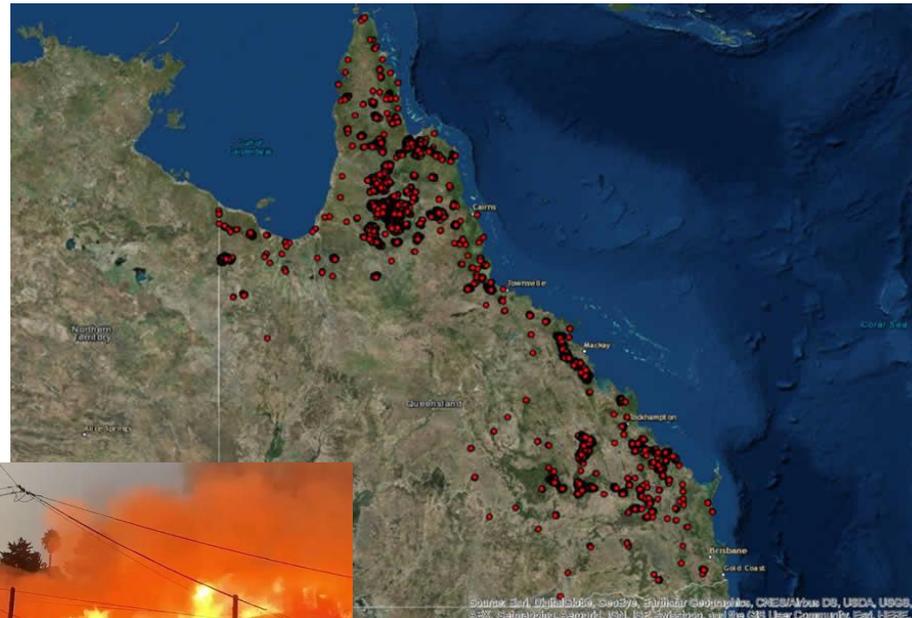


Accepting change: Protection, restoration and climate change adaptation for the Great Barrier Reef

Lisa Walpole
Riversymposium
21 October 2019

Change?

Loss?



Let's talk about...

1. The climate change narrative for the Great Barrier Reef
2. Perspectives on current response
3. Environmental stages of grief
4. A coordinated way forward

Research context

- QWMN review of incorporation of climate variability and change into water modelling across Queensland
- GBRF Investment Pathways
- Master's research – review of consideration of climate change in strategic planning, operational activities and research for protecting and restoring the GBR



Great Barrier
Reef Foundation



International
WaterCentre

Research approach

- Desktop review of key plans, strategies, reports and papers
- Interviews with 12 key actors in the GBR space:
 - GBRMPA, OGBR, GBRF, NRM groups, NGOs, research, private



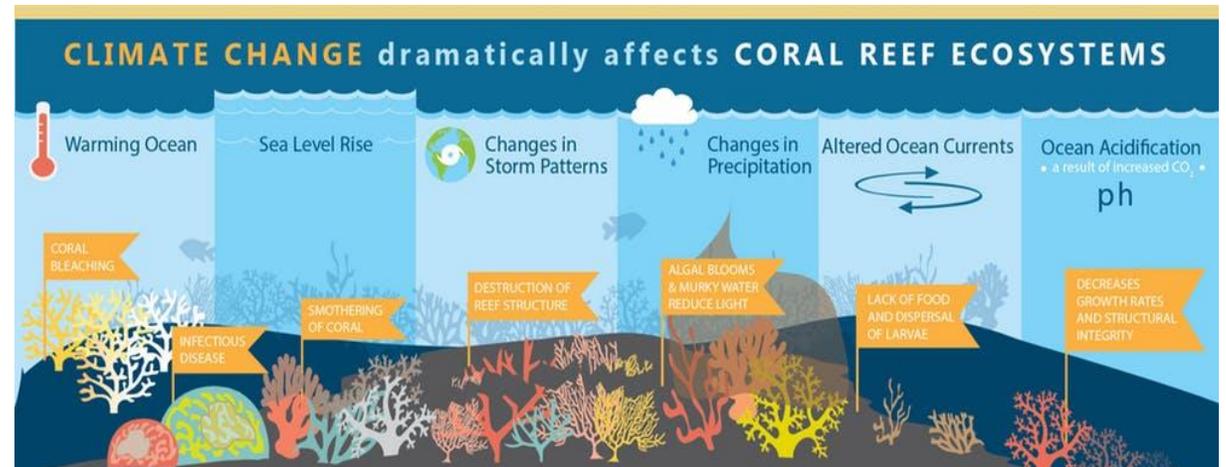
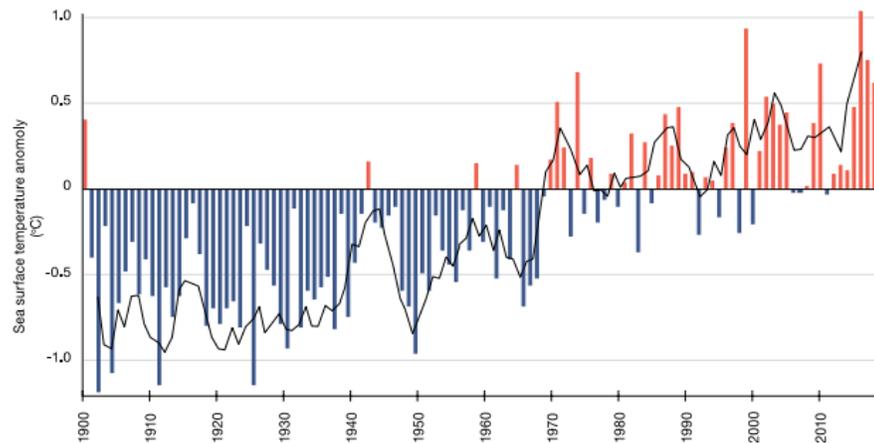
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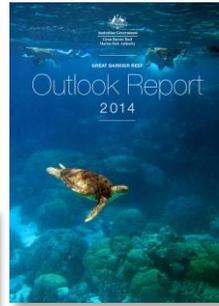
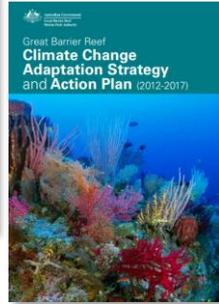
- 3 years on the World Heritage 'In danger' warning list
- 2019 Outlook Report - overall 'very poor'
- Projected rates of climate change are highly likely to occur faster than rates of evolutionary adaptation in many plant and animal species

Outlook Reports 2009, 2014, 2019

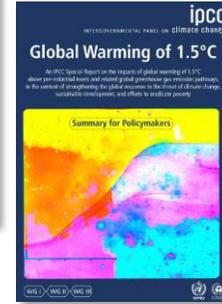
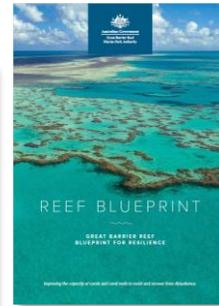
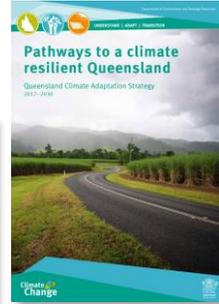




Great Barrier Reef Marine Park Act 1975



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21-CMP11



WORLD HERITAGE IS OUR PROMISE TO THE FUTURE

A statement from the Board of the Wet Tropics Management Authority regarding serious climate change impacts on the Wet Tropics of Queensland World Heritage Area



1975

1981

2009

2011

2012

2014

2015

2017

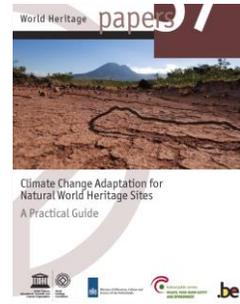
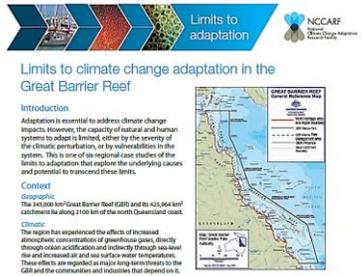
2018

2019

RECOMMENDATION
Great Barrier Reef Marine Park meets the criteria of the Convention and therefore should be placed on the World Heritage List. The Committee should laud the efforts of the Government of the Commonwealth of Australia in providing virtually the entire Great Barrier Reef, and request periodic information about how development pressures are being managed so as to maintain the integrity of the site. The Committee should also note that the Great Barrier Reef extends beyond the northern boundary of the property nominated, and press a willingness to accept the addition of this area should it become liable in the future.

International Union for Conservation of Nature
July 1981 (draft)

World Heritage Status



Reef Restoration and Adaptation Program

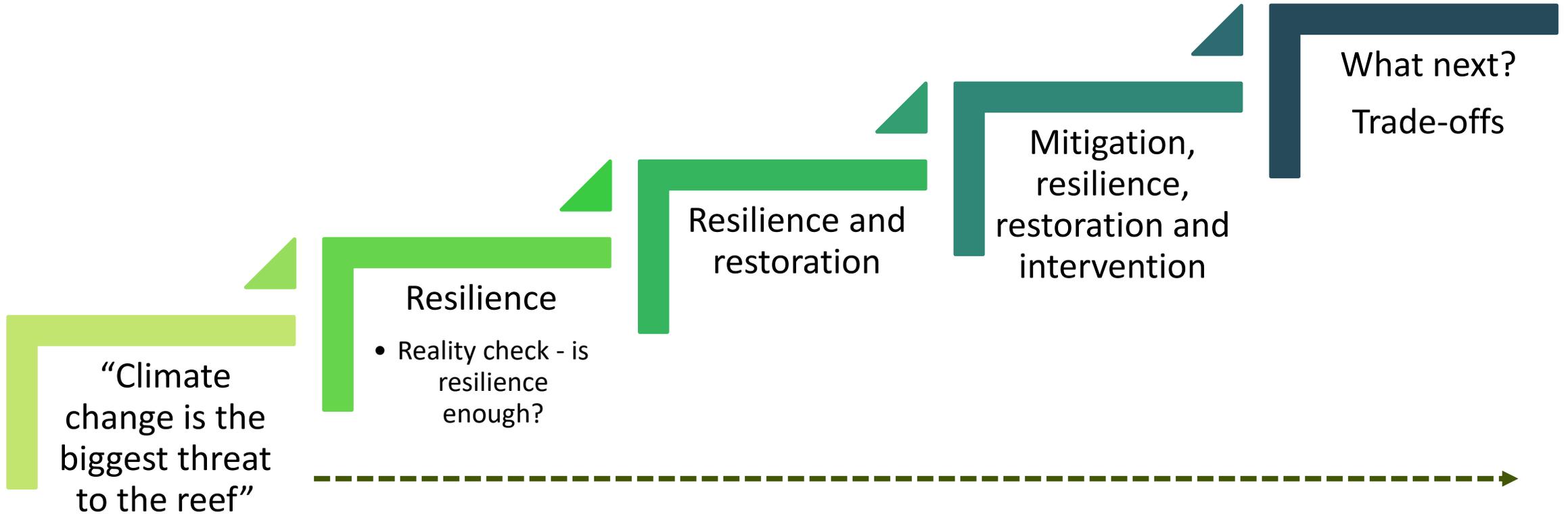
A partnership helping the Great Barrier Reef resist, adapt and recover

- A partnership helping the Great Barrier Reef resist, adapt and recover
- In addition to a global commitment to greenhouse gas mitigation, and continued management of local pressures, further measures are needed.
- Australian Government provided \$6M for the concept feasibility phase to investigate the best science and technology options to help the Great Barrier Reef resist, repair and recover
- Cooling and shading, reef structures and stabilization, coral reproduction and recruitment, biocontrol, field treatments, seeding

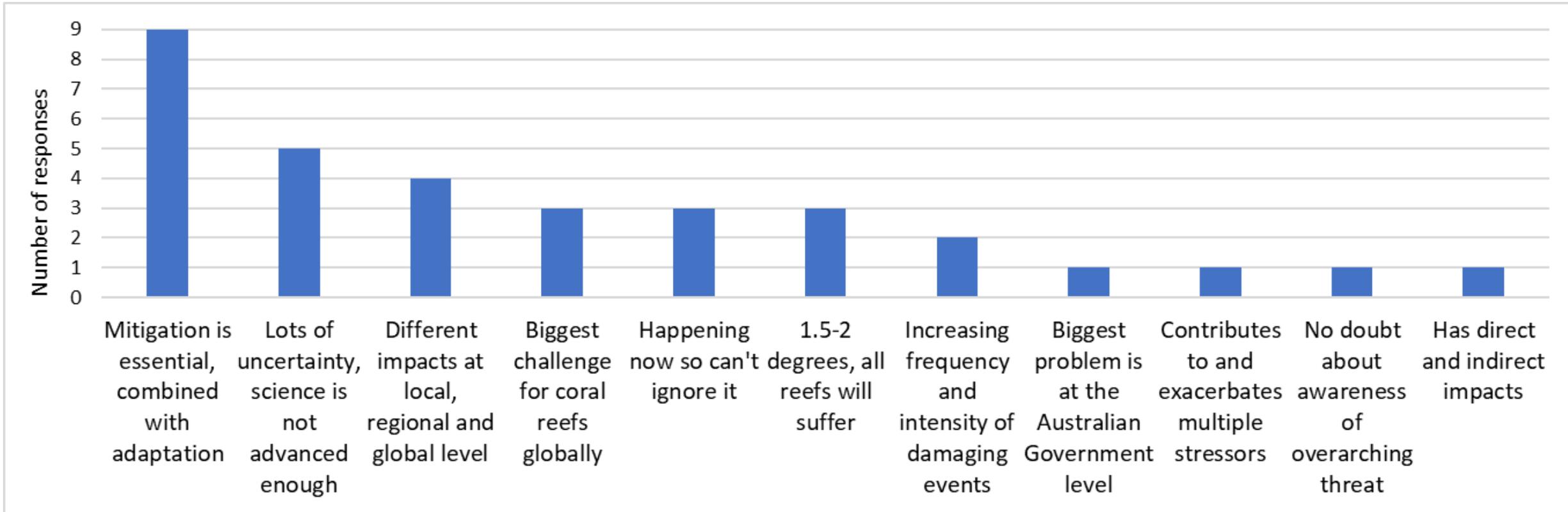
Reef Restoration and Adaptation Program, a partnership:



How has the climate change narrative changed?

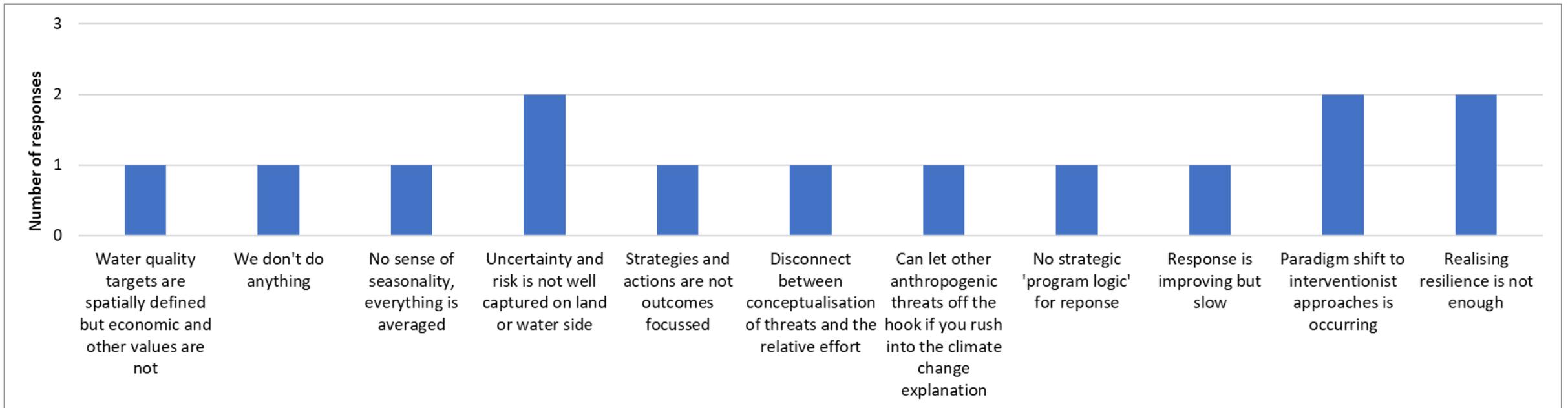


What do the experts think?

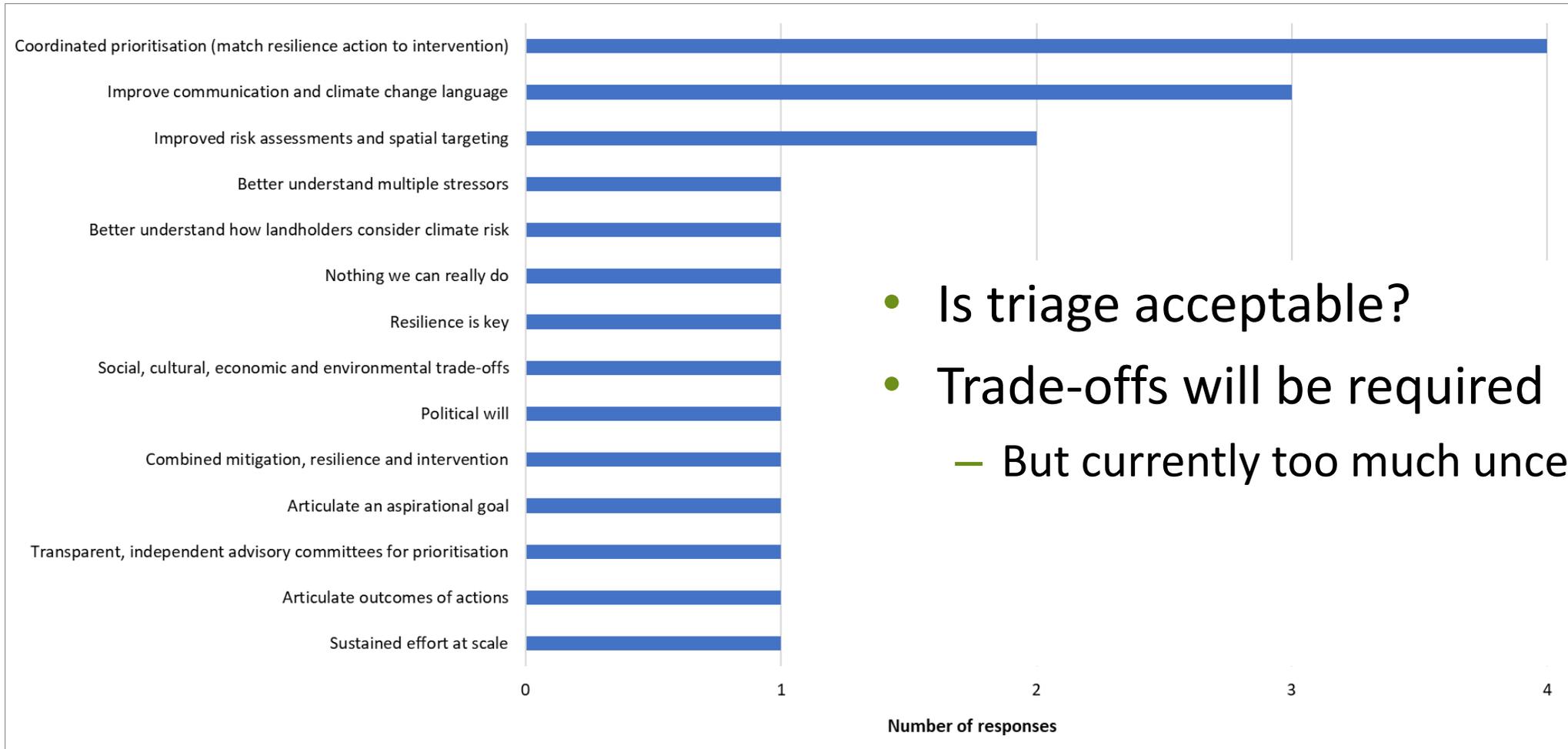


What do the experts think?

- Response will require strengthening resilience and active intervention
 - The appetite for intervention has recently escalated



What do the experts think?



- Is triage acceptable?
- Trade-offs will be required
 - But currently too much uncertainty

Is there hope?

'Easier not to look at climate change'

'Nothing we can really do'

'Too little too late in a lot of ways'

'Not saying a waste of time because we don't have any other solutions'

'If you don't try with water quality you're not even giving it a chance'

'High risk, low chance of success'

'Mildly positive that we could preserve more than if we did nothing'

'Not enough money not enough capability'

'Not the time to give up, time to put the pedal to the wheel'

'We're in desperate times'

'No matter what, moving to intervention'

'Small country, nothing to do with us is a pathetic excuse'

'Don't want people to give up on it, but don't want to pretend it's not happening either'

'Situation is hopeless'

'Coral in the GBR is a write off'

'10 years ago struggling to understand the basics, now at a point where we understand more'

Kübler-Ross Grief Cycle

Stages of loss/grief



*the 7 stages of grief/loss meme, featuring...
HOMER J. SIMPSON*

shock

denial

anger

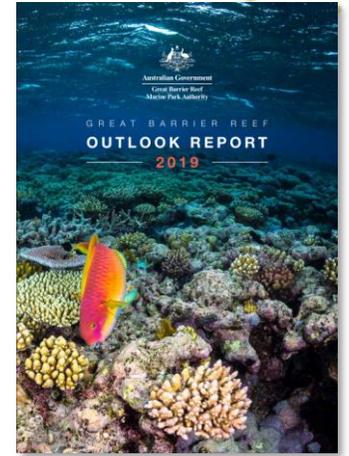
fear

depression

bargaining

acceptance

The Reef - Acceptance (or not) of change



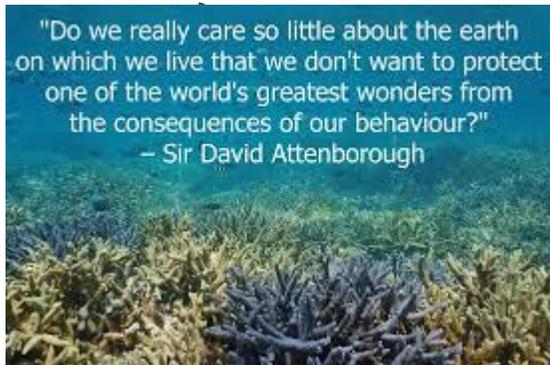
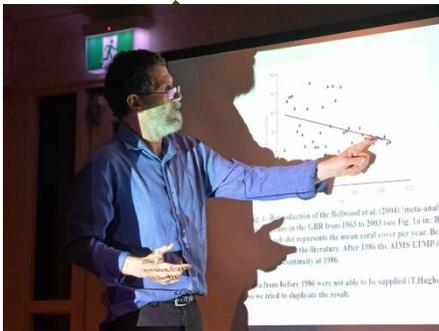
Denial

Anger

Bargaining

Depression

Acceptance





'You need to stop smoking or there's no hope'



'We're going to have to amputate to save the rest of the body'



'We need stronger treatment, but then you should be ok'



'Stop drinking and 10,000 steps a day and you can fight anything'

Acceptance of change and loss

- Study asserts that in the natural resource management space, there are implications of individuals and groups within a collective being at different stages of the grief cycle when coordinated action is required
- The proposition is that by there being a level of agreement that there will be some loss, the level of loss can be reduced, and somewhat actively managed

Mitigation



Coordination and Prioritisation

Intervention

Resilience

Restoration



A way forward (for the GBR and NRM in general)

- **Accept change**
 - Agree on the likely, acceptable and aspirational future state
- **Active management**
 - Balance resilience, restoration and intervention (and mitigation)
- **Respond to a changing climate**
 - Ensure actions consider seasonality, extremes
- **Coordination**
 - Agree on values, priorities, trade-offs

Take away message

Unless we all **agree and accept** that change/loss is inevitable, we won't be able **to plan and implement a coordinated approach** to protecting the environmental, social and economic values of the GBR

Thanks for listening

Lisa Walpole
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