

VICTORIA'S CLIMATE CHANGE ADAPTATION ACTION PLAN 2022-2026

NATURAL ENVIRONMENT

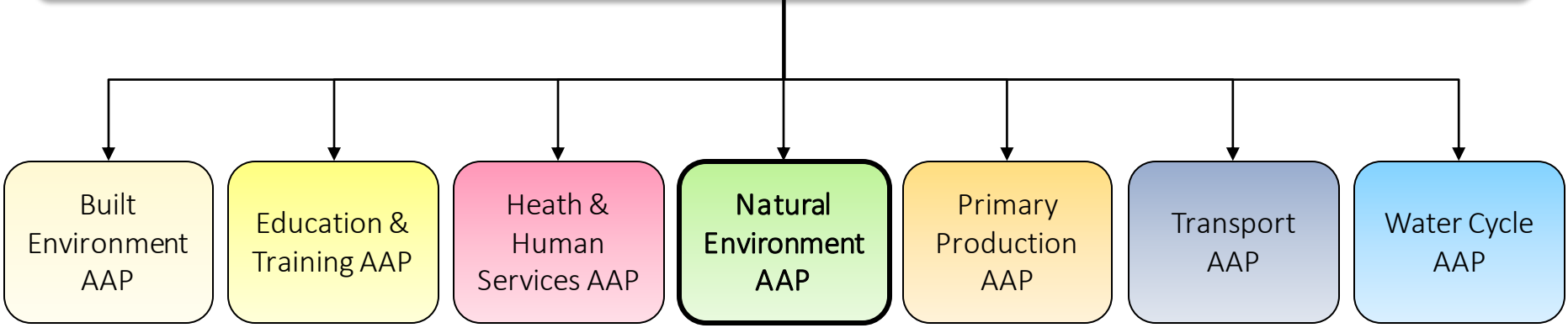
Lis Ashby
Biodiversity Futures
DELWP Biodiversity



VICTORIA

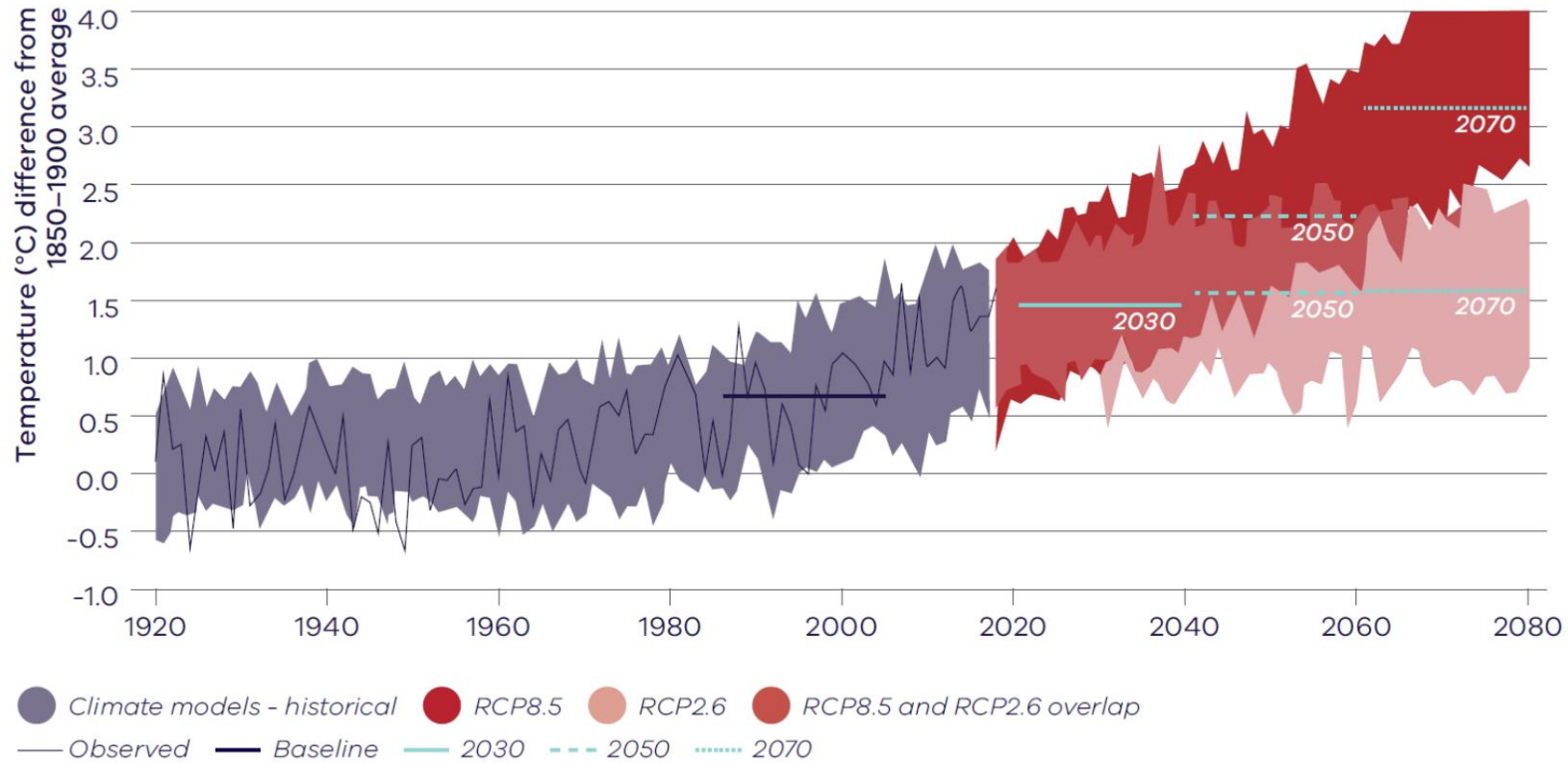
Climate Change Act 2017

Climate Change Strategy



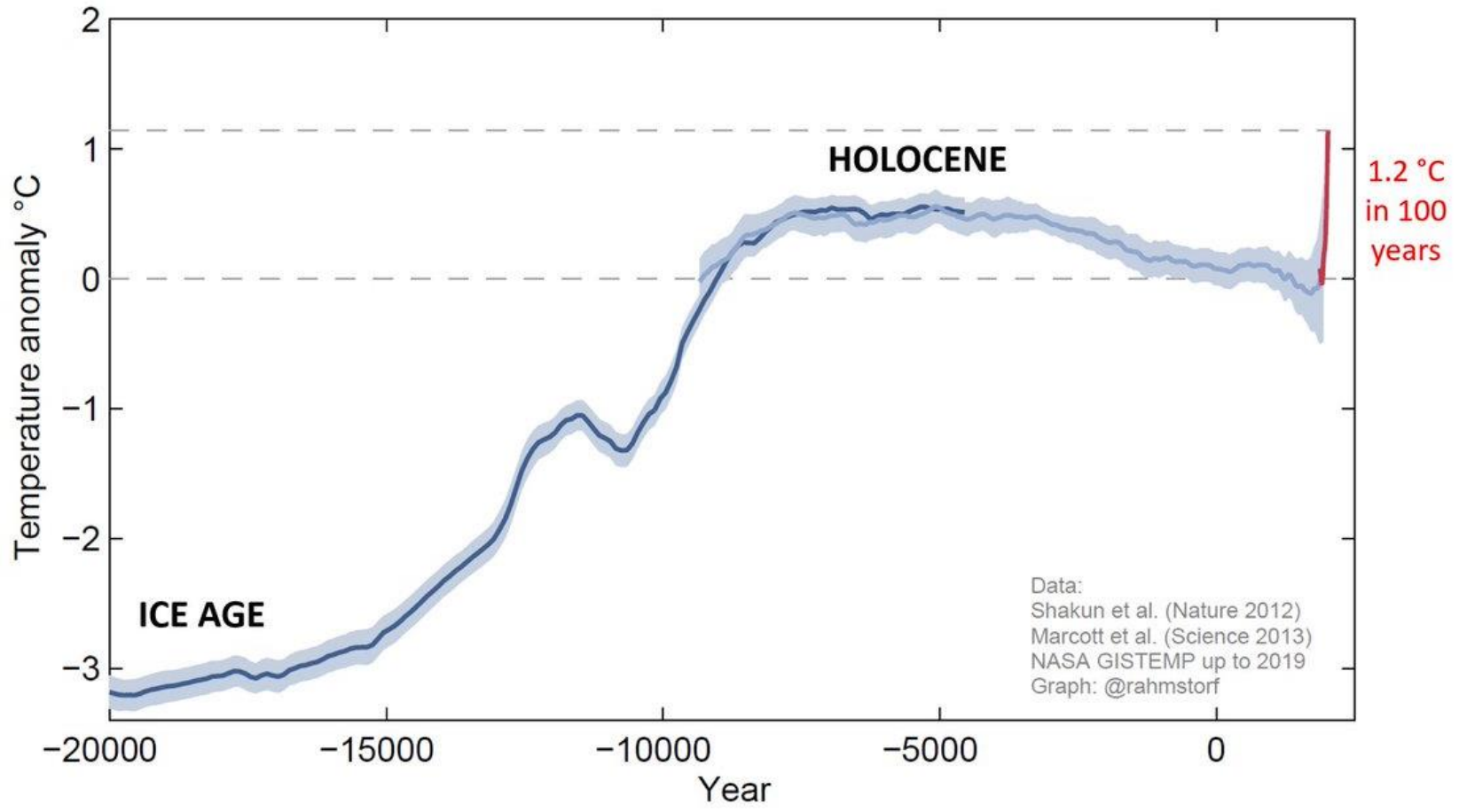
6 Regional Adaptation Strategies

The amount of change is significant



Source: CSIRO, 2019, Victorian Climate Projections 2019

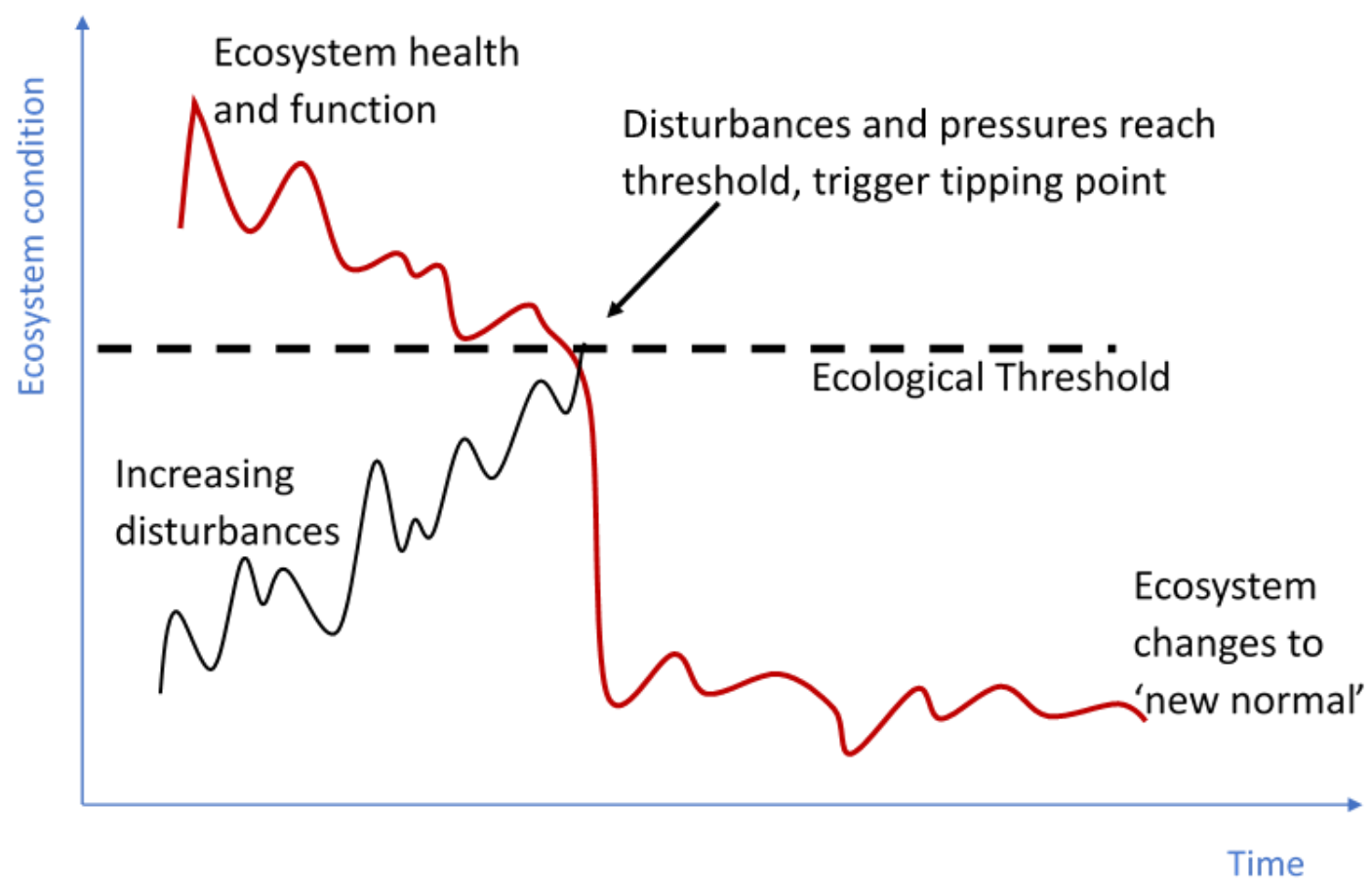
The rate of change is significant



Source: Professor Rahmstorf, Potsdam Institute for Climate Impact Research

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Ecological thresholds are likely to be exceeded



Adapted From: Dana M et al. 2011 Global Change Biology

Supporting the natural environment to adapt

Some ecosystems will:

- be **resistant** – they will be able to withstand climate-related impacts and remain essentially unchanged.
- be **resilient** – they will be impacted but have the ability to recover.
- **transition** – they will be impacted and will not recover to their previous state. For instance, they could change structure or composition and, in some cases, even become a 'novel' ecosystem.

We need to reduce existing threats to give the natural environment a fighting chance.

However, our current approach is not well-suited to climate change:

- ▶ amount of change
- ▶ rate of change
- ▶ significant uncertainty.

The Climate Adaptation Lens

Adaptation requires that we do things differently.

Apply the climate adaptation lens to NRM decisions.

1. Consider the issue within context

2. Account for the 'lifetime' of the decision

3. Acknowledge uncertainty

4. Take a futures approach

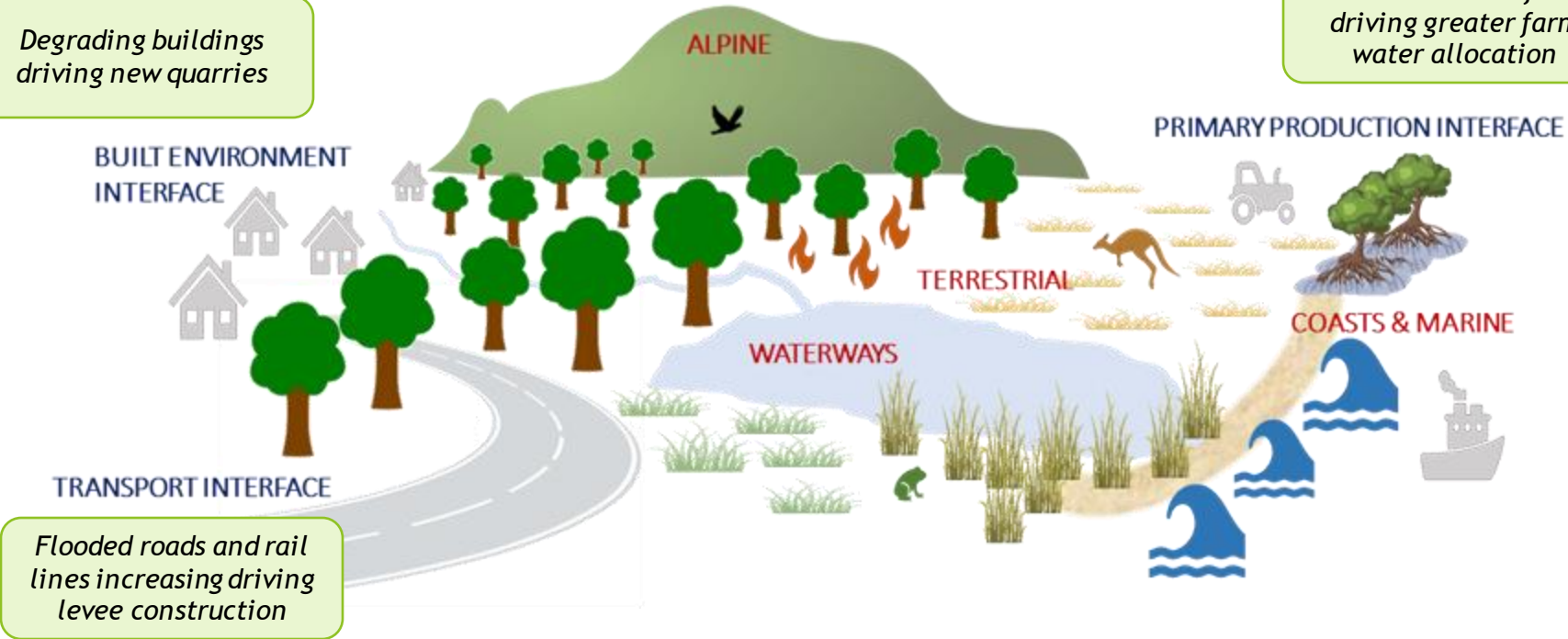
5. Anticipate transformational change

6. Be transparent about trade-offs

Consider the issue within context

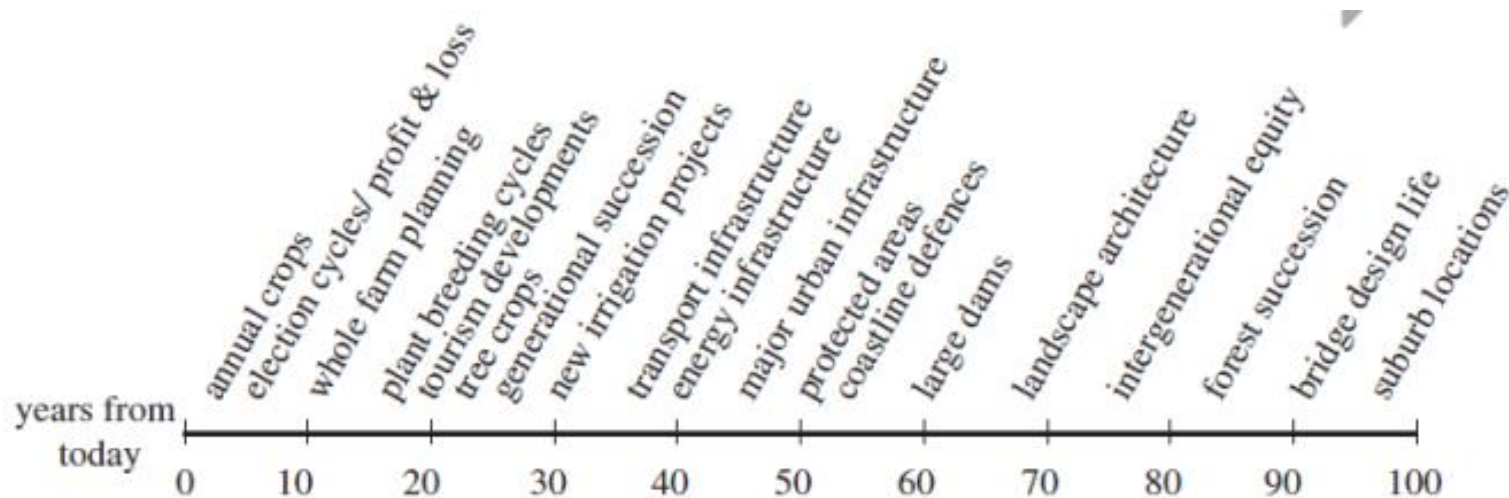
Degrading buildings driving new quarries

Decreased rainfall driving greater farm water allocation



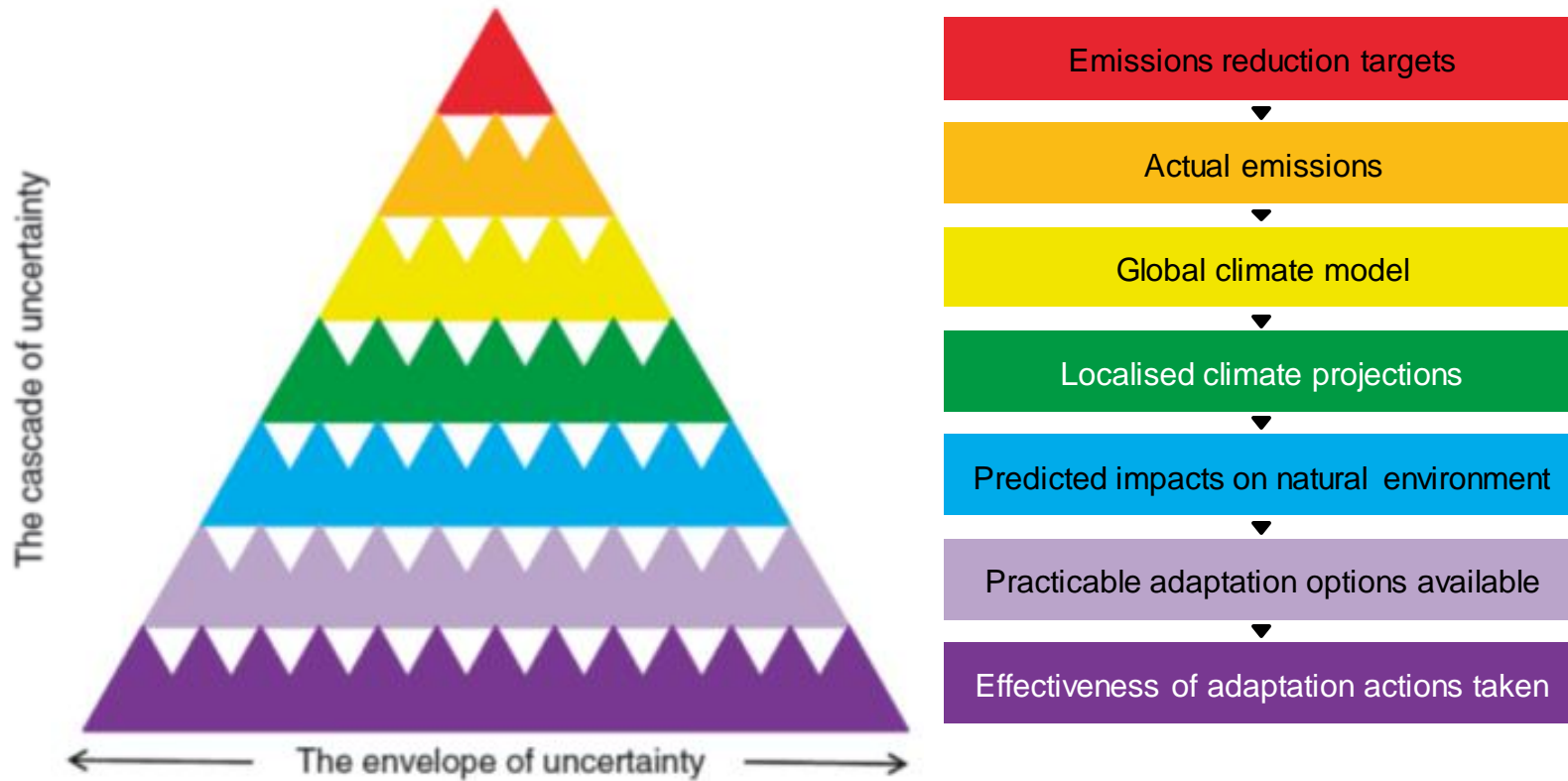
Flooded roads and rail lines increasing driving levee construction

Account for the lifetime of the decision



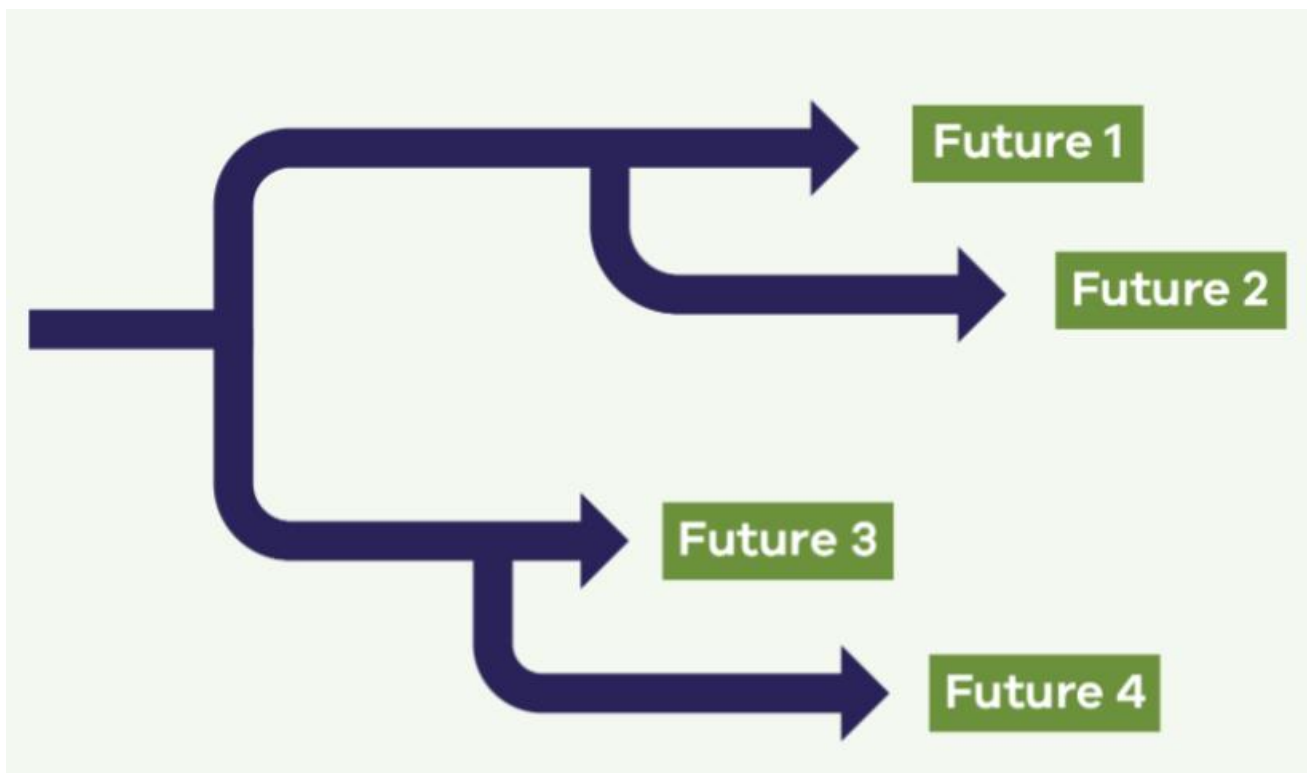
Source: Stafford-Smith et al. 2011 *Phil. Trans. R. Soc. A*

Acknowledge uncertainty



Adapted from: Wilby and Dessai 2009 Weather

Take a futures approach



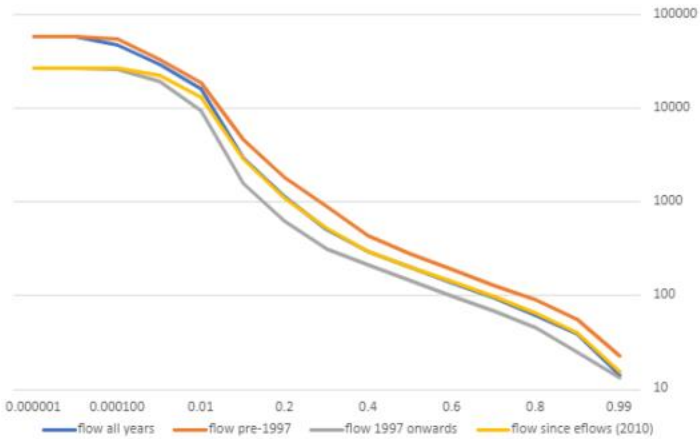
Anticipate transformational change

TRIGGER 1: Significant changes have already occurred

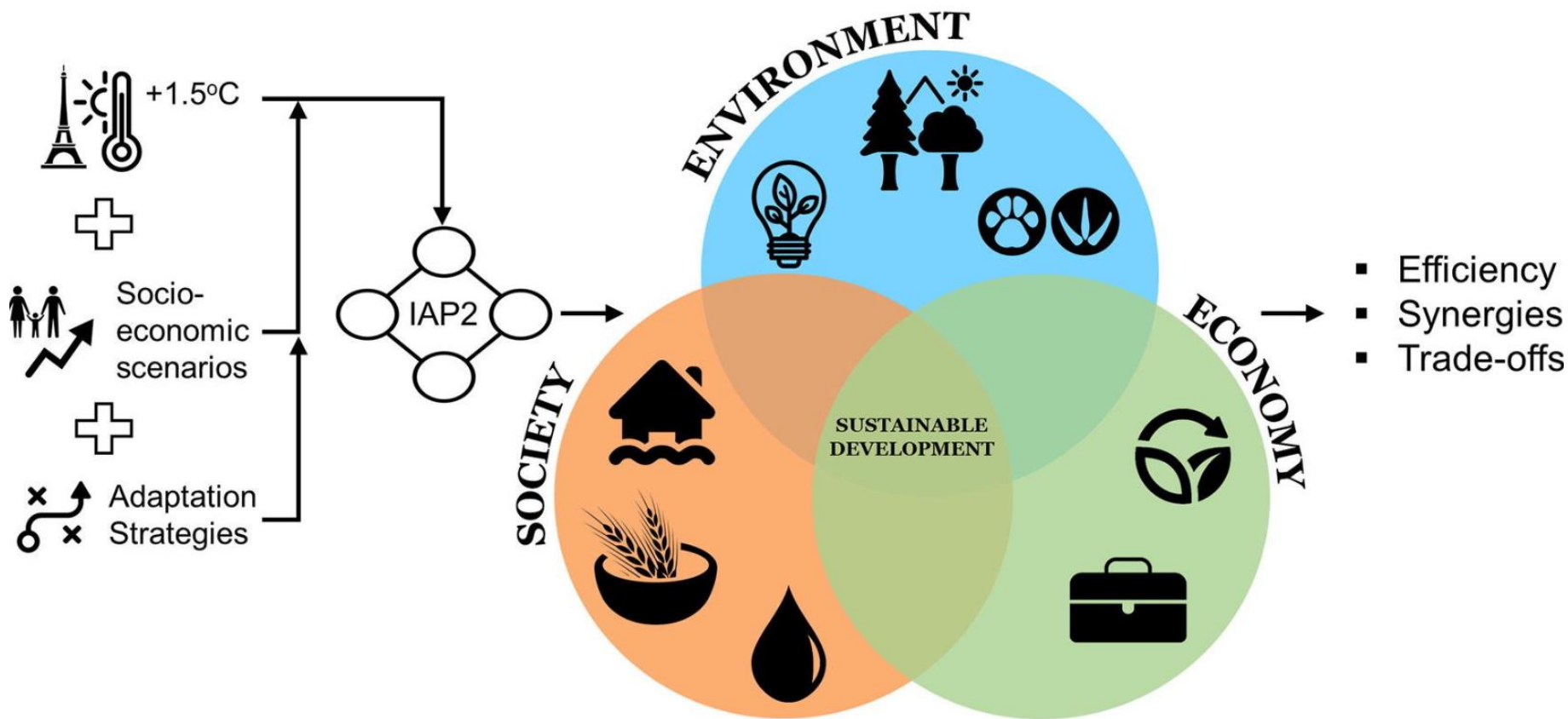
TRIGGER 2: There are signs of high vulnerability

TRIGGER 3: Current approaches are failing

TRIGGER 4: Decisions have long-term consequences



Be transparent about trade-offs

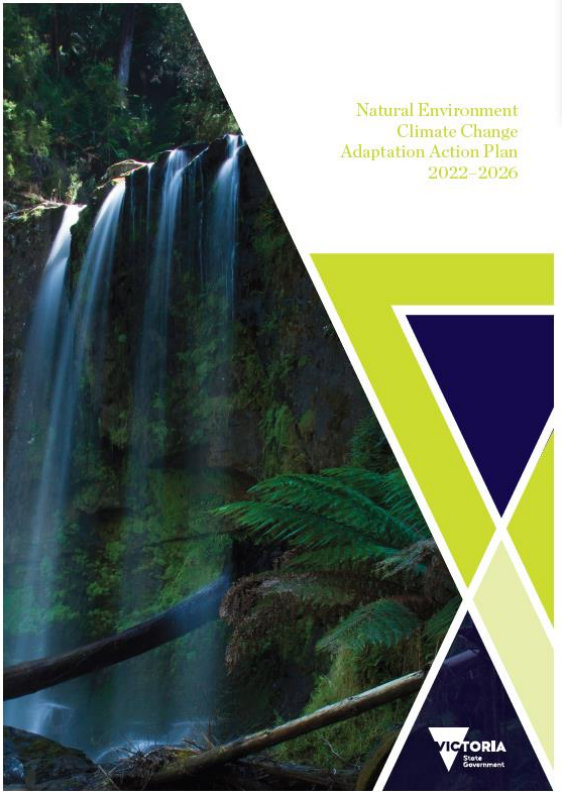


Source: Papadimitriou et al. 2019 Science of the Total Environment

NEAAP is enabling

NEAAP aims to:

- ▶ Embed climate change adaptation into natural environment management
- ▶ Lay the foundation for how to approach adaptation
- ▶ Inform sector-specific plans and strategies,
- ▶ Support flexible, adaptive and robust decision-making under high uncertainty.



NEAAP Actions

The 20 actions under to meet 5 objectives:

1. Improve our understanding of risks and vulnerabilities
2. Help to prioritise adaptation actions and focus efforts
3. Create a framework to support climate-adapted decision making
4. Support and enable practitioners to better approach decision making in the context of a changing climate and increased uncertainty
5. Support Traditional Owner outcomes and objectives

<https://www.environment.vic.gov.au/natural-environment-adaptation-action-plan/actions>

Challenges

- Shifting people from current ways of doing things/existing frameworks ('efficiency'/cost-effectiveness, older legislative frameworks)
- Discomfort with uncertainty and novelty, seeking proven or replicable experiences
- Capability/expertise gap
- Shift to 'holistic, sustained model with flexibility' to enable longer-term, adaptive projects
- Psychological impact of climate change (e.g. protected values)
- Making time/space for extensive stakeholder engagement
- Prioritising work for impacts felt far into the future when disasters, economic conditions, COVID being felt now.

Looking forward

- ▶ Spreading the word about climate change impacts, NEAAP directions and work that has been done or current projects
- ▶ Working with interested people to show how climate adaptation lens can be applied
- ▶ Finding keen people who want to incorporate adaptation into their work – want to pilot approaches and/or share understandings
- ▶ Trying to connect people together – like-minded, similar projects – to build capacity and learning across the system.