

Biodiversity: why care?

roly russell



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The Fall of Icarus, 17th century, Musée Antoine Vivenel

Biodiversity: why care?



The science says ...

**Biological diversity
matters to
ecosystem function**

Roles matter more than just

diversity of a community, but there is still no consensus on which are most suitable. Indeed, none of the existing indices meets all the criteria required for general use. The main criteria are

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ecosystem functioning: A

, China

Vive la différence: plant functional diversity matters to ecosystem processes

Sandra Díaz and Marcelo Cabido

The links between plant diversity and ecosystem functioning remain highly controversial. There is a growing consensus, however, that functional diversity, or the value and range of species traits, rather than species numbers *per se*, strongly determines ecosystem functioning. Despite its

change across s
critical value of
and this has lec

REVIEW

Beyond species: func
maintenance of ecos

ecosystem processes and the ECOSYSTEM SERVICES (see Glossary) that humans derive from them¹. The issue of whether plant diversity influences ecosystem processes has received increasing attention in the

¹Graham Centre for Agricultural Innovation (alliance between Industry & Investment NSW and Charles Sturt University), Wagga Wagga Agricultural Institute PMB, Wagga Wagga, NSW 2650, Australia

²Molecular Ecology Group (MEG), Water Research Institute, National Research Council (CNR-IRSA), Verbania Pallanza, Italy

³Institute of Ecology and Earth Sciences, University of Tartu, Tartu, Estonia

It's not just about numbers ...

Biodiversity: what is it?

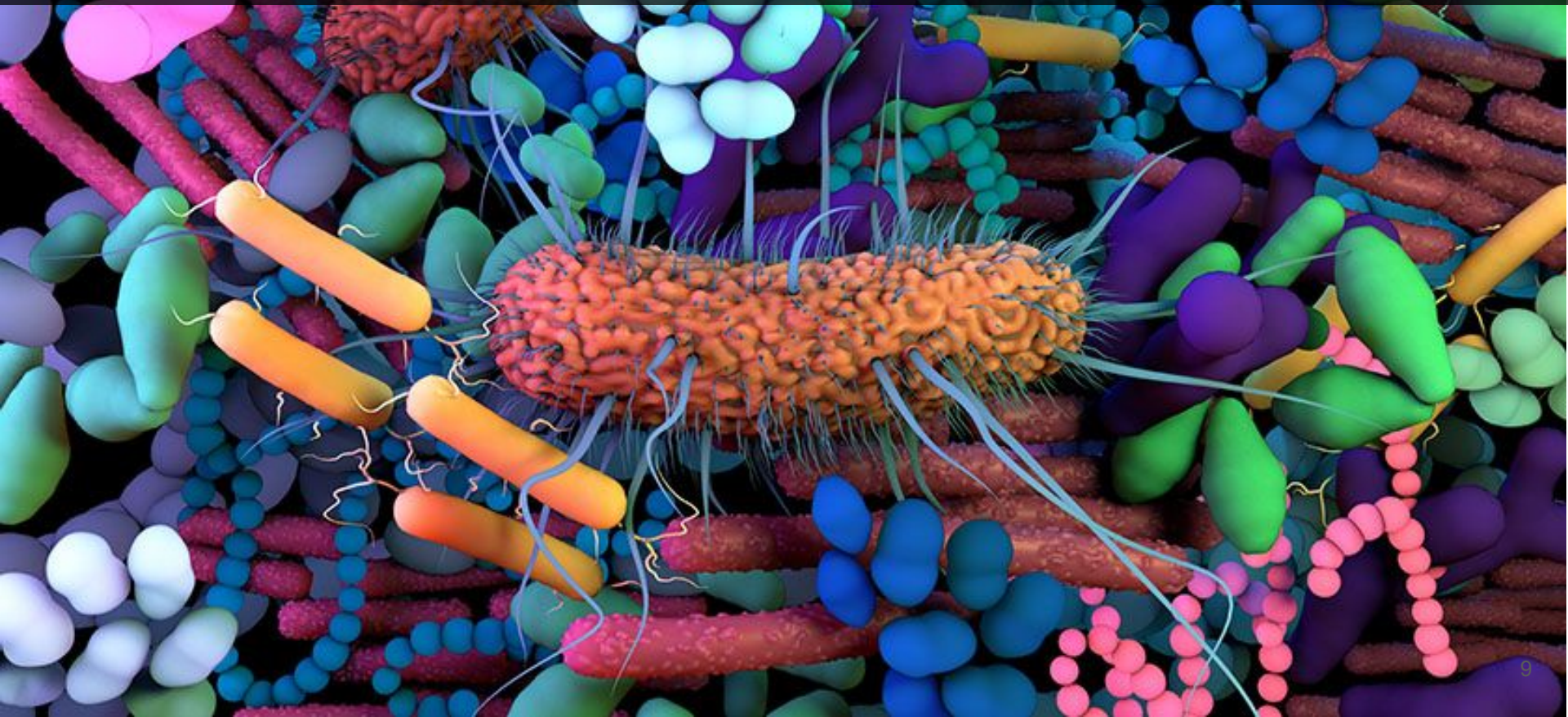


Biodiversity: what is it?



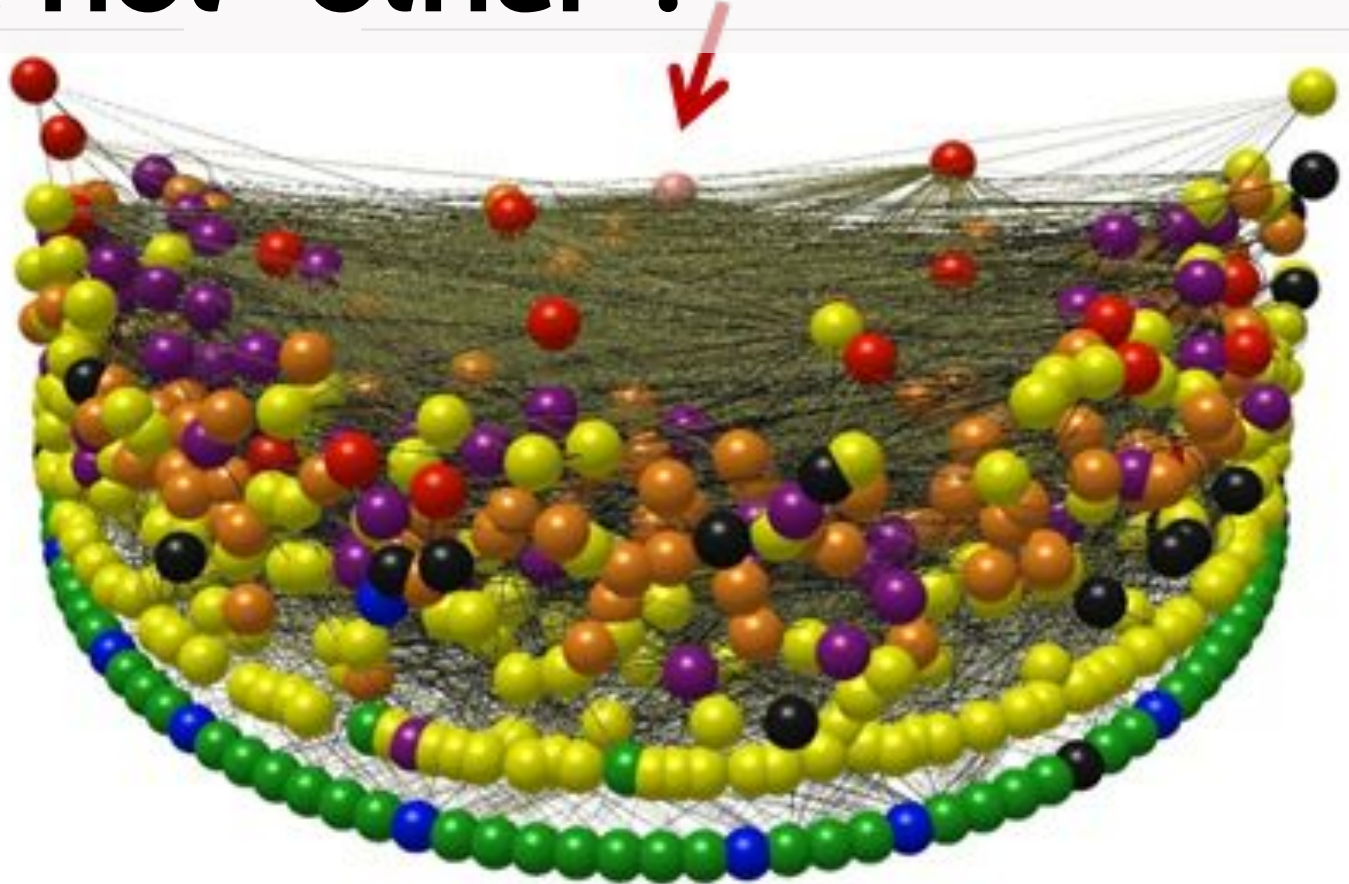
Xanthopan morgani
(WALKER, 1856)

Us vs. not us

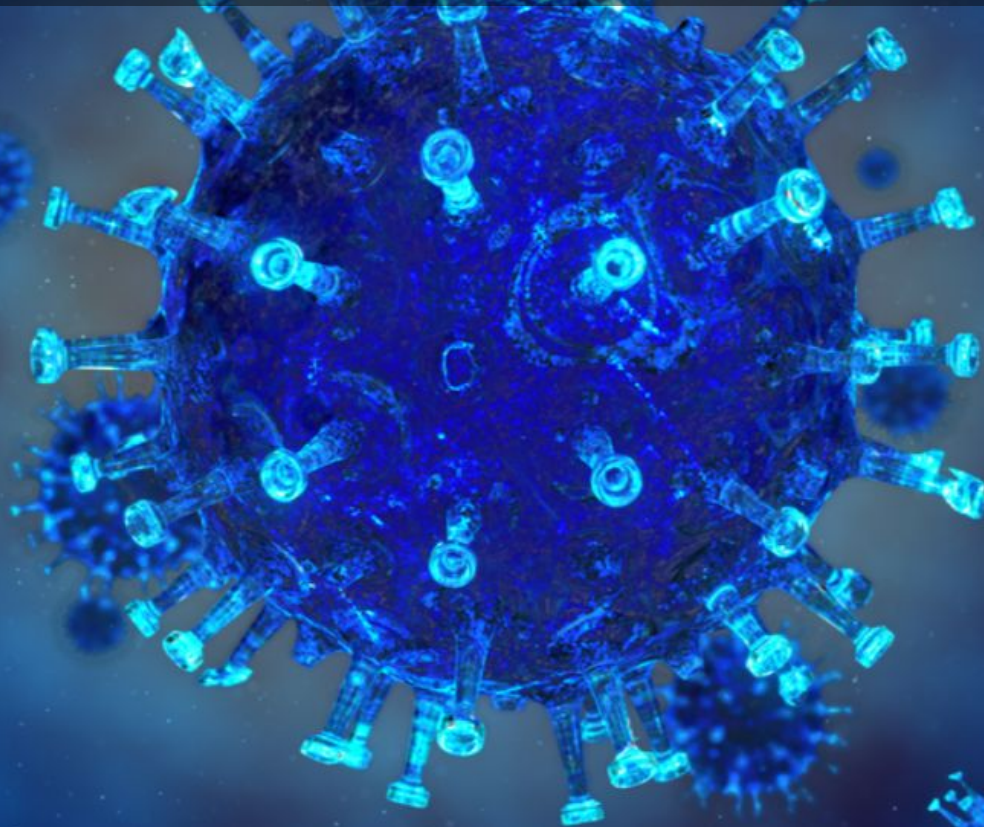


We are not “other”.

(B)



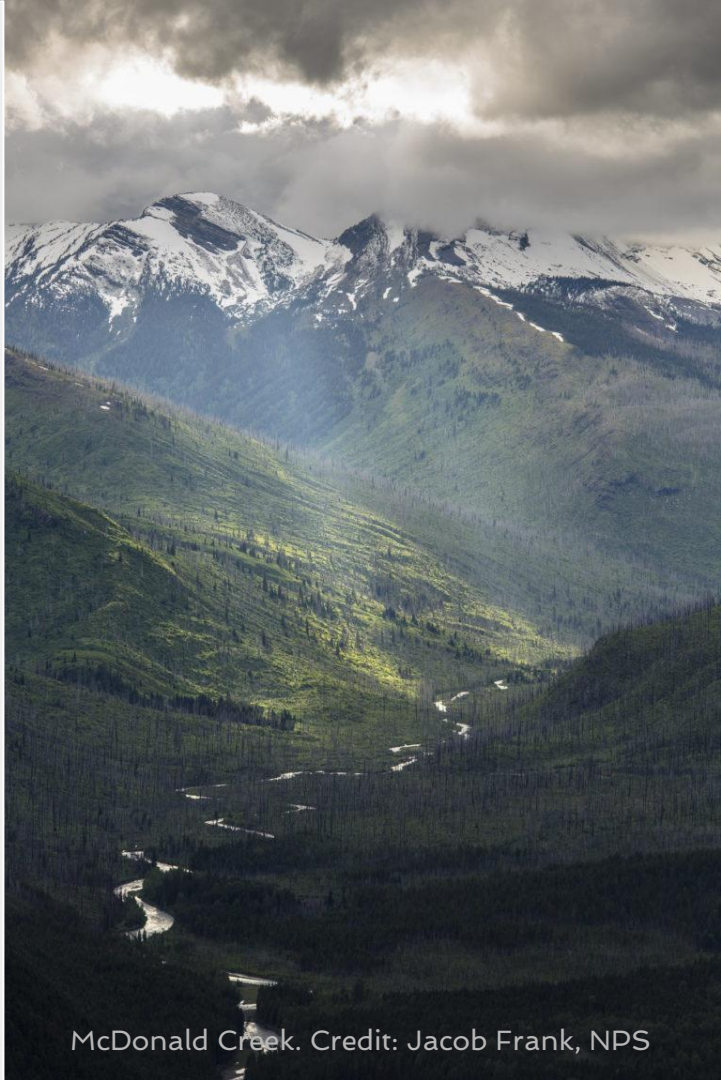
Even bad can be good.





Confidence

Kokanee Salmon. Credit: Glacier NPS



McDonald Creek. Credit: Jacob Frank, NPS

Surprise



Mysis shrimp. Credit: Montana Fish, Wildlife & Parks

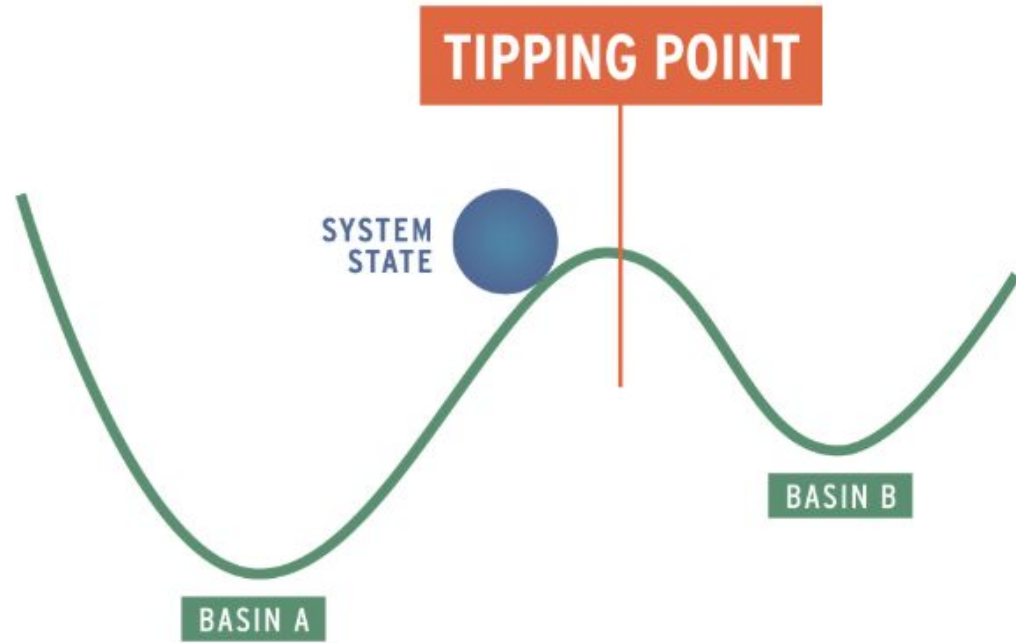
Ripple effects.

Credit: CBC.ca, Jordan Stead/Canadian Press

Credit (inset): Robert Jefferies.



Nonlinear change



We are connected to nature.

"[...] evidence indicates conclusively that knowing and experiencing nature makes us generally happier, healthier people."

Humans and Nature: How Knowing and Experiencing Nature Affect Well-Being

Roly Russell,¹ Anne D. Guerry,² Patricia Balvanera,³ Rachelle K. Gould,⁴ Xavier Basurto,⁵ Kai M.A. Chan,⁶ Sarah Klain,⁶ Jordan Levine,⁶ and Jordan Tam⁶

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Keywords

well-being, ecosystem, cultural ecosystem services, channels of human experience, constituents of well-being, nonmaterial ecosystem benefits, ecosystem goods and services

Abstract

Ecosystems provide many of the

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Recap

1. **Us vs. not us**
 - a. (whether it's what where we are in the tangled web, what we eat, or what's in our gut)
2. **Even the bad might be good**
3. **Diversity matters, but in unexpected ways**
4. **Expect (sudden) surprises.**
5. **Expect unexpected connections.**
6. **Our well-being is tied to nature.**

“Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past. . . . [A] new ecological awareness is beginning to emerge. . . . The ecological crisis is a moral issue”.

~ Pope John Paul II



Kevin Frayer/Getty Images

An invitation ...

“Ecosystem-based management calls for rich multidisciplinary collaboration, reaching to the past and engaging with the present fields of political ecology, anthropology, resilience science, common pool resource models, and historical ecology. **What can emerge, ... is “an alternative way of thinking, in which human systems and the environment are inextricably linked and co-evolved.**

This reconciliation is a powerful invitation. As Dean Moore and Russell write, **ecosystem-based management invites us into, “a co-evolution of ecological ethics and ecological management** practices, each of them requiring of the other a renewed commitment to the thriving of the bio-cultural whole”.

What care looks like on the landscape



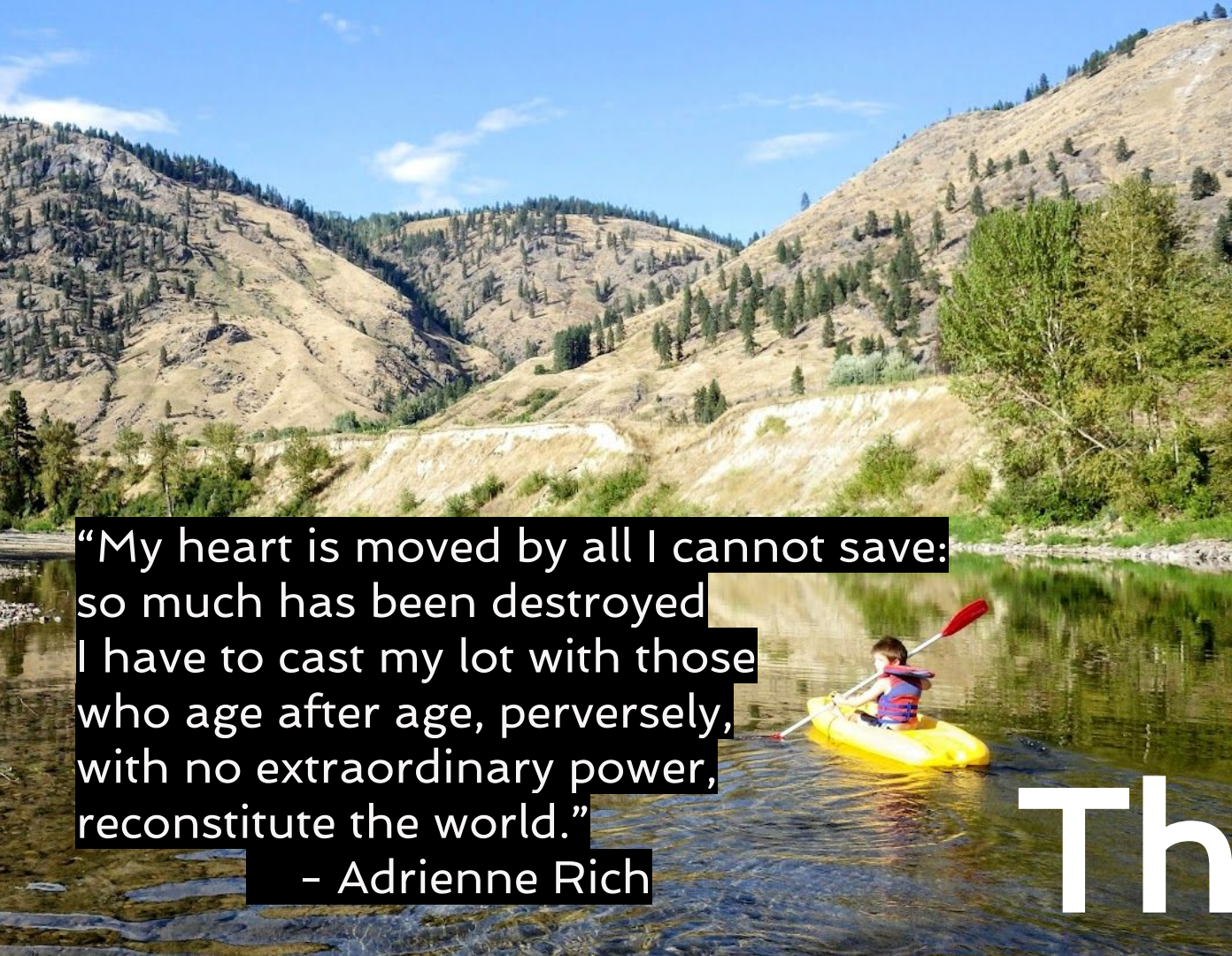
“Conceptual guidance includes recognizing of linkages, expecting of surprises, and avoiding hubris in management.

Tactical guidance includes managing coastal systems at watershed scales, emphasizing monitoring, using area-based management, and incorporating the recognition of uncertainties into decision-making.”

A photograph of a person in a yellow kayak on a river, with steep, rocky mountains in the background. The person is wearing a blue life vest and is paddling with a red paddle. The water is calm, reflecting the surrounding landscape. The mountains are covered in sparse vegetation and patches of exposed rock. The sky is blue with some clouds.

“My heart is moved by all I cannot save:
so much has been destroyed
I have to cast my lot with those
who age after age, perversely,
with no extraordinary power,
reconstitute the world.”

– Adrienne Rich



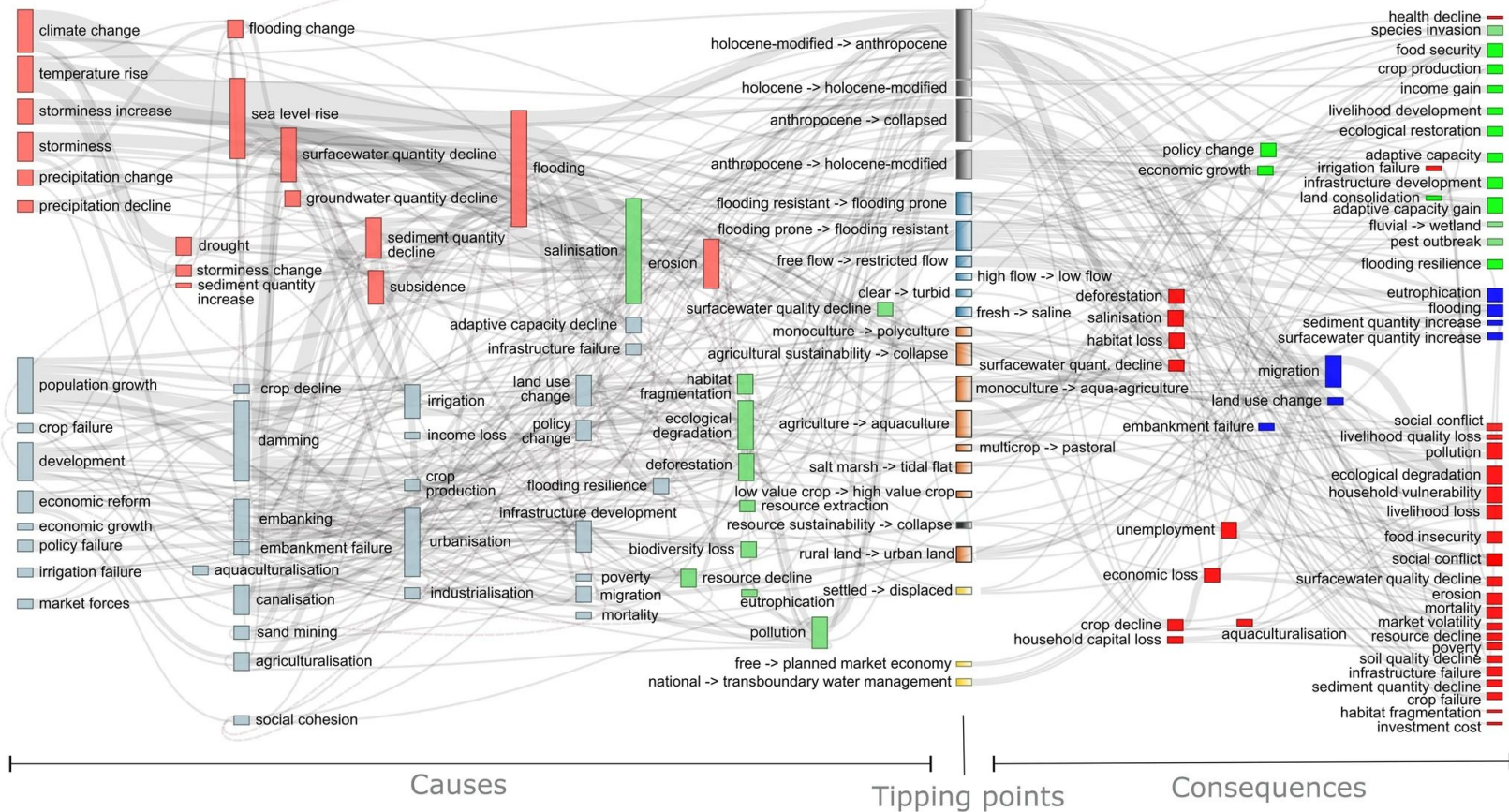
“My heart is moved by all I cannot save:
so much has been destroyed
I have to cast my lot with those
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– Adrienne Rich

Thanks.



Conceptual guidance includes recognizing of linkages, expecting of surprises, and avoiding hubris in management. Tactical guidance includes managing coastal systems at watershed scales, emphasizing monitoring, using area-based management, and incorporating the recognition of uncertainties into decision-making.



Geophysical
Ecological
Anthropogenic driver

Systemic
Governance
Hydrological
Land cover/use change

Positive
Neutral
Negative

**“My heart is moved by all I cannot save:
so much has been destroyed
I have to cast my lot with those
who age after age, perversely,
with no extraordinary power,
reconstitute the world.”**

- Adrienne Rich



DRAFT

DRAFT B.C. BIODIVERSITY AND ECOSYSTEM HEALTH FRAMEWORK



November 2023



Ministry of
Water, Land and
Resource Stewardship

- 1) Why do we care about biodiversity or ecosystem health/integrity?
- 2) Because we're all connected:
 - a) Coevolution
- 3) Our thinking is oversimplified:
 - a) Western thinking about self, separation of mind and body,
- 4) Review of the state of the science:
 - a) Biodiversity and ecosystems and complexity, connection to system resilience, fragility, and functioning
 - i) Not rocket science - portfolio
 - ii) Functional diversity
 - iii) Food webs and our place in them
 - iv) Indirect effects in food webs (e.g. fishers shooting seals, but best modeling shows
- 5) Acknowledge what we cannot understand
 - a) Eg The human body, microbiome impacts on health and identify, shift from thinking that the 'non-self' is bad for us
- 6) Our sociopolitical context:
 - a) Post-truth: so the science matters but what we care about matters more today. So science's impact on our thinking really is important
- 7) Where are we trying to go?
 - a) Humility about knowledge, empathy (generally, including for the future) DEMANDS that we care about biodiversity (Moore and Russell - new ocean ethic)
 - b) Care & a better accounting of things we care about might help make more people care..

Postpolitics and Post-Truth

Cian O'Callaghan

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<https://doi.org/10.1016/B978-0-08-102295-5.10683-3> ↗

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Abstract

A growing number of geographers have used frameworks of post-politics to interrogate the foundations and dominance of neoliberal consensus politics. Theories of the post-political argue that the consensus around the combination of liberal democracy and neoliberal capitalism that has become hegemonic since the 1970s creates a stifling effect on the public sphere. These forms of politics disavow or foreclose the contentious nature of the political and replace it with the technocratic and consensus-based management of a pre-given situation. But post-politicization is never complete; there is always a gap for the political to return in moments of disruption to the intuitional order. This article will discuss theorizations of post-politics and geographical work on the post-political. It will do so alongside the concept of post-truth, referring to the recent situation whereby objective facts have lost their currency in political and public debate. While these concepts are not analogous, post-truth offers a lens to unpack how post-politics both as a set of practices and as a theoretical apparatus is in flux following the 2008 global

	A	B	C	D	E	F	G	H
43								
44	90mins	Climate Talk - Graham to lead (6:30-8:00) Location: Sherring Spaces						
45								
46								
47		May 2nd Peoples Projects and Implementing Change						
48		start	end	Title/Theme		Speaker Name or Organizer		
49		8:00	9:00	Food				
50		9:00	9:15	KRWAC Chair		Barb Stewart		
51		9:15	9:30	Introduce day 2 followed by introduction of historians		Facilitator	15mins	13:35
52		9:30	10:20	Focused Historians (2*families) and questions				
53	GLA	10:20	10:35	GLA		Facilitator		
54	Break	10:35	10:50					
55	5mins	10:50	10:55	Introductions - Climate change, adaptation, mitigation		TBD		
56	20mins	10:55	11:15	FP: Importance of Biodiversity (and Ecosystem Corridors) +Q		Roly Russell		
57	10mins	11:15	11:25	SP: Reptiles at Risk		Caroline Lafond		Questions for Roly
58	10mins	13:05	13:15	SP: Speckled Dace		Evan Smith		
59		11:25	11:35	Panel Questions: Roly and Caroline				10mins
60	GLA	11:55	12:00	questions? Last opportunity for public engagement before and over lunch		Facilitator		
61	LUNCH	12:00	13:00	Lunch Community Posters				
62	5mins	13:00	13:05	Introductions - natural assets and biodiversity		TBD		
63	20mins	11:35	11:55	FP: What does Climate Change have in store for the Boundary		Greg Utzig		
64	20mins	13:15	13:35	FP: Prescribed Burns		Lisa Tedesco		
65								
66								
67	10mins	13:50	14:00	FP: Economics of Natural Assets		Mike Kennedy		
68		14:00	14:20	questions? Panel? Open? Learning?				
69		14:20	14:30	Summary overall and GLAs		Facilitator		
70		14:30	15:00	From Learnings to Actions. Closing Comments. Final Draw. End of Forum		TBD - KAnderson? Donna Dean? Mark Andison or James Chandler		
71				Thank you and closing from RDKB		BSC Chair (Mayor Baker) - last speaker?		
72								