# Process-Based Restoration Requires **Process-Based Monitoring**

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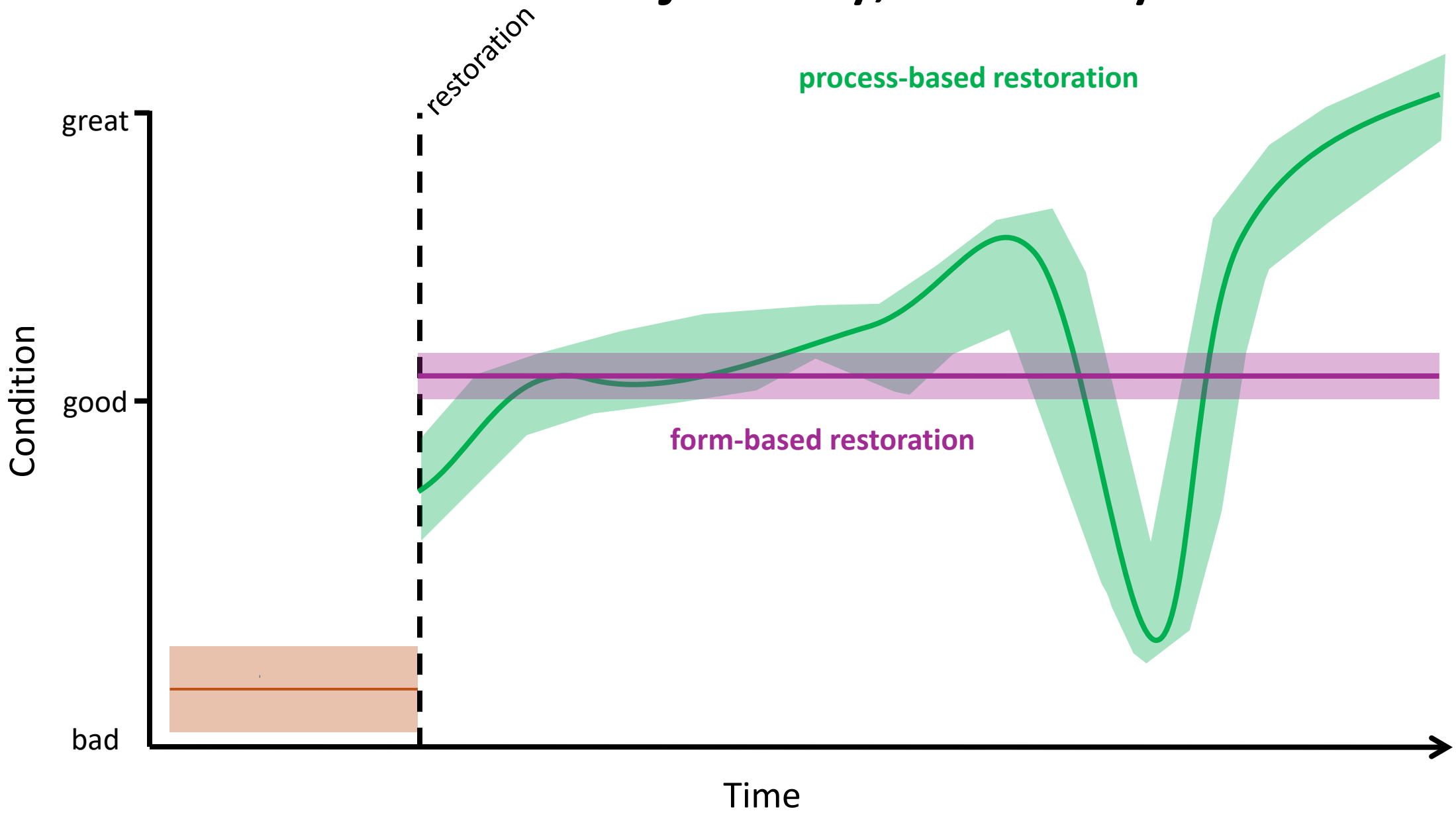
# Form- vs Process-Based Restoration Goal

| | Form-Based | Process-Based |
|---|---|---|
| **Goal:** | Create a fixed, enhanced state | Alter the trajectory of a river using fluvial processes |
| **Scale:** | Small, short-term | Big, long-term |
| **Stewardship:** | None – one and done | Initial restoration is just the beginning |
| **Monitoring:** | Simple, check for success | **Tell the river's story**<br>**Process-Based Monitoring** |

# PBR Alters a River's Trajectory, or Story



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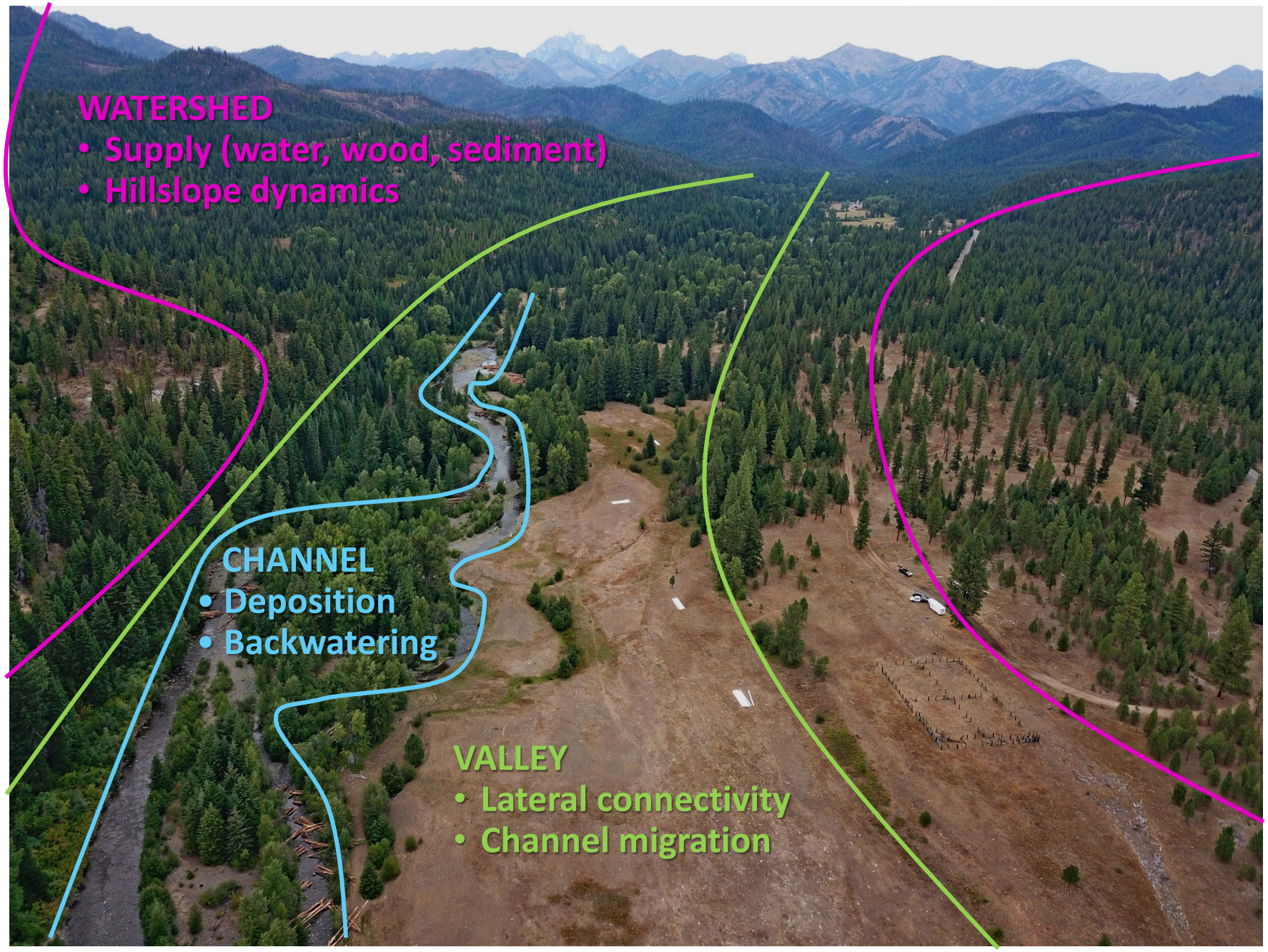
Even simple process-based alterations depend on valley- to watershed-scale processes



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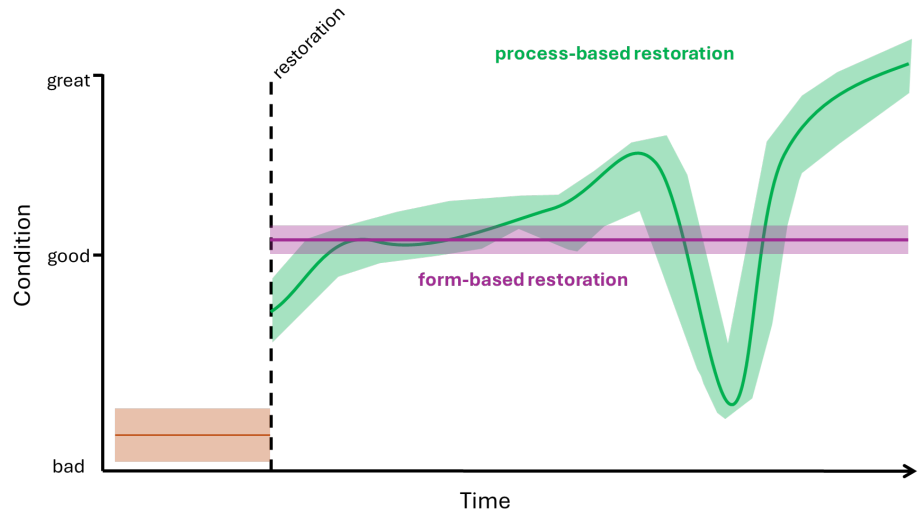

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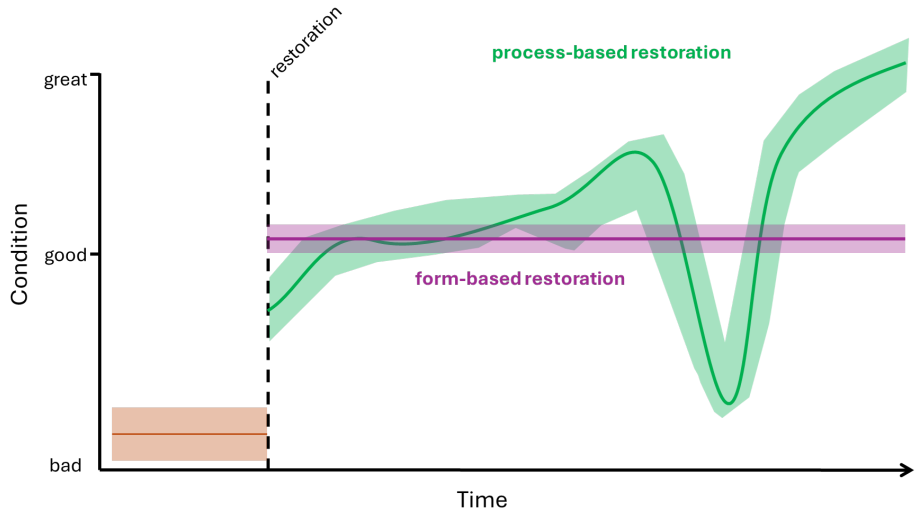


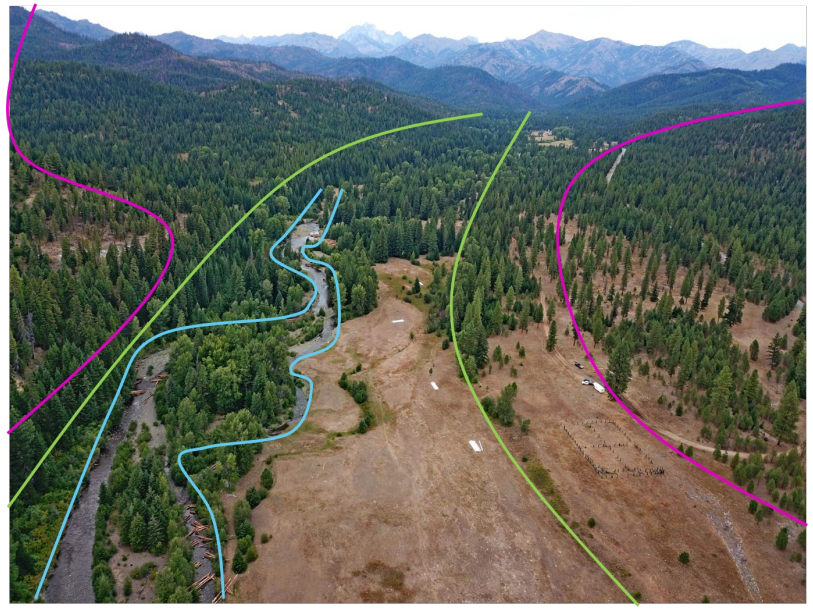

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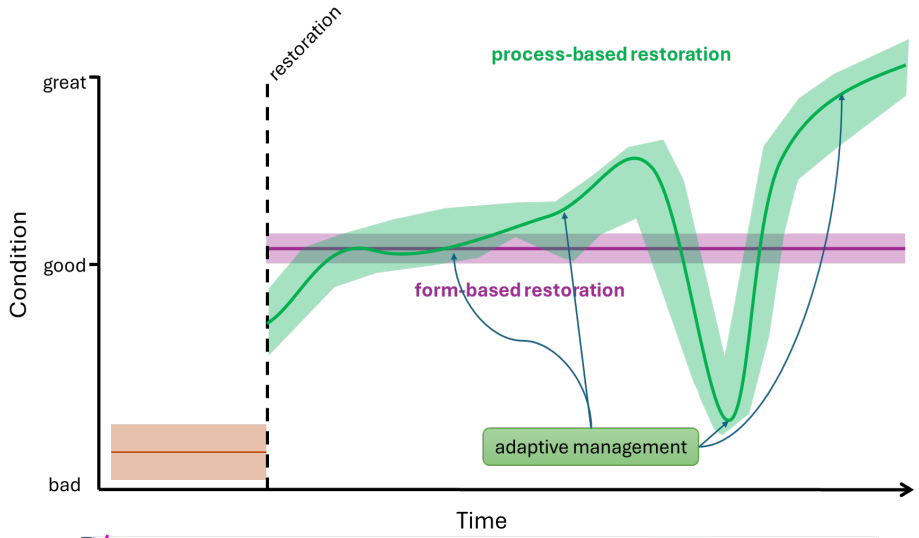
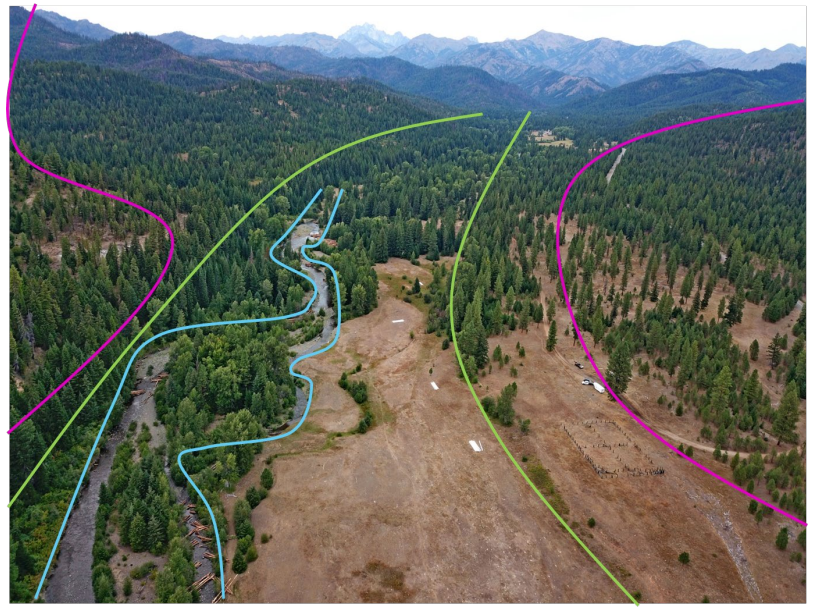
- Focus on “why” questions: cause and effect, in context



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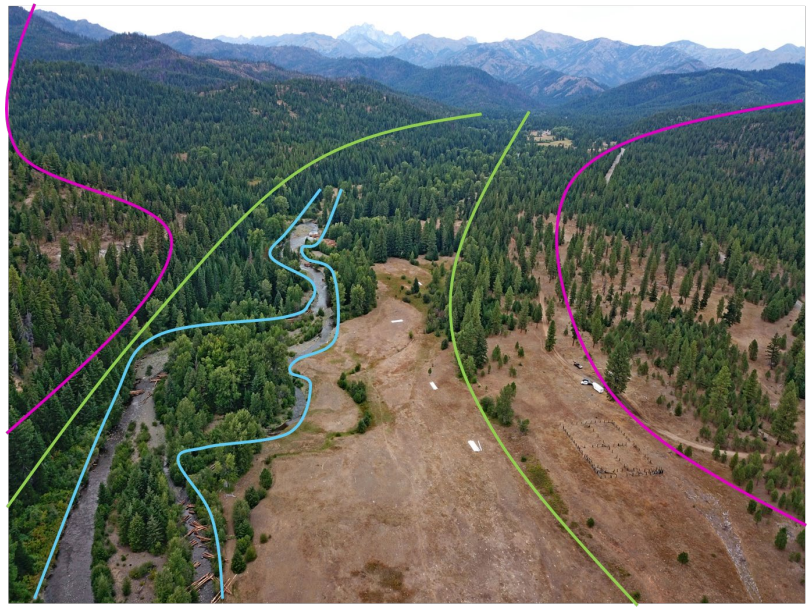

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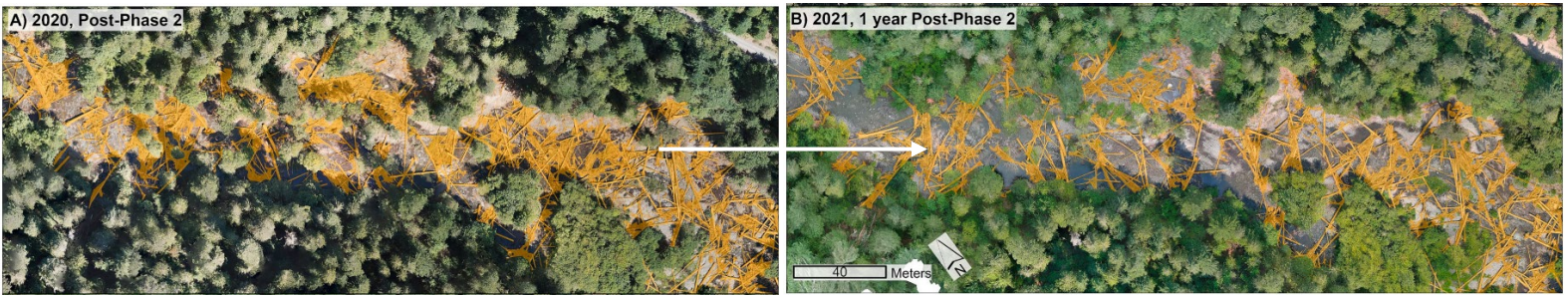
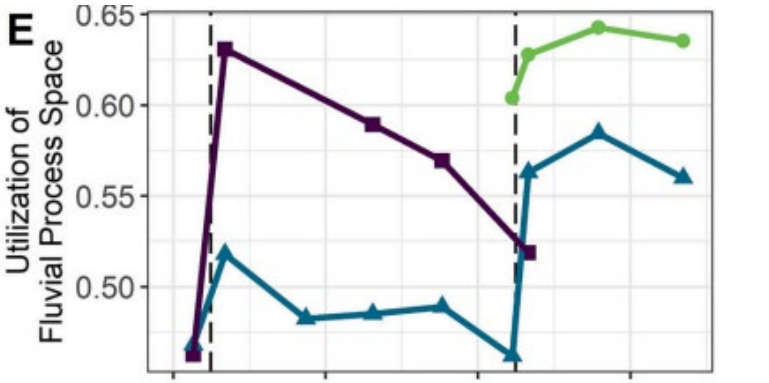
Δ wood quantity/distribution/location (driver)




Δ floodplain reworking rate (response)



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| Tell story that guides adaptive management | Right trajectory (floodplains inundating at lower flows)?<br>In response to alteration (wood placement)?<br>If not, what are limiting factors, or missing drivers? |

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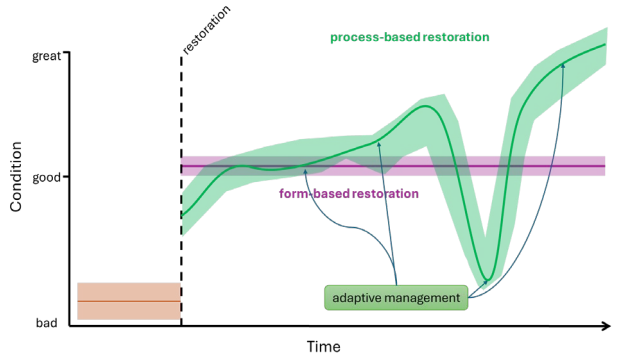
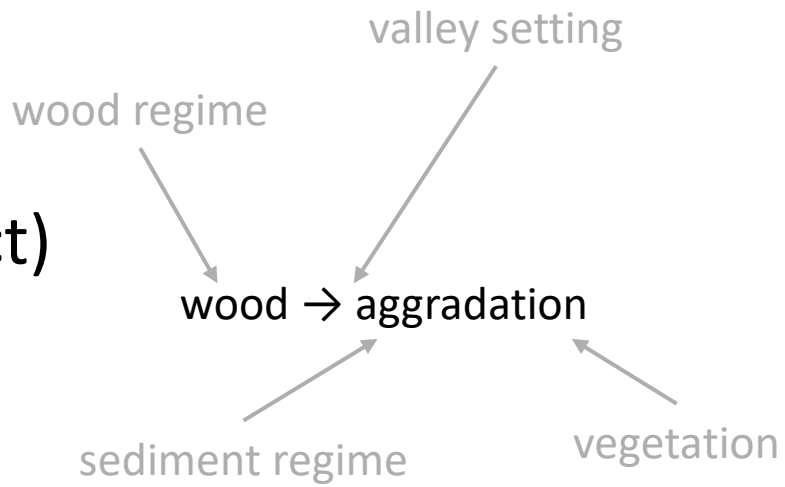


# Take Home Recommendations

Measure both **driving** (cause) and **response** (effect) factors: answer “why” questions



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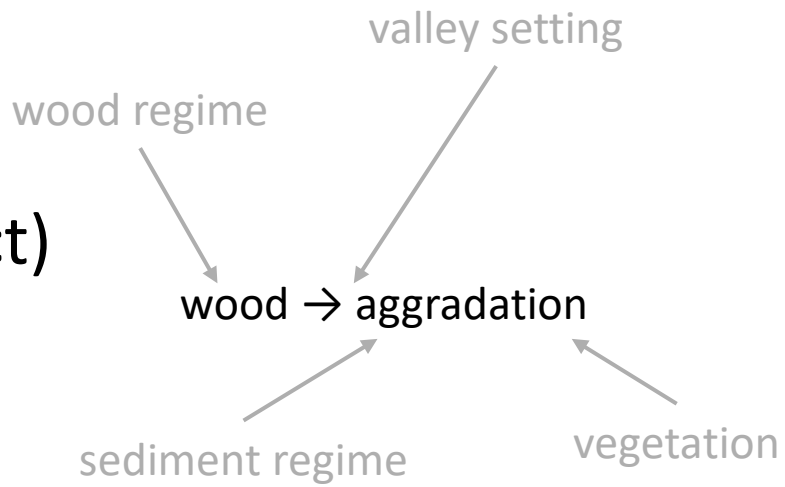


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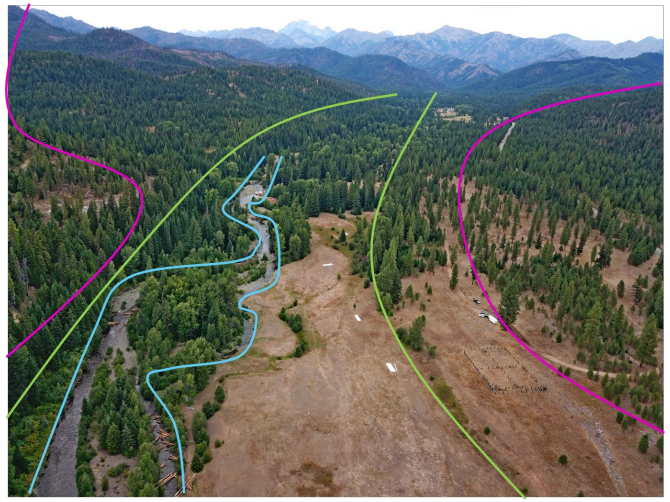

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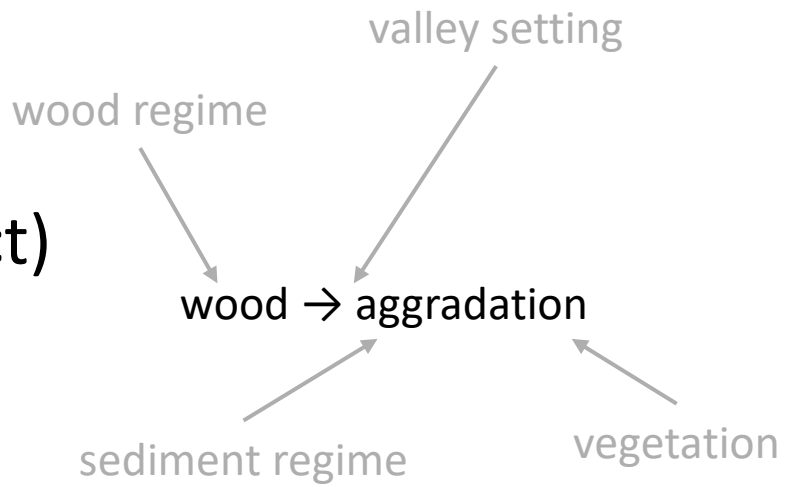


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**Build a relationship with the river through storytelling**