

INTRO TO OPAL



Assessing & mitigating development impacts to ecosystem services and biodiversity

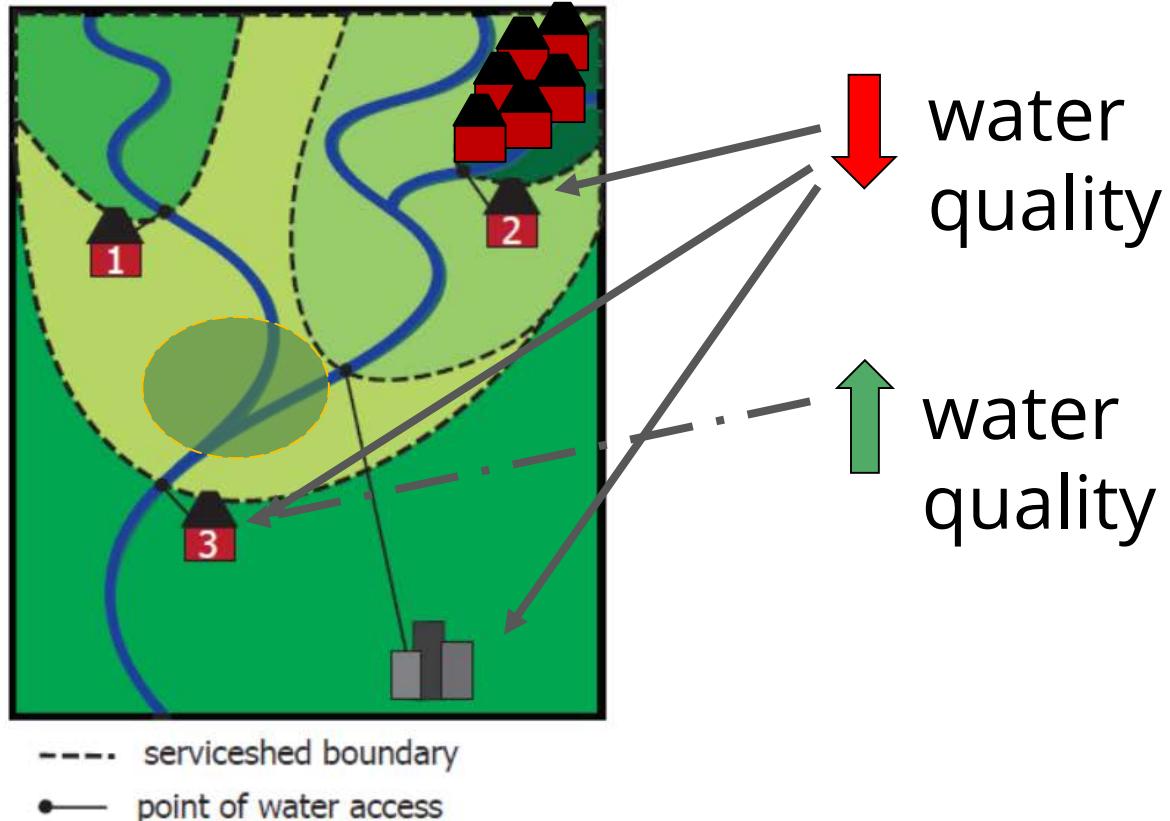


Offset Portfolio Analyzer & Locator

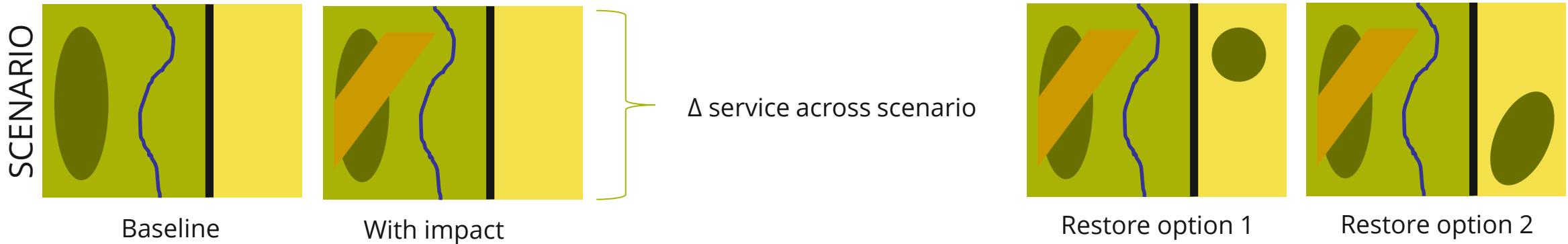
- How much habitat and ecosystem services will be lost with project development?
- How much mitigation is needed to offset losses?
- Where should offsets be located to return services to affected people?

Available at: www.naturalcapitalproject.org/OPAL.html
Free & open source, ArcGIS independent

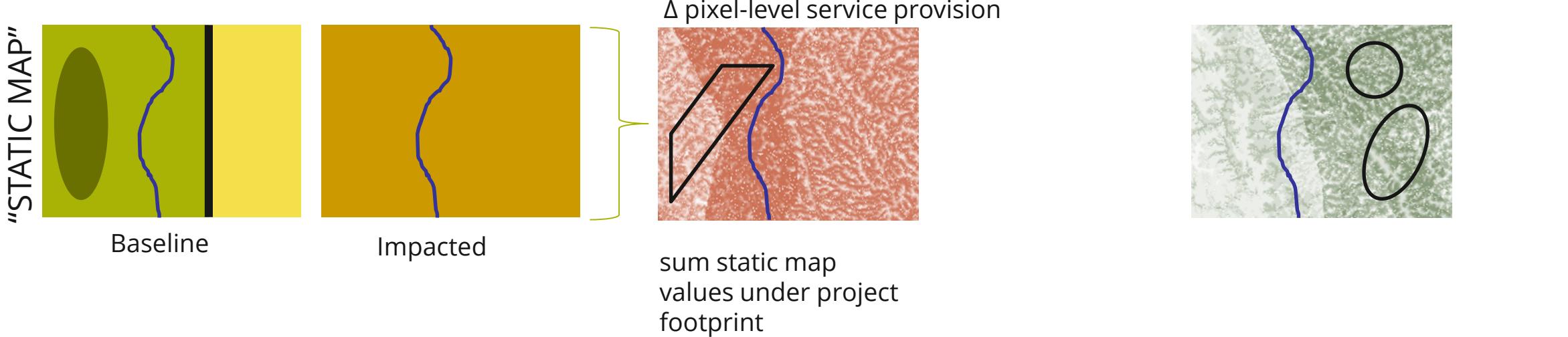
SERVICE SHEDS TRACK IMPACTS TO PEOPLE



STATIC MAPS SIMPLIFY REPEATED ANALYSES



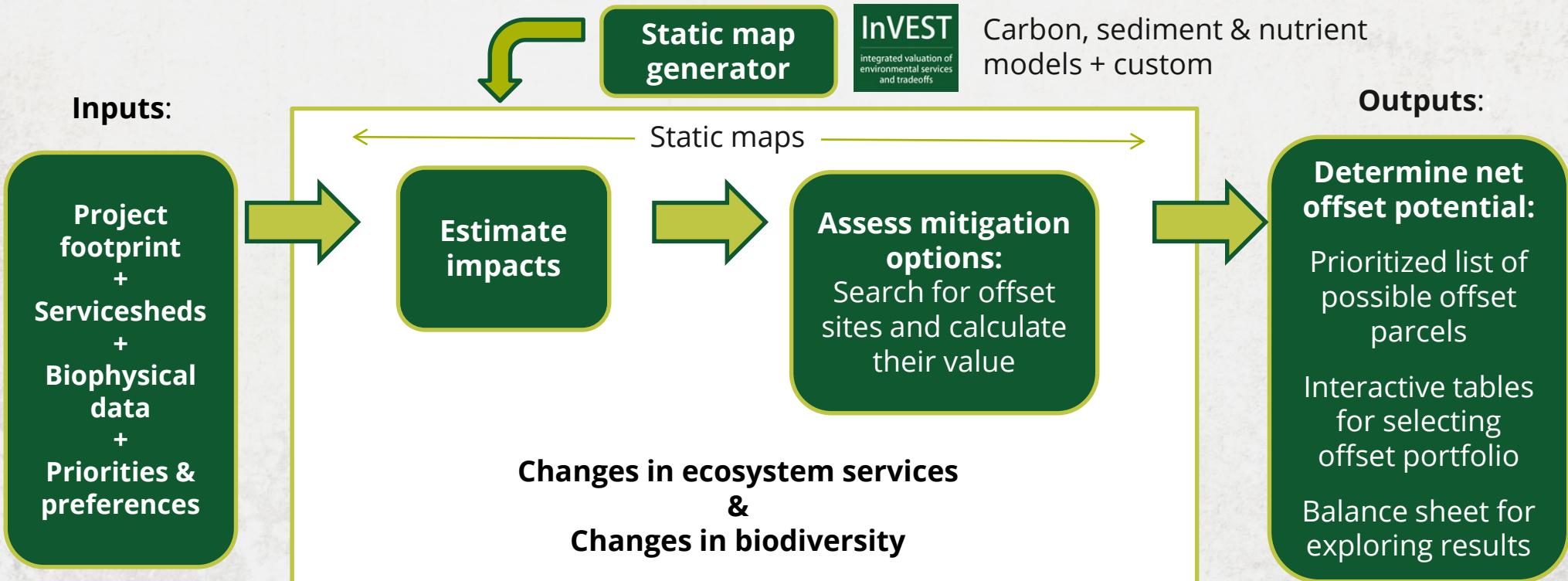
Need to repeat ecosystem service model runs for each impact scenario and all mitigation options



A few upfront model runs provide good repeated approximations of service change for spatially dependent services



THE OPAL APPROACH

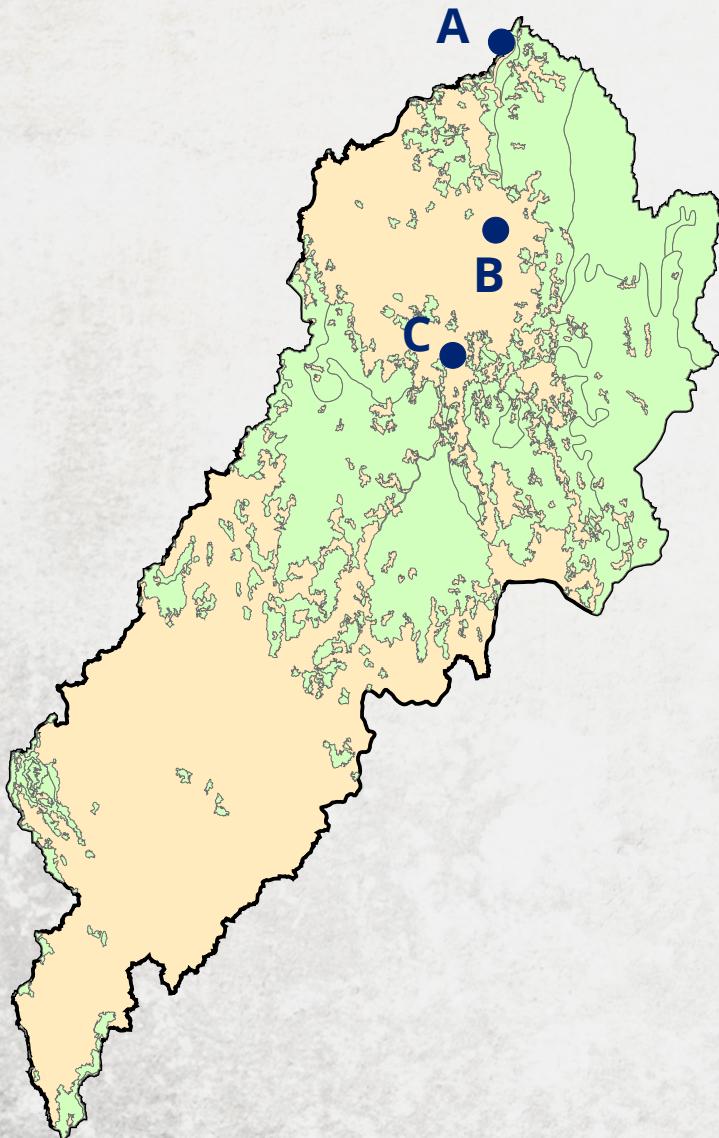


THREE KEY OPAL STEPS:

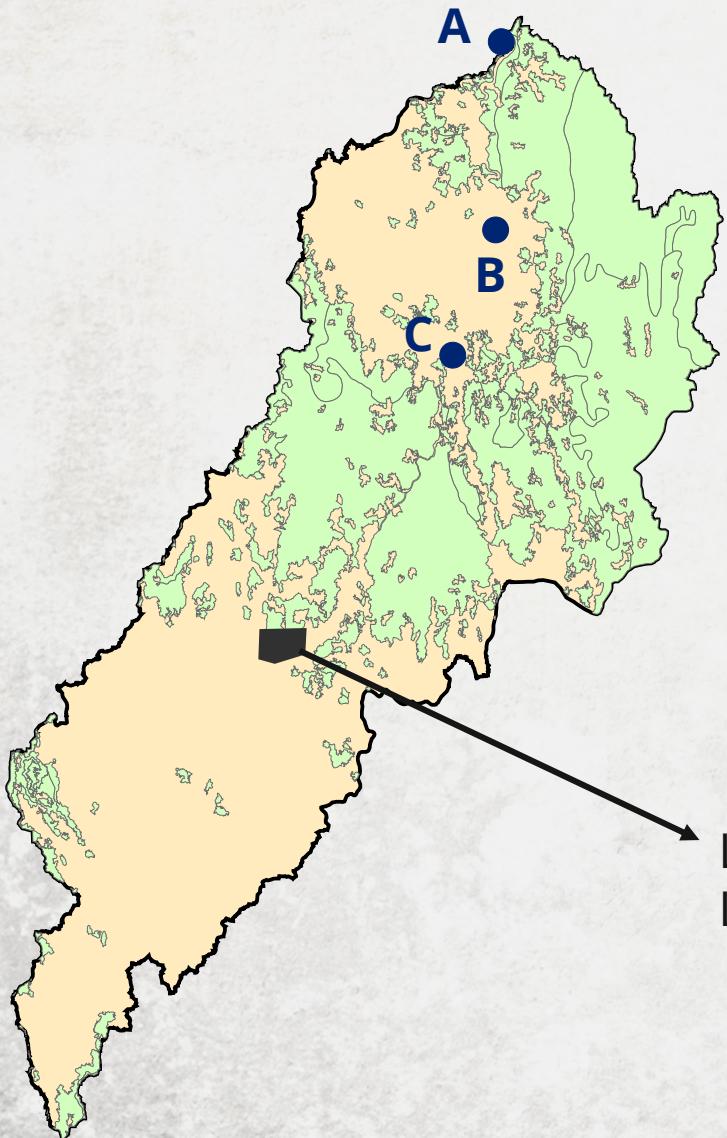
- 1) Estimate impacts to biodiversity and ecosystem services
- 2) Assess mitigation options
- 3) Select potential offset portfolios and track the benefits

1) QUANTIFYING IMPACTS

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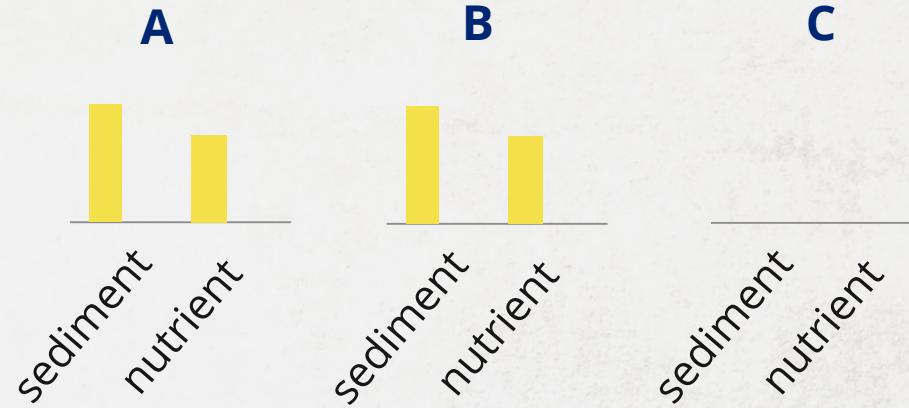


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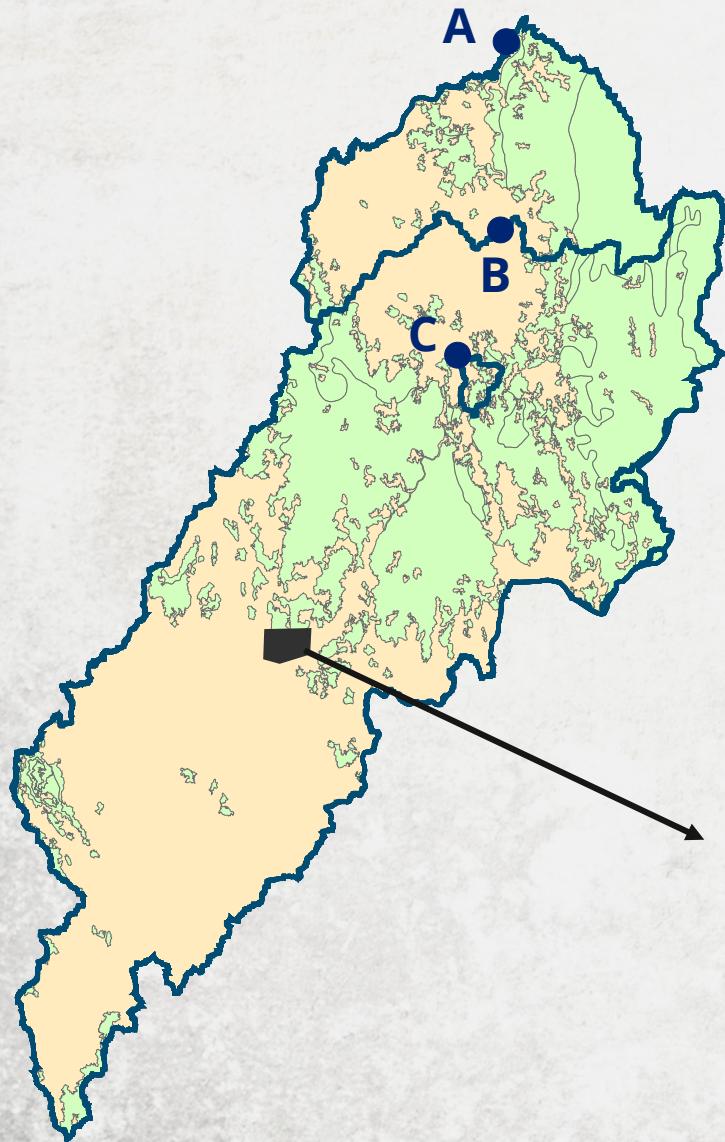


Loss of 1,600 ha
Loss of soil & nutrient retention

Changes in water quality

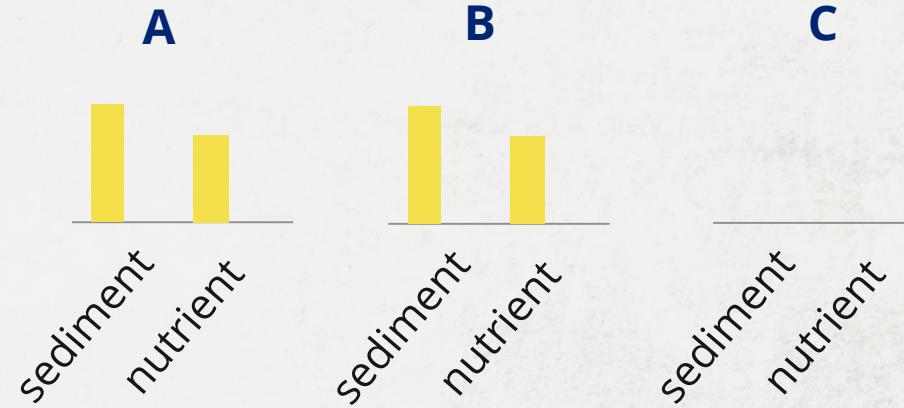


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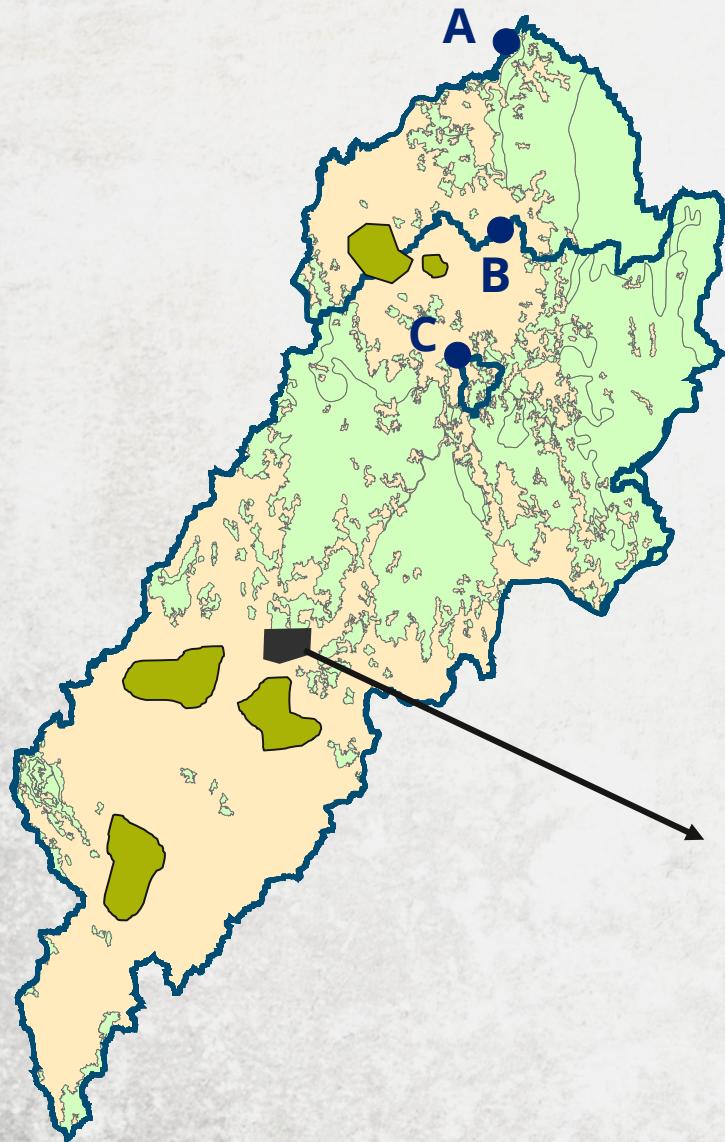


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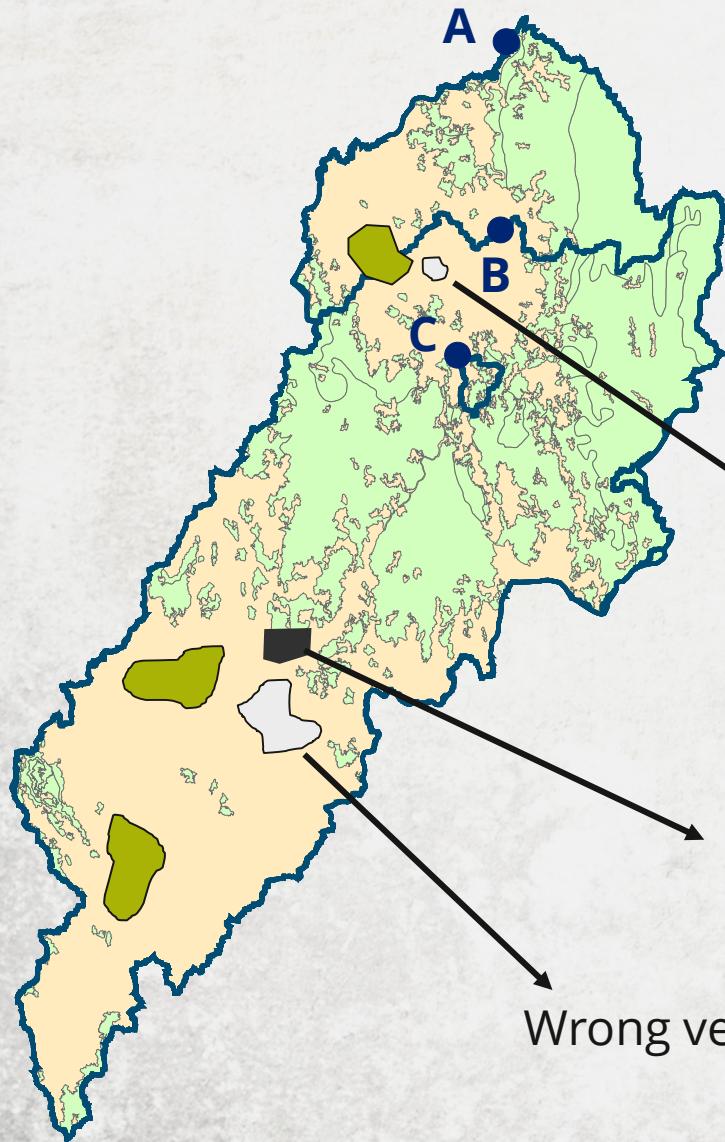


2) ASSESSING MITIGATION OPTIONS



Loss of 1,600 ha
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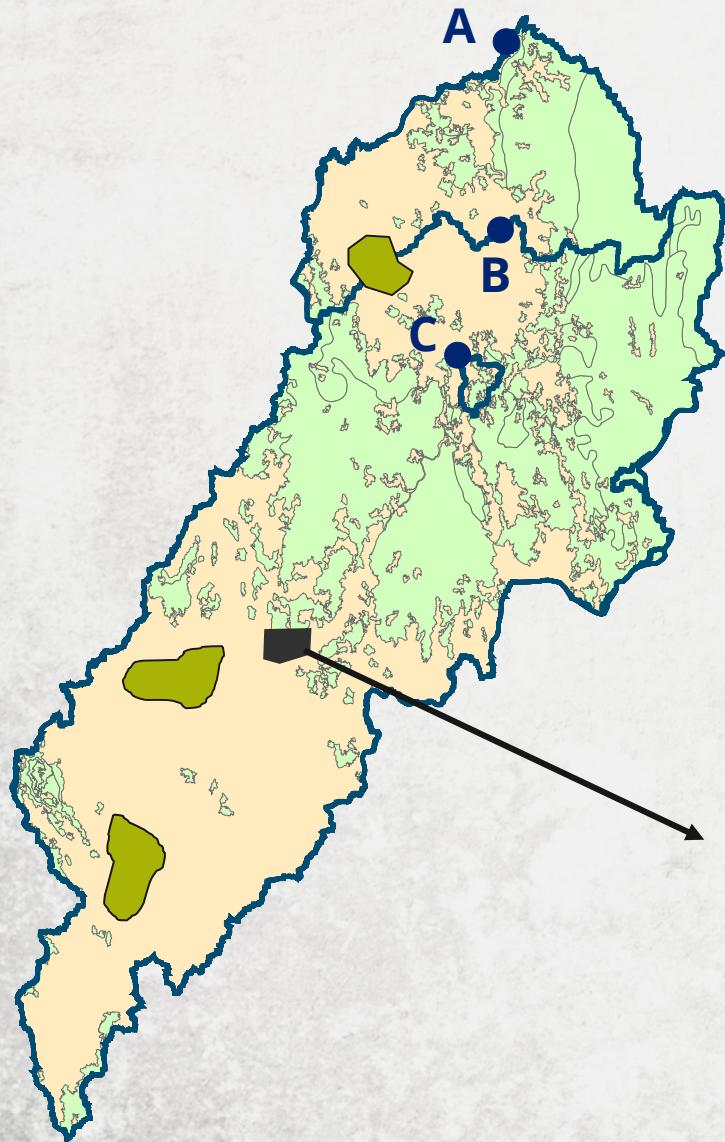


Too small

Loss of 1,600 ha
Loss of soil & nutrient retention

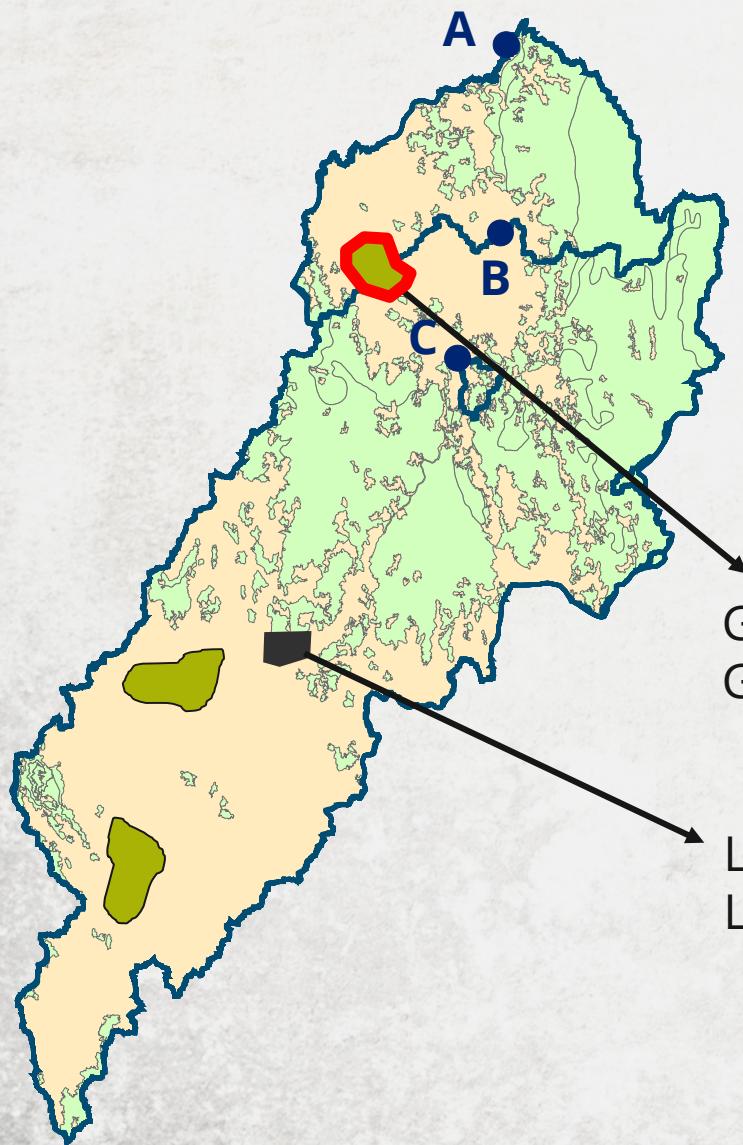
Wrong vegetation type

3) SELECTING OFFSETS & TRACKING BENEFITS



Loss of 1,600 ha
Loss of soil & nutrient retention

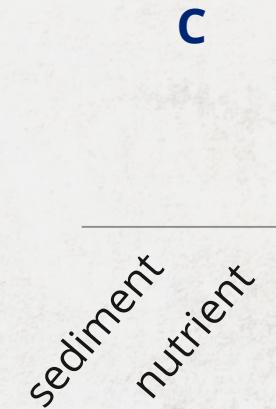
3) SELECTING OFFSETS & TRACKING BENEFITS



Gain of 5,000 ha
Gain of soil & nutrient retention

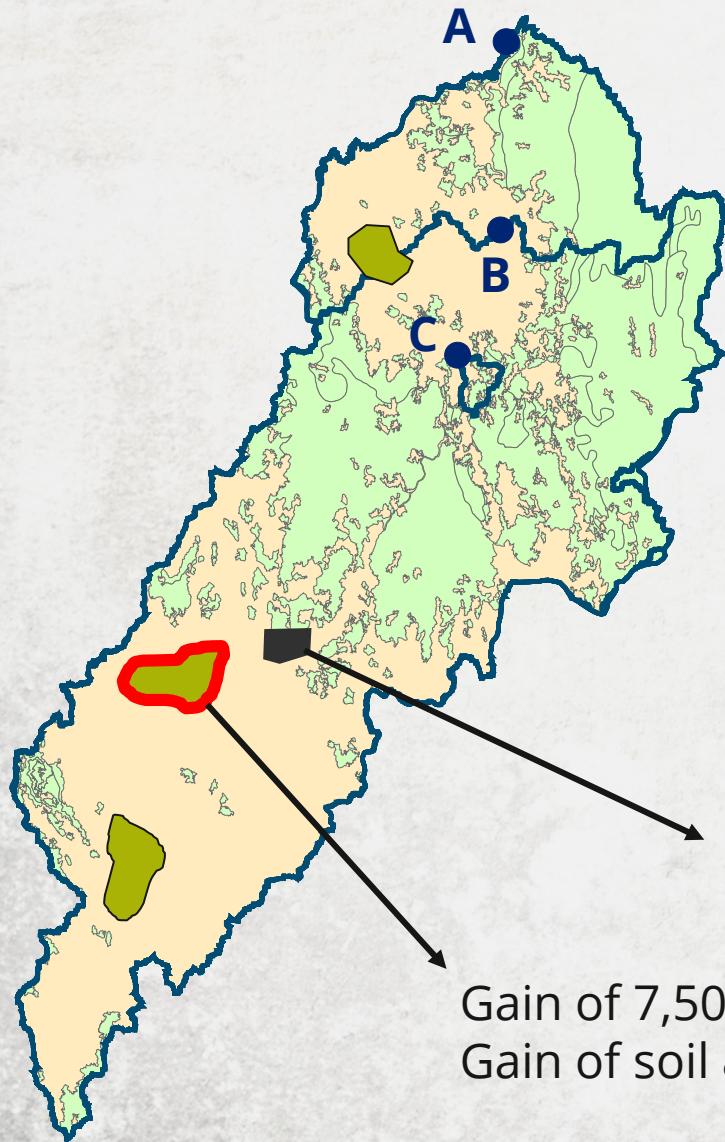
Loss of 1,600 ha
Loss of soil & nutrient retention

Changes in water quality

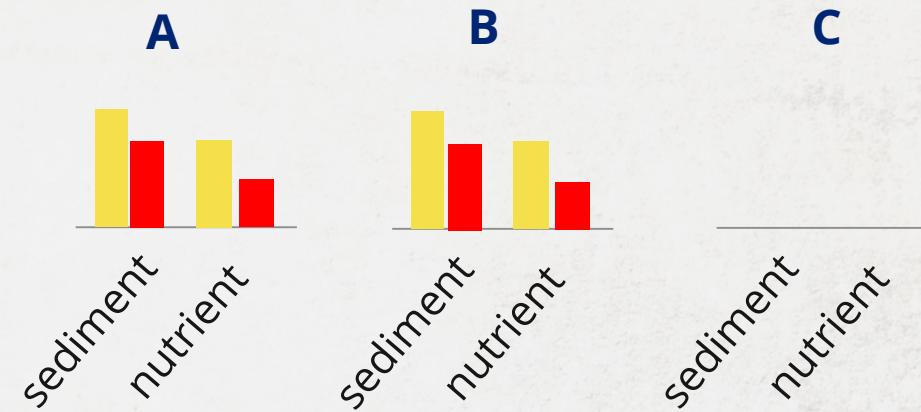


Loss from development
Benefit from offset

3) SELECTING OFFSETS & TRACKING BENEFITS

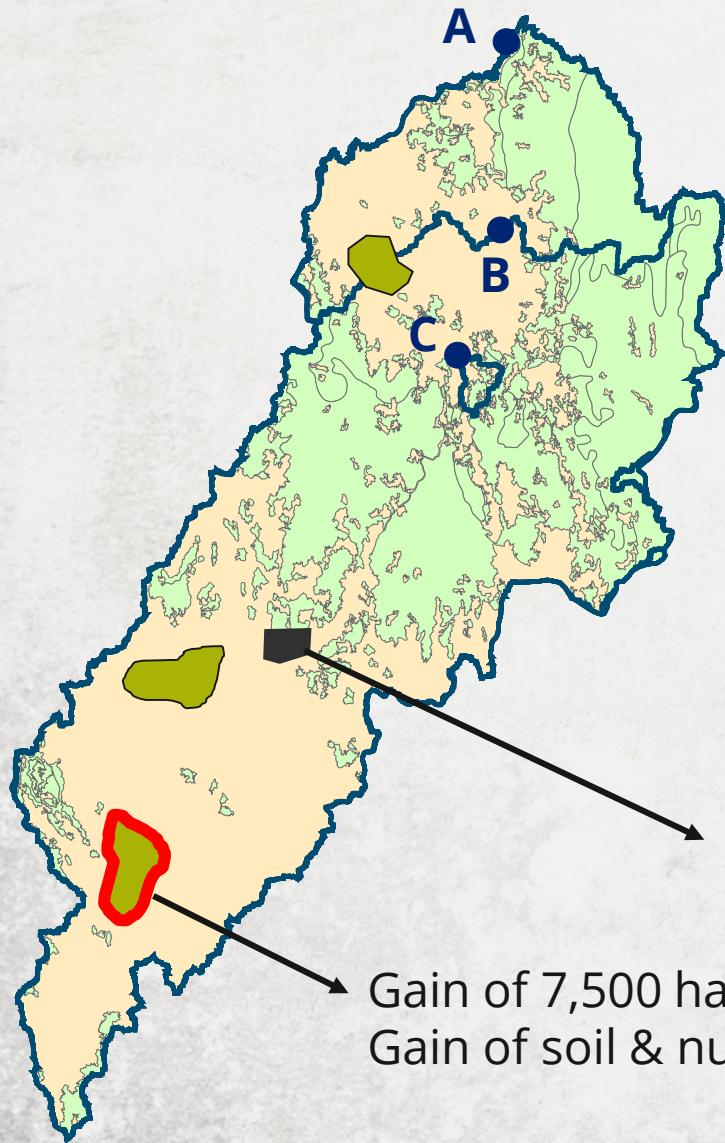


Changes in water quality

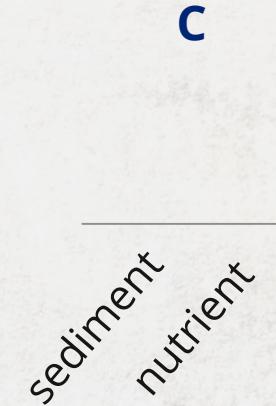


Loss from development
Benefit from offset

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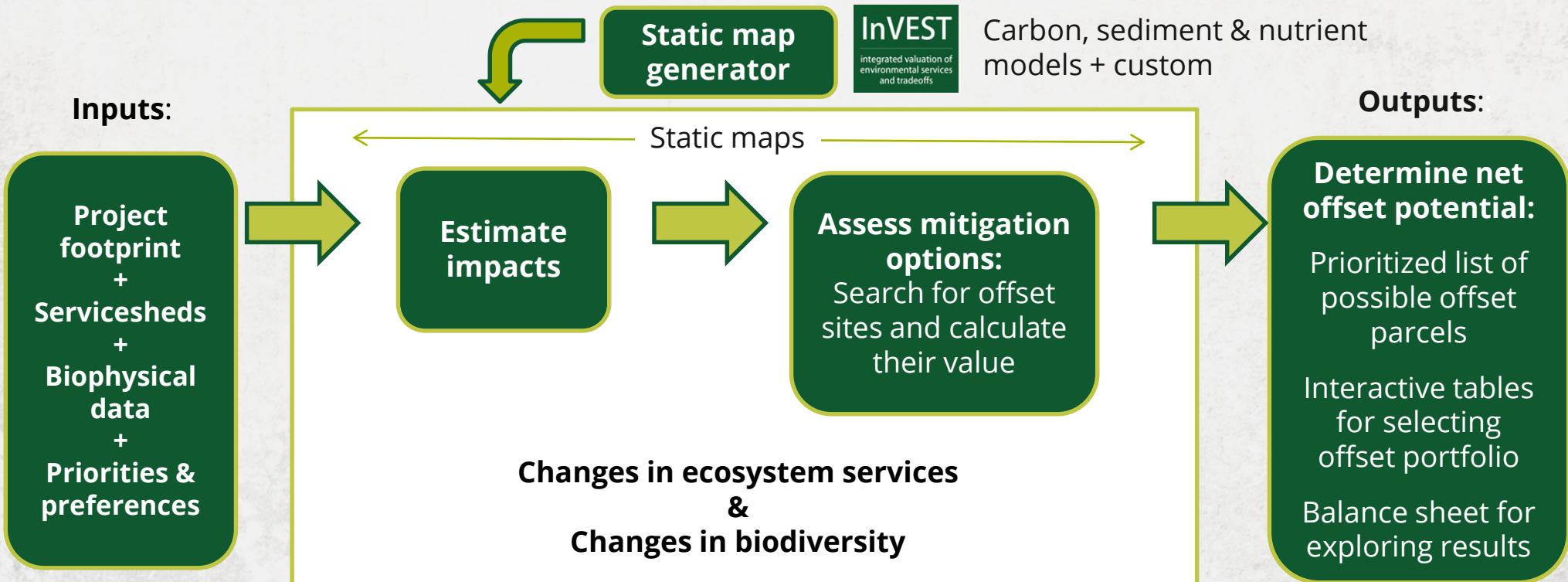
Changes in water quality



- Loss from development
- Benefit from offset



THE OPAL APPROACH





OPAL FEATURES

- Uses InVEST or other ecosystem service models to create static maps
- Tracks changes in benefits with servicesheds
- Restoration or protection offset options
- Flexible options for prioritizing offsets
- Rapidly and interactively explore results



Adaptable to wide variety of contexts



Offset Portfolio Analyzer & Locator

- How much habitat and ecosystem services will be lost with project development?
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Questions?

Forums.naturalcapitalproject.org