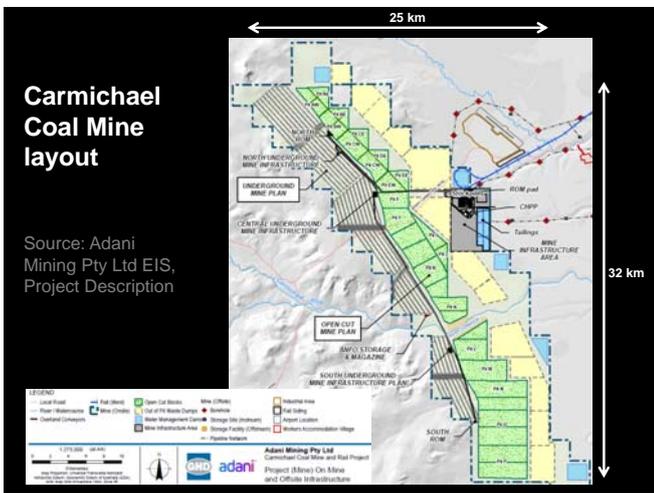


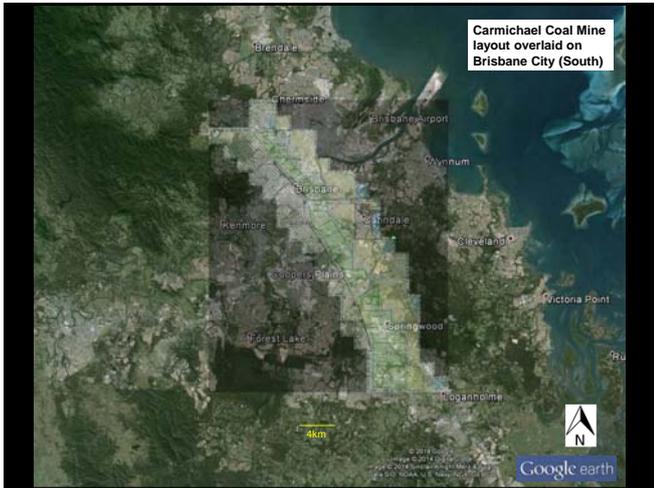
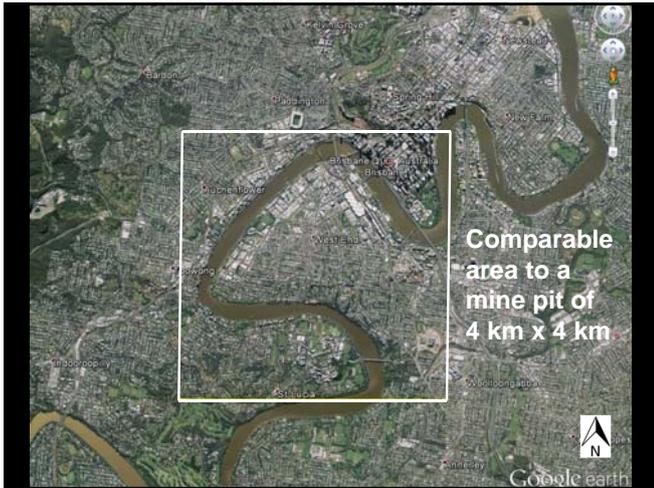
When I was 15 ...

- A winding path:
- Science / Law degree at UQ in the 1990s
 - Enforcement Officer with Qld Dept. of Environment 1998-1999
 - Master of Laws in 2000
 - PhD 2001-2007
 - Barrister 2000 – present
 - Teaching & public education



The enormous scale of coal mines, especially the new mega-mines like Carmichael, is difficult to comprehend.





Current climate conditions are too high for healthy reefs. If we continue on our current path (e.g. Adani mine) we are certain to lose the Great Barrier Reef.

A CRS-A	B CRS-B	C CRS-C
375 ppm +1°C	450-500 ppm +2°C	> 500 ppm > +3°C

Source: Hoegh-Guldberg et al (2007) Vol 318 Science 1737

The grant of the final major approval for the Adani coal mine in the midst of coral bleaching indicates not only have we not learnt what we must do to protect the reef, **we are actively moving in the wrong direction** to protect it.



Climate change and biodiversity loss pose immense threats to the natural environment and society, yet the policy response to both has largely been a **collective shoulder shrug**.

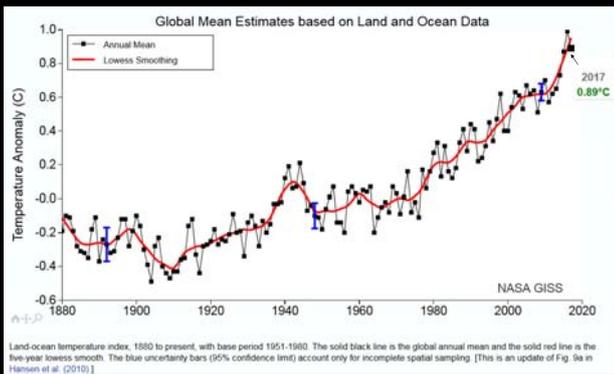


We are drowning in data already and **more data seems unlikely to change ingrained political antipathy, apathy and inaction.**

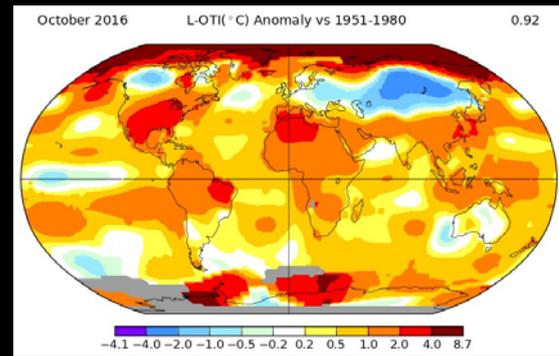
IPCC AR5



We are drowning in data



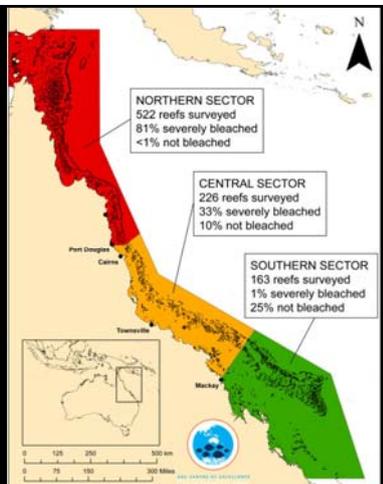
We are drowning in data



April 2016: "There is clear evidence of the extent and severity of the bleaching, which supports the conclusion that the reef is experiencing the worst bleaching event ever seen. ...

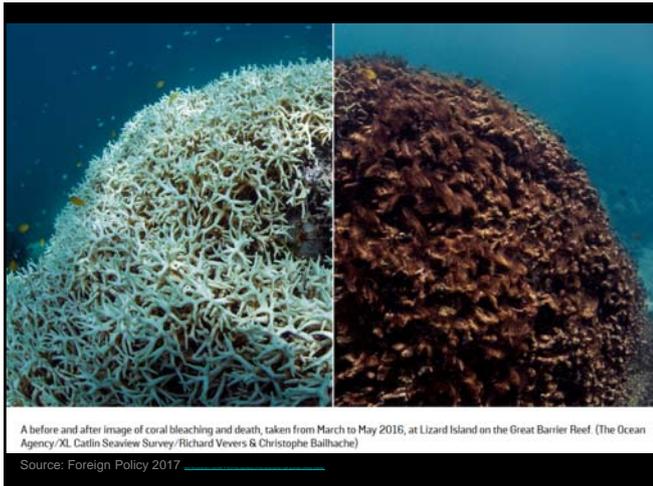
... the level of bleaching ... is catastrophic in the northern sector. Along the length of the Great Barrier Reef from north to south, there is a gradient of decreasing severity, from very severe to no sign of bleaching."

Source: Jon Day, ARC Coral Reef Studies, JCU, "Great Barrier Reef bleaching stats are bad enough without media misreporting" The Conversation, 27 April 2016



We are drowning in data on climate change and biodiversity loss





© CSIRO 1999 *Mar Freshwater Res.* 1999, 54, 839-66

Climate change, coral bleaching and the future of the world's coral reefs

Ove Hoegh-Guldberg

*School of Biological Sciences, A08, University of Sydney, NSW 2006, Australia
email: oveh@bio.usyd.edu.au*

Abstract. Sea temperatures in many tropical regions have increased by almost 1°C over the past 100 years, and are currently increasing at ~1-2°C per century. Coral bleaching occurs when the thermal tolerance of corals and their photosynthetic symbionts (zooxanthellae) is exceeded. Mass coral bleaching has occurred in association with episodes of elevated sea temperatures over the past 20 years and involves the loss of the zooxanthellae following chronic photoinhibition. Mass bleaching has resulted in significant losses of live coral in many parts of the world. This paper considers the biochemical, physiological and ecological perspectives of coral bleaching. It also uses the outputs of four runs from three models of global climate change which simulate changes in sea temperature and hence how the frequency and intensity of bleaching events will change over the next 100 years. **The results suggest that the thermal tolerances of reef-building corals are likely to be exceeded every year within the next few decades. Events as severe as the 1998 event, the worst on record, are likely to become commonplace within 20 years.** Most information suggests that the capacity for acclimation by corals has already been exceeded, and that adaptation will be too slow to avert a decline in the quality of the world's reefs. The rapidity of the changes that are predicted indicates a major problem for tropical marine ecosystems and suggests that unrestrained warming cannot occur without the loss and degradation of coral reefs on a global scale.

Alarm bells rang loud & clear in 1998 for coral reefs, one of the Earth's most important ecosystems, which millions of people depend upon for food and livelihoods.

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Putting our fingers in our ears
The Australian and Queensland governments' policy approach to climate change issues when assessing coal mines

LALALALALA...I Can't Hear You!

Photographer: unknown

"The former Canadian environment minister Charles Caccia ... compared the country's position on greenhouse gases – pledging to reduce emissions on the one hand while increasing tar-sands production on the other – to **'attempting to ride two horses galloping in opposite directions.'**"

Elizabeth Kolbert (2007) *Field Notes from a Catastrophe*

Given this, how can researchers manage feelings of personal despair and burnout?

PART 2: FINDING YOUR ANSWER

5 strategies

1st strategy:

Be kind to yourself:
remember why you started
your journey.



2nd strategy:

See your career as a
marathon, not a sprint.

It is really common to see people in the conservation sector come in and work incredibly hard. They keep it up for a few years and then burnout and drop out.

Don't let that happen to you.

See your career as a (30 year) marathon, not a (1-2 year) sprint.



Photo: Steven Senne/AP

3rd strategy:

Recharge regularly:

- exercise
- spend time with your friends, your family & **doing things you love**
- take weekends off (turn off the news) & holidays

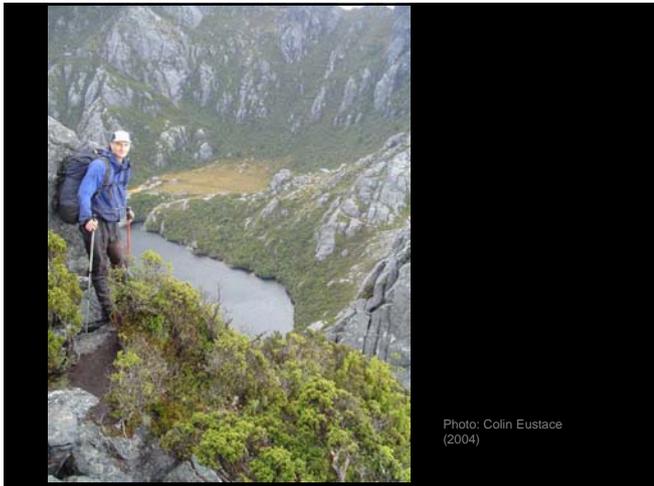


Photo: Colin Eustace (2004)



Stradbroke Island, May 2012
Photo: Chris McGrath



Photograph by Xuan Thuan Nguyen (Tic), 2011

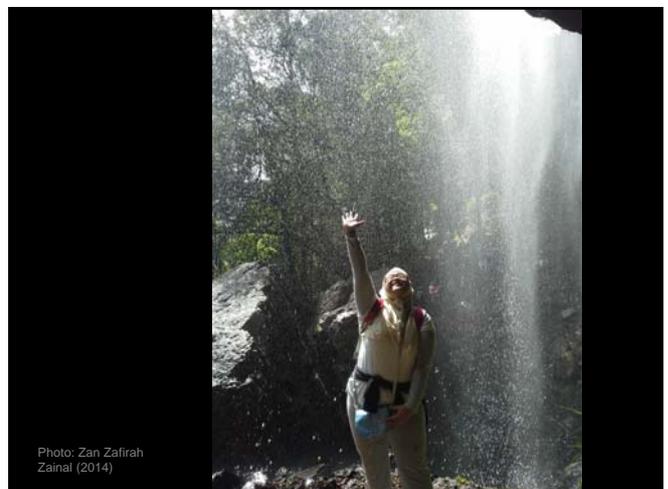


Photo: Zan Zafirah Zainal (2014)

It is important to stay in touch with the wonderful places (and people) that you love.

They will recharge you during your career and remind you what you are working to protect.



4th strategy:

Accept that it is rational to despair in the face of the crises facing the Earth. Move beyond acceptance of that to work for positive change despite the potential for failure.

It is rational to despair in the face of the crises facing the Earth but we can move beyond acceptance of that to work for positive change despite the potential for failure.

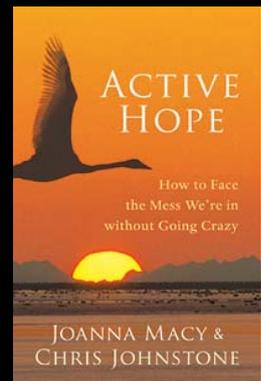


Joanna Macy, photo by Adam Shemper

See Joanna Macy's work on despair and empowerment:
<http://www.ioannamacy.net/>

Practice which sustains active hope:

1. Take in a clear view of reality.
2. Identify our vision for what we hope will happen.
3. Take active steps to help bring that vision about.



Source: Joanna Macy & Chris Johnstone, *Active Hope*

Hope is an essential part of success.

Despair and denial have the common outcome of inaction. You/we don't take action because (for despair) the problem is hopeless or (for denial) we don't accept it is a problem that needs addressing.

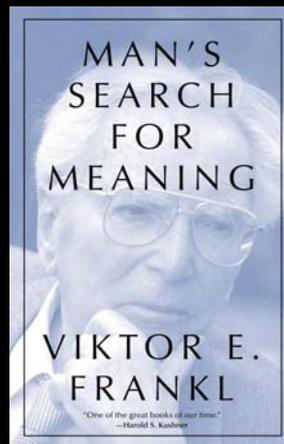
There is no "plan B" or "planet B" we or our kids are going to.



"The Blue Marble" Photo: NASA (1972), Apollo 17

5th strategy:

Choose to use the skills and tools you have to save what you can. Choose to fight to protect the people and places you love.



Originally published: 1946



Martin Luther King Jr. waves to supporters Aug. 28, 1963, in Washington, D.C., during the March on Washington. (Photo: AFP/Getty Images)



Photo: AP

We need to fight for the future we want.

Being nice, expecting others to be reasonable and that our governments will take action necessary to prevent climate change **is not working** at present.

"We shall defend our island, whatever the cost may be, **we shall fight on the beaches**, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender."

Winston Churchill, 1874-1965

Photo: Government of Canada, 1941

“Fighting” in this context does not mean acts of aggression but **refusing to passively accept unacceptable outcomes** and actively working to avoid those outcomes through any non-violent political, public and personal actions available to you.

Don't accept unacceptable behaviour or government policies.

Don't give up.

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Strategies for SEES HDR researchers to cope in the face of ongoing inaction on climate change & biodiversity loss:

1. Be kind to yourself: remember why you started your journey.
2. See your career as a marathon, not a sprint.
3. Recharge regularly:
 - exercise
 - spend time with your friends, your family & doing things you love
 - take weekends off (turn off the news) & holidays
4. Accept that it is rational to despair in the face of the crises facing the Earth. Move beyond acceptance of that to work for positive change despite the potential for failure.
5. Choose to use the skills and tools you have to save what you can. Choose to fight to protect the people and places you love.

Questions?

Do you have any strategies for dealing with despair and burnout you'd like to share?