



Mackenzie Valley Environmental Impact Review Board



Thresholds in EIA: Where to Draw the Line

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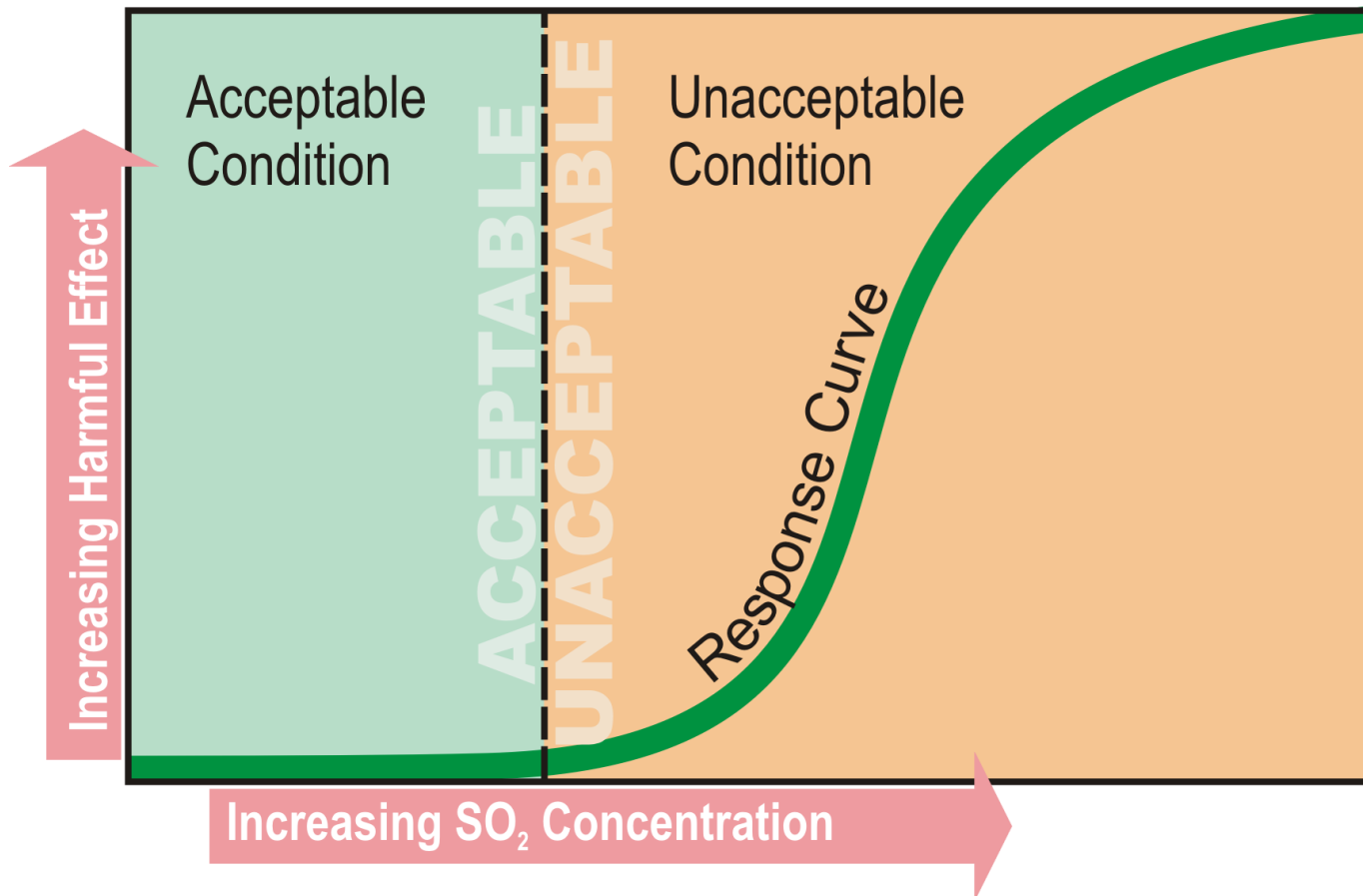


What are Thresholds?

- Threshold is a boundary
- Ecosystems are affected by impacts from many sources
- Management thresholds: **limits of acceptable change**
- Focus on valued components
- Useful for managing cumulative effects



Change and Thresholds





Different Types of Thresholds

- Water or air quality
- Biophysical thresholds
- Sometimes tipping points
- Tiered thresholds
 - Cautionary
 - Target
 - Critical
- May be social or cultural



The Role of Values

- Science can (often) tell you how what impact a change will cause
- The acceptability of an impact is a social question, not a scientific one
- Any applied threshold involves limits and trade-offs
- Thresholds must be based on science AND reflect what matters to people



Thresholds in Practice

- Deh Cho Land Use Planning
 - Biophysical tiered thresholds for:
 - Stream crossing density
 - total disturbed area
 - corridor density
 - social thresholds
- ESRF projects
 - Inuvialuit
 - NWT-wide



Thresholds in EIA

- At the beginning: Planning and thresholds considered in issue scoping
 - E.g. Hunter Bay resources
- At the end: Thresholds can result from EIA
 - E.g. 1.8 km/km² Paramount Cameron Hills linear density threshold for caribou



Significance Determinations

- EIAs can only make measures for significant impacts
- Considers the magnitude, breadth, duration, likelihood and reversibility of predicted impacts to determine significance
- Considers evidence from participants and technical experts (including TK holders)
- Based on Board's informed judgment on a case-by-case basis



Significance and Acceptability

- Few clear external thresholds
- Board uses its informed judgment to determine acceptability of predicted changes on an *ad hoc* basis
- This involves comparing a possible change to a limit of acceptability
- Significance determinations therefore are an application of thresholds on a case-by-case basis!

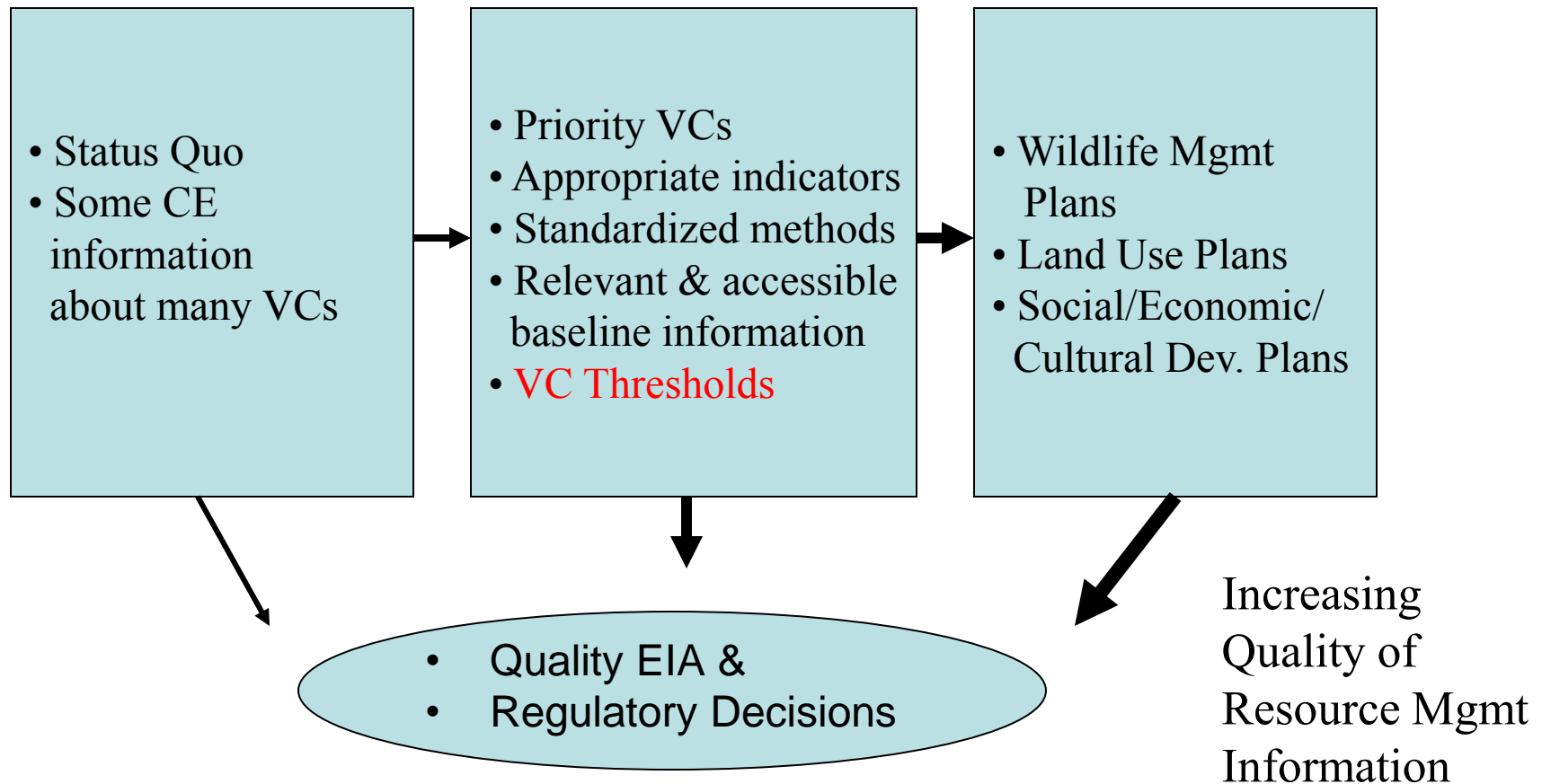


Disadvantages

- Several disadvantages of having to use significance determinations as *ad hoc* thresholds
 - **Uncertainty**: No guarantee of consistency
 - **Difficulty**: Board and parties regularly start from scratch
 - **Duration**: Case-by-case takes longer



Future Improvements





Conclusions

- Timely settlement of claims and land use planning would likely result in thresholds sooner
- This would give developers more clarity and certainty, increased consistency and more efficient EIA processes
- Until then, get cracking on scientific research on natural responses to help define cautionary and critical thresholds