

*Using ecosystem response footprints to guide
environmental management priorities*

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Today's management reality

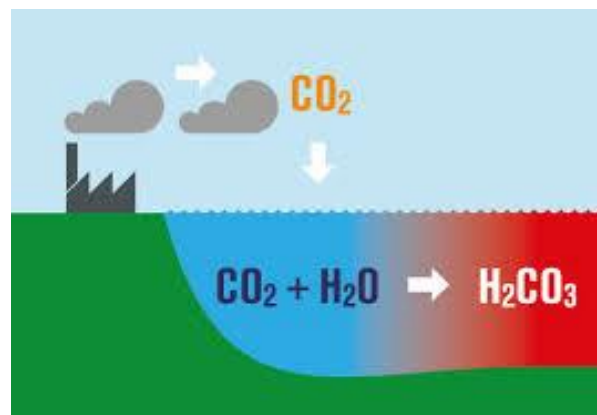
Land



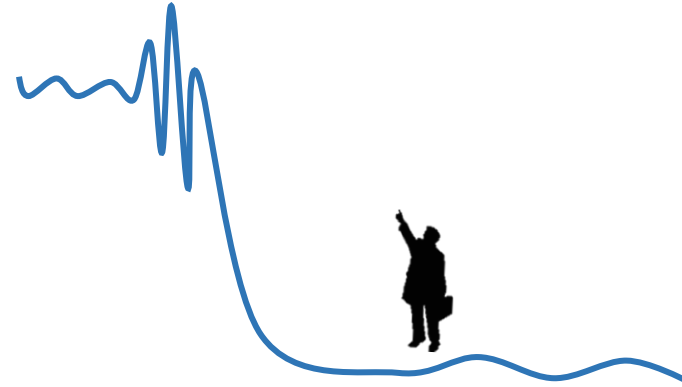
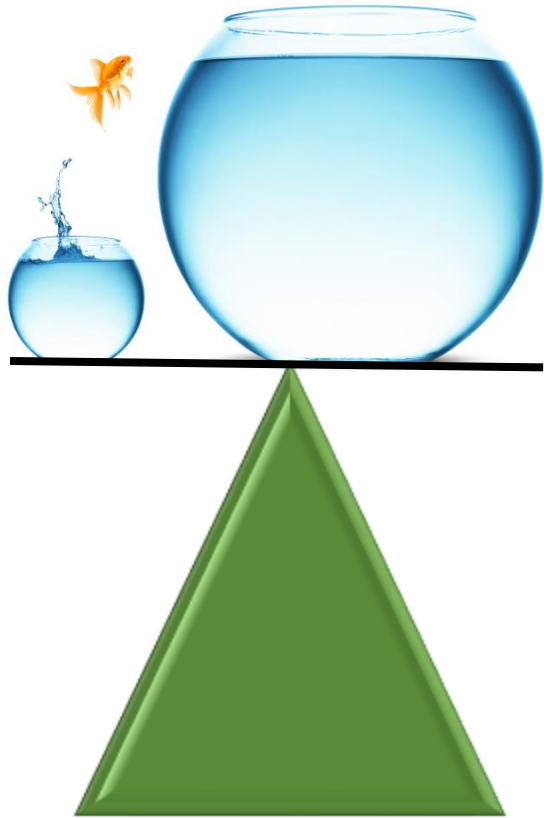
Sea



Global



Cumulative effects & tipping points

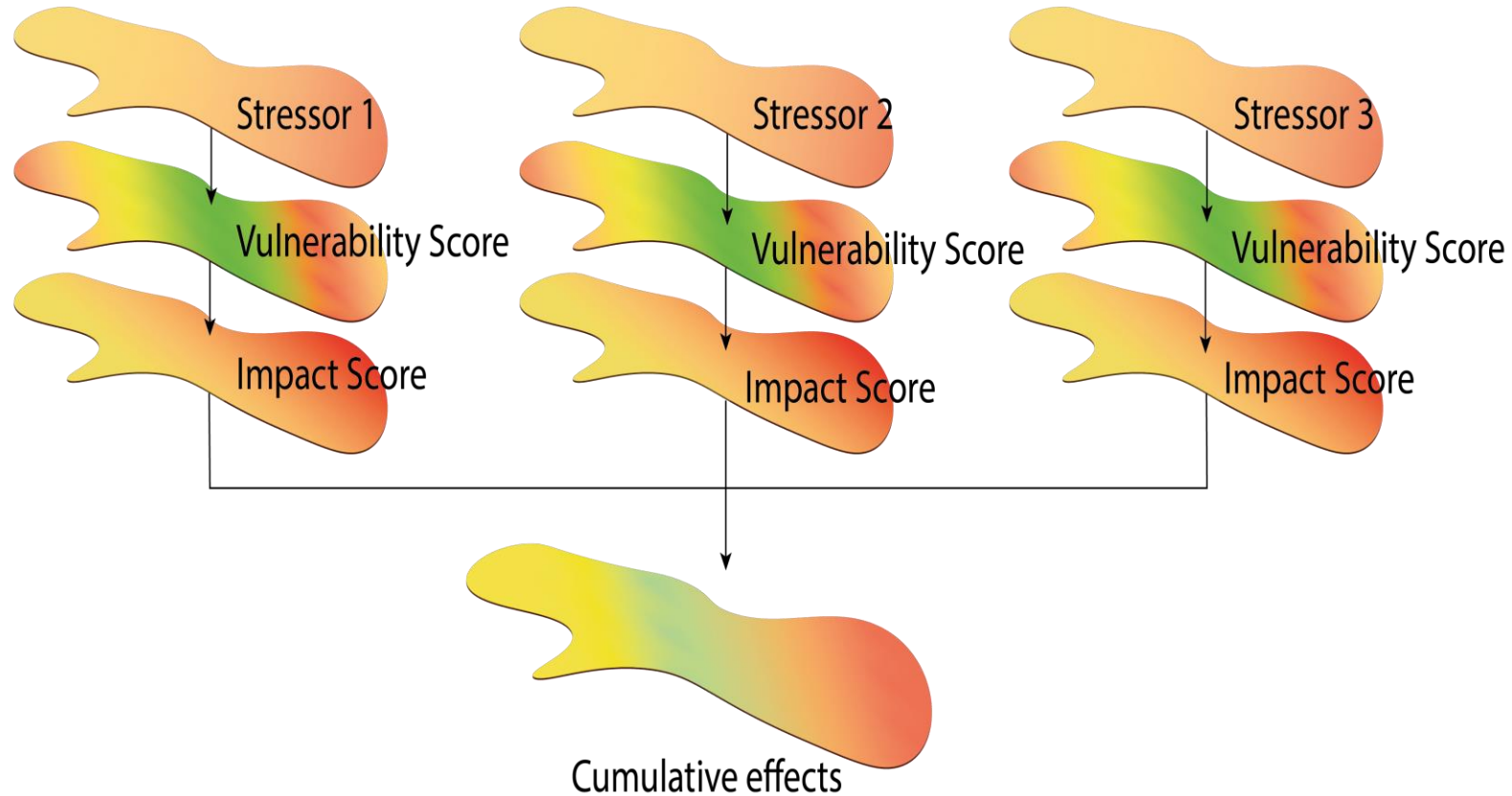


Managing for cumulative effects

1. We are generally doing a poor job because we focus on stressor accounting
2. Can we reframe CE assessments by focusing on ecosystem responses?

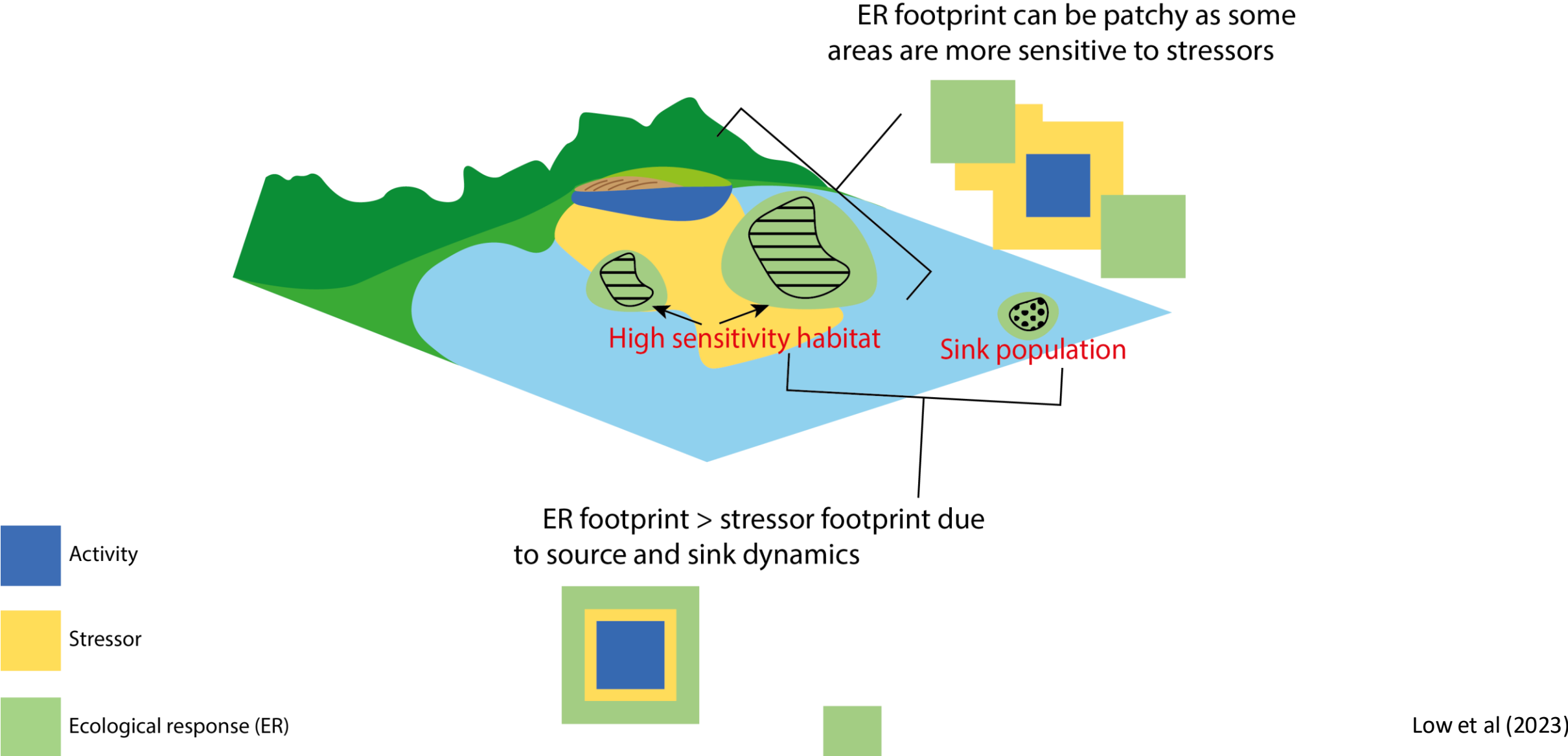


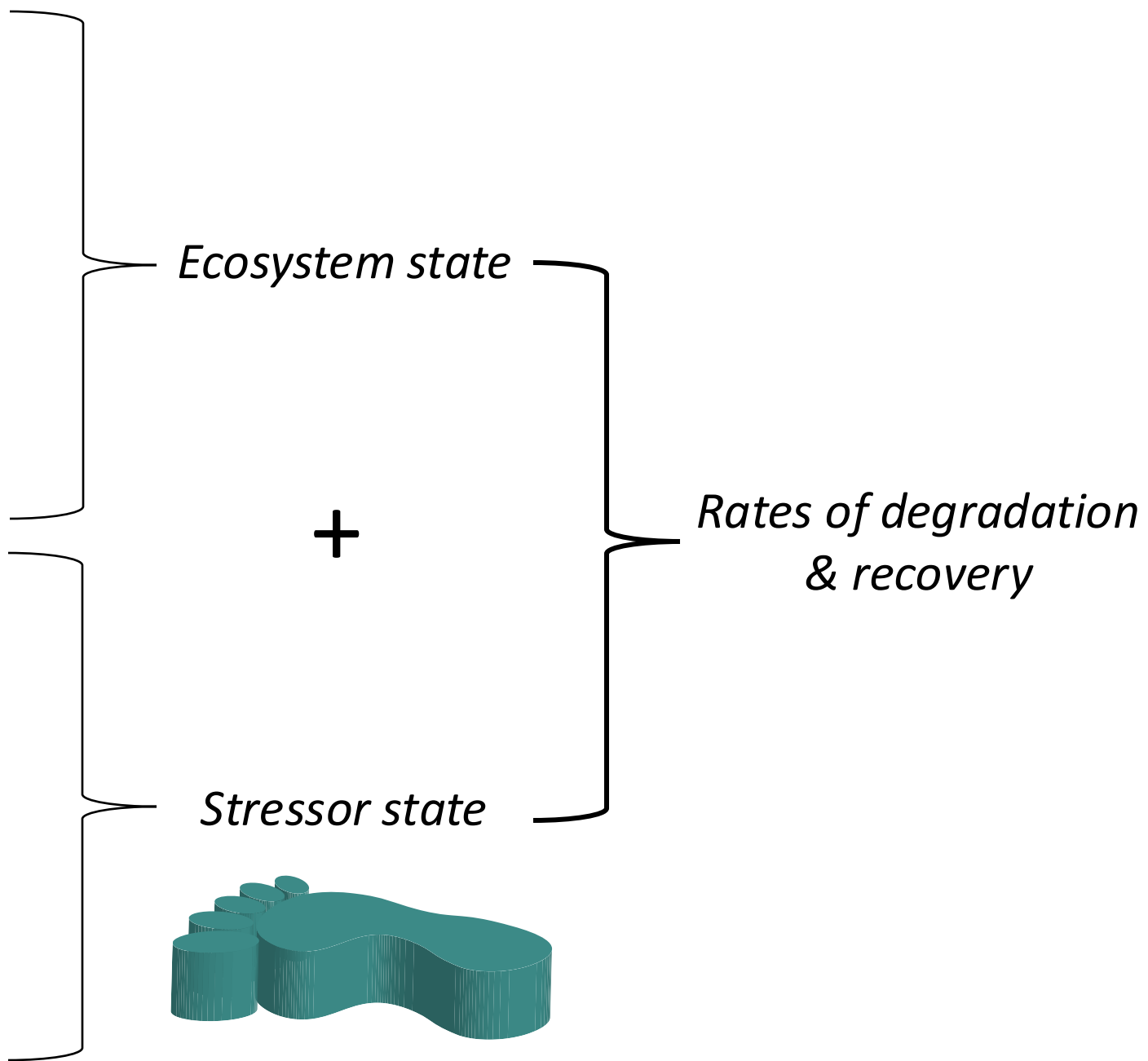
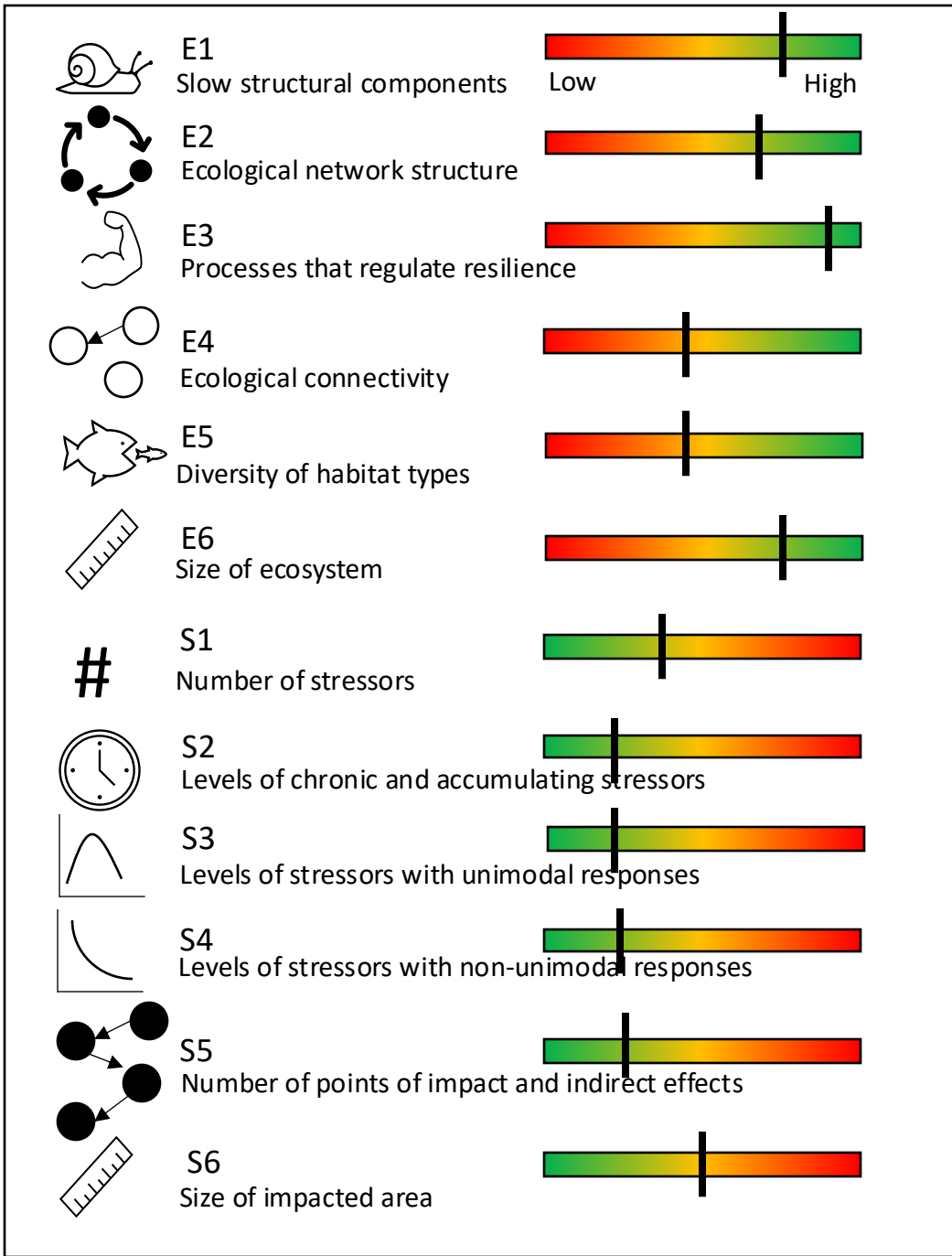
Current cumulative effects assessment



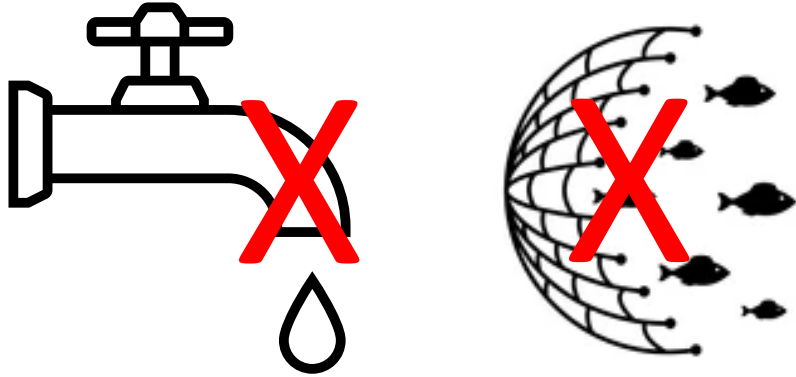
- Focus on activity/stressor footprints
- Highlight areas impacted by high levels of cumulative effects
- Do not recognise ecosystem as a network of responding and interacting components

Reframing CE assessments with ecological response footprints





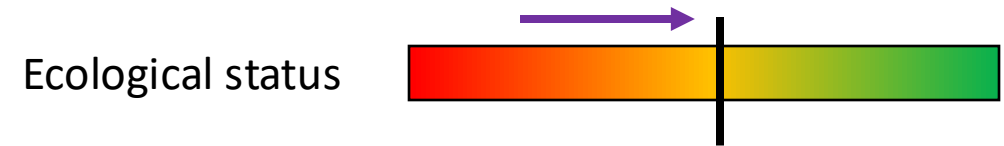
Actions work as levers acting on stressors or ecosystems

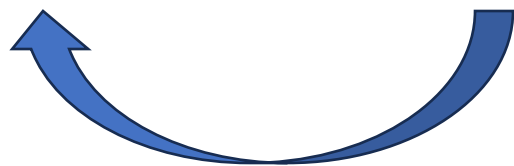


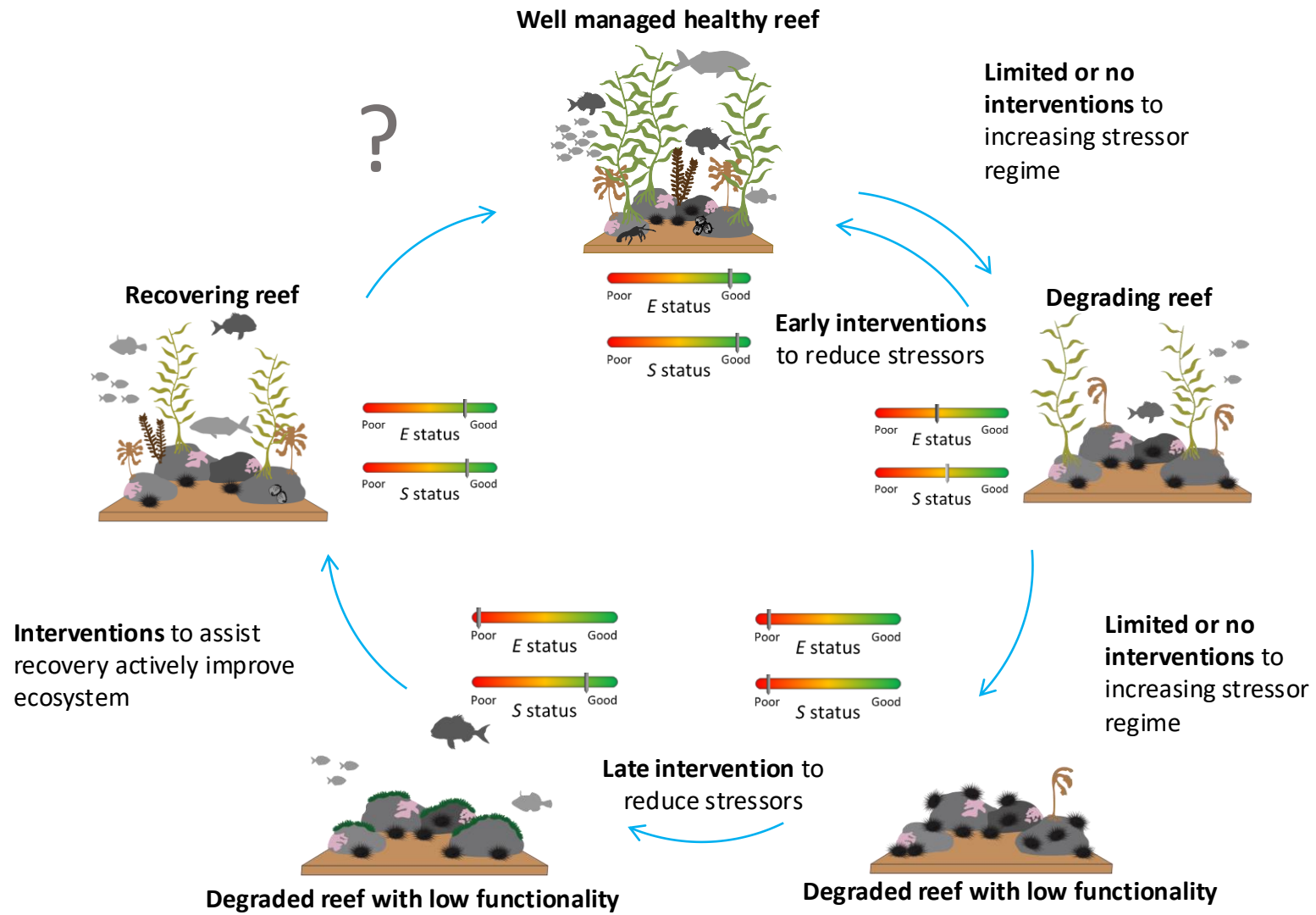
Turning off/limiting the *stress* tap



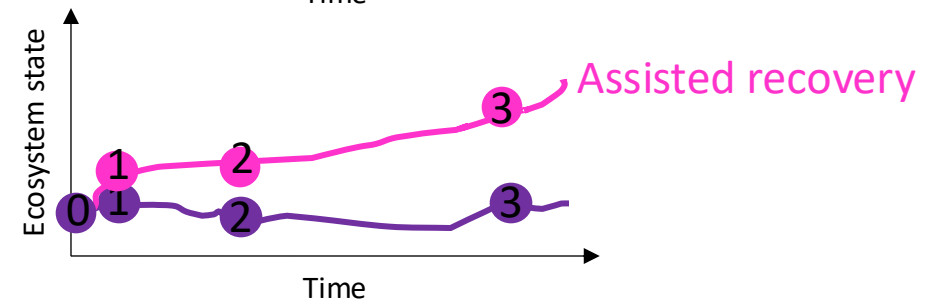
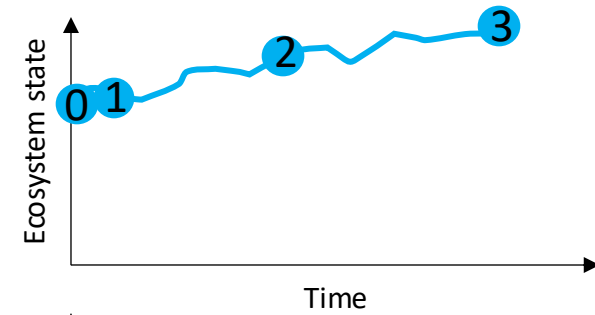
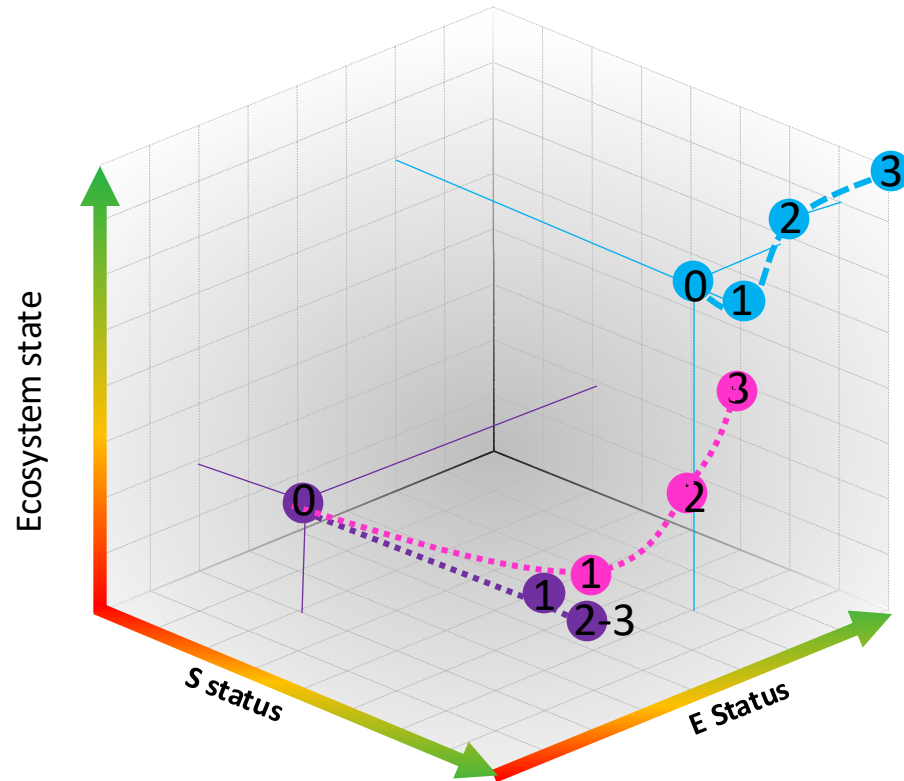
Restoring /enhancing the *ecosystem*



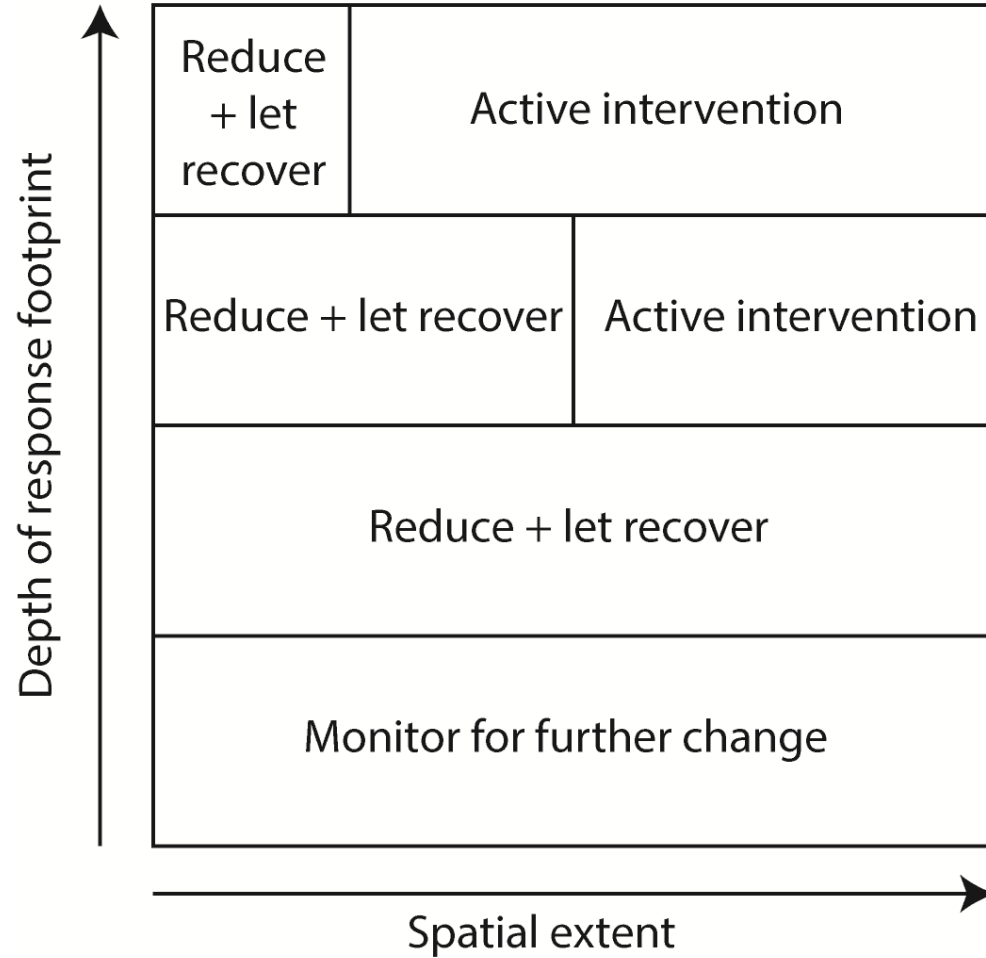




Actions mismatched with scales of degradation and recovery



Managing for recovery



Take home

- Ecosystem response footprints can be poorly aligned with activity/stressor footprints
- Management strategies for recovery need to account for context dependencies
- We need to embrace ecological complexity and think holistically about how marine ecosystems respond to cumulative effects



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