Cumulative Effects

Monitoring, Assessment, & Management

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What Are Cumulative Effects?

“changes to the environment and/or society that result from a land use activity in combination with other past, present and future activities.”

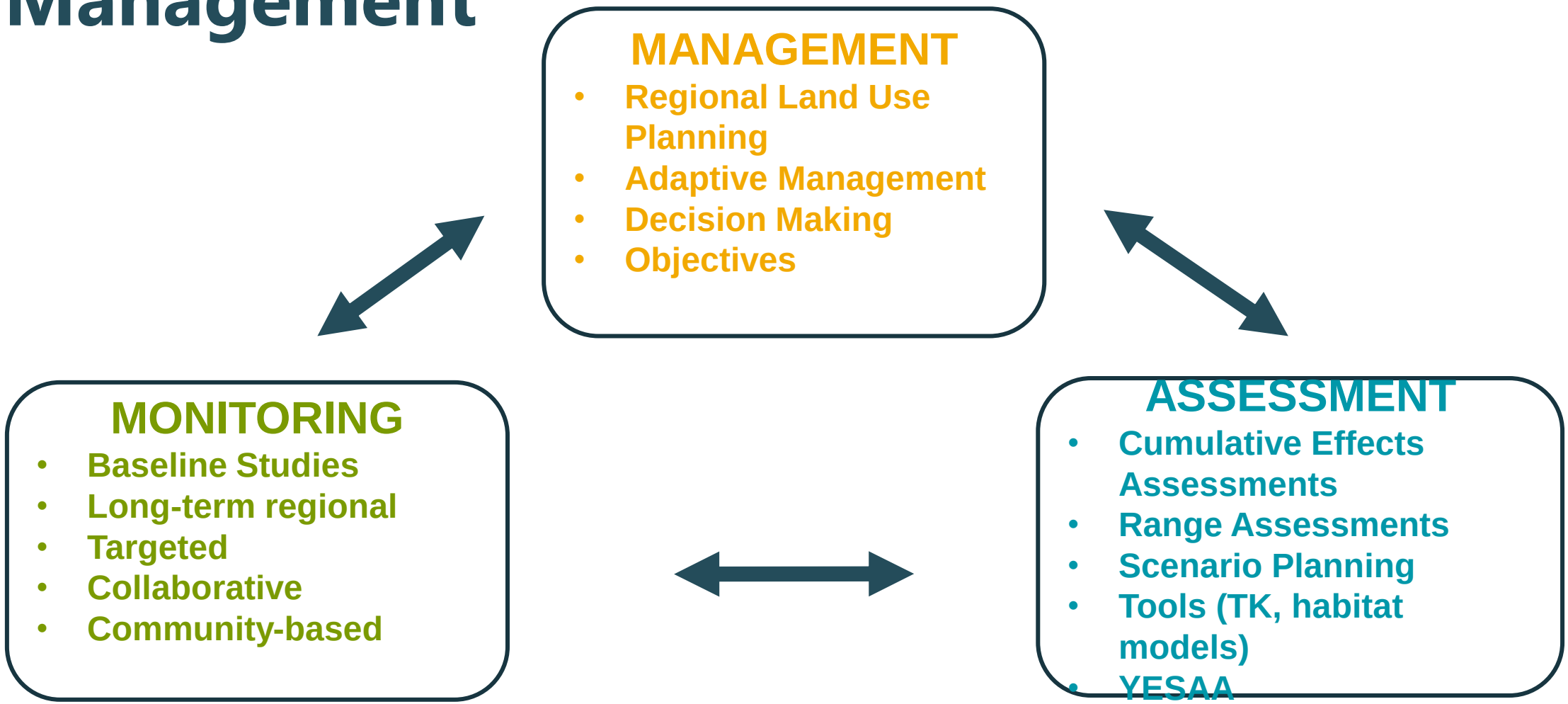
“a change in the environment caused by multiple interactions among human activities and natural processes that accumulate across space and time”

“death by a thousand cuts”

Cumulative Effects Management

- Regional approach (not project-by-project)
- Consider indirect and direct impacts
  - e.g., Road development
    - direct impact: loss of habitat
    - indirect impact: increased human access, changes in ecosystem dynamics
- Regional Monitoring
- Adaptive Management

CE Monitoring, Assessment, & Management

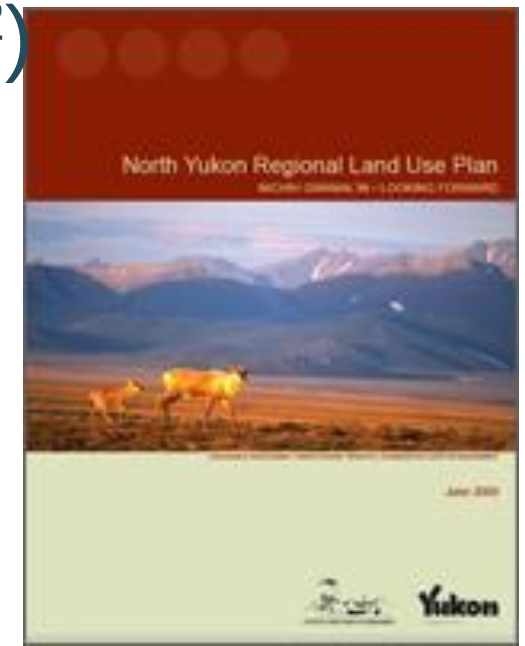


How do we measure cumulative effects?

North Yukon CE ‘measures’

Direct Surface Disturbance: physical footprint of all human-caused disturbances on the landscape (km^2)

Linear Feature Density: the total length of linear features (e.g., roads, trails, seismic lines) in a given area (km/km^2)



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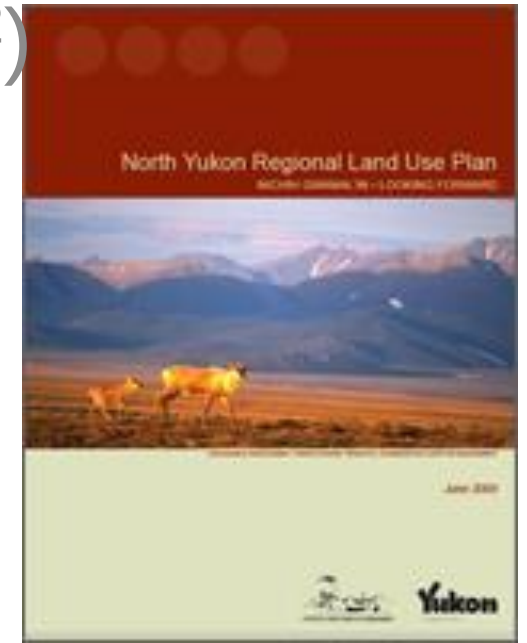
Disturbance does not equal cumulative effects

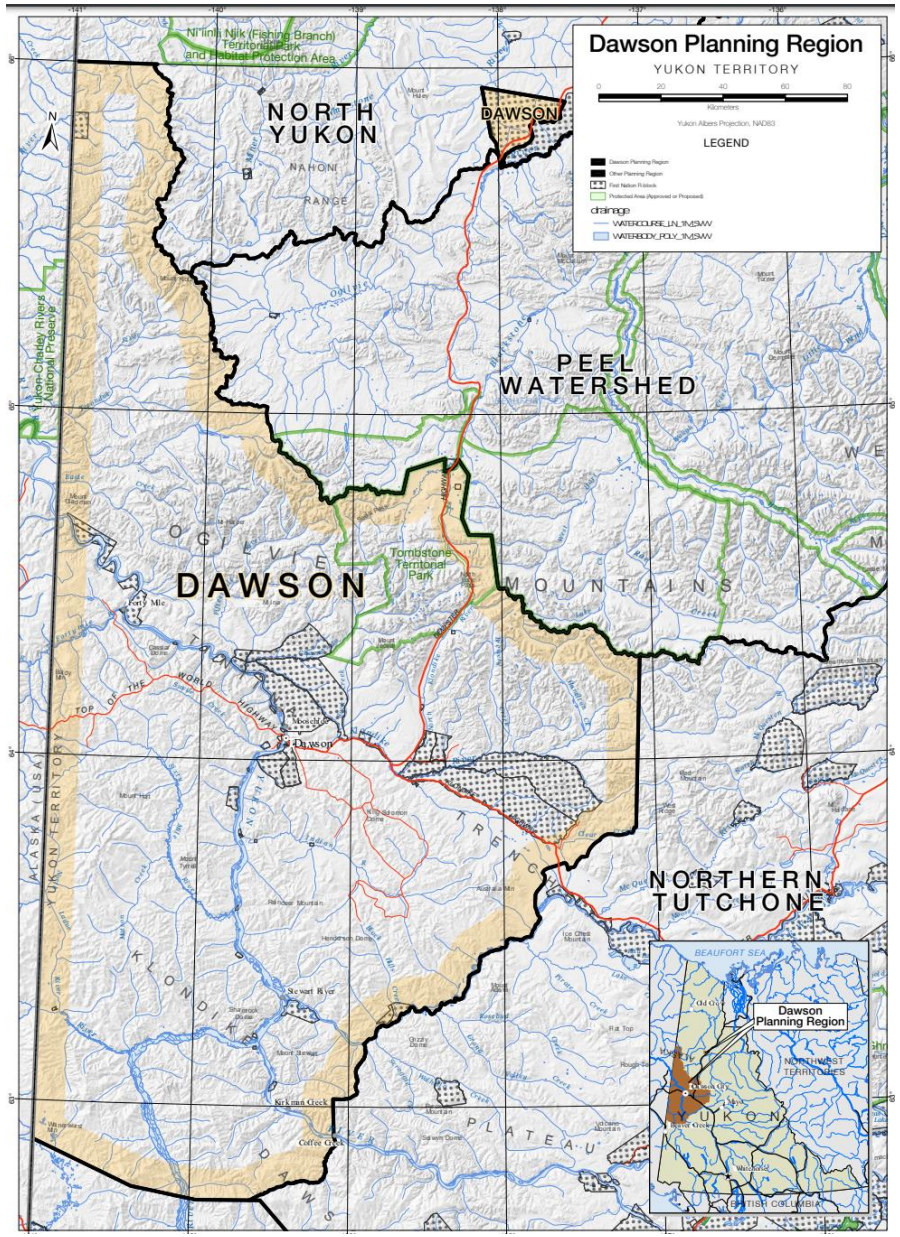


How *should* we measure CE?

- Indicators are generally based on *valued ecosystem components* and should address aquatic and terrestrial impacts

- CE Indicators are typically ecological indicators, this could be generic (e.g., amount of intact forest) or specific (e.g., caribou habitat quality)

Questions?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