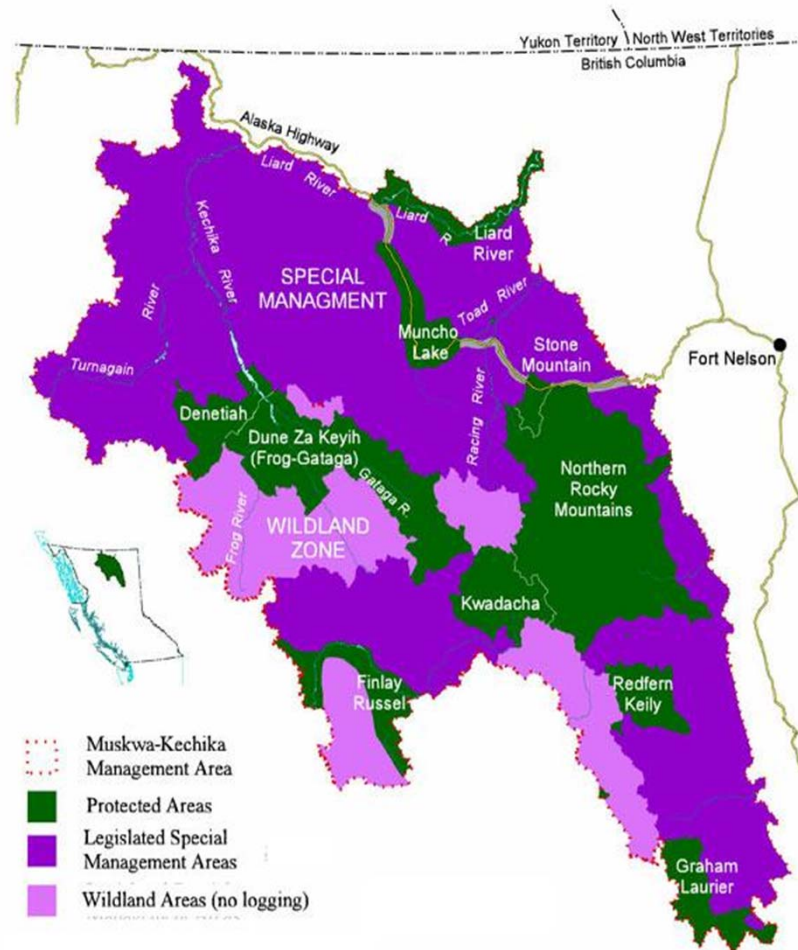


# Change in the Muskwa-Kechika Management Area

## HOW MUCH? OVER HOW MUCH AREA? FOR HOW LONG?

Kathy Parker  
 Pam Wright  
 Mike Gillingham  
 UNBC



## **Goal for the M-KMA:**

**Maintain wilderness quality, and the diversity and abundance of wildlife and the ecosystem**

Currently, the M-KMA:

- is one of few **large intact wilderness areas** left in BC, North America, and the developed world
- supports a large-mammal assemblage with some of the **highest species diversity and abundance** in North America
- also has **resource potential** for development

## Next Steps

(Working Group meeting in Vancouver, 2 June 2015)

1. If there are likely to be potential conflicts between high-value wildlife habitats and resource use, **what recommendations should be made?**
2. **What guidelines are needed** to make recommendations?
  - percentage of high-quality habitat affected?
  - amount of wildlife range altered or roads expected?
3. **What scale should be used** for decision-making?
  - management within each SRMZ?

**Advice and Rationale Needed  
(request from Greg Rawling, 12 April 2016)**

1. Duration for persistence of disturbances
2. Maximum proportion of disturbance on the land base at any one time
3. Exceptions by activity or location
4. Factors to consider in maintaining wilderness quality

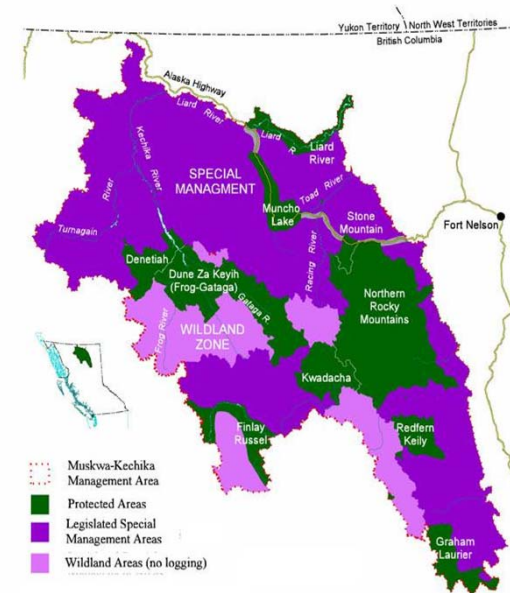
**How will the MK Board provide advice on these items?**

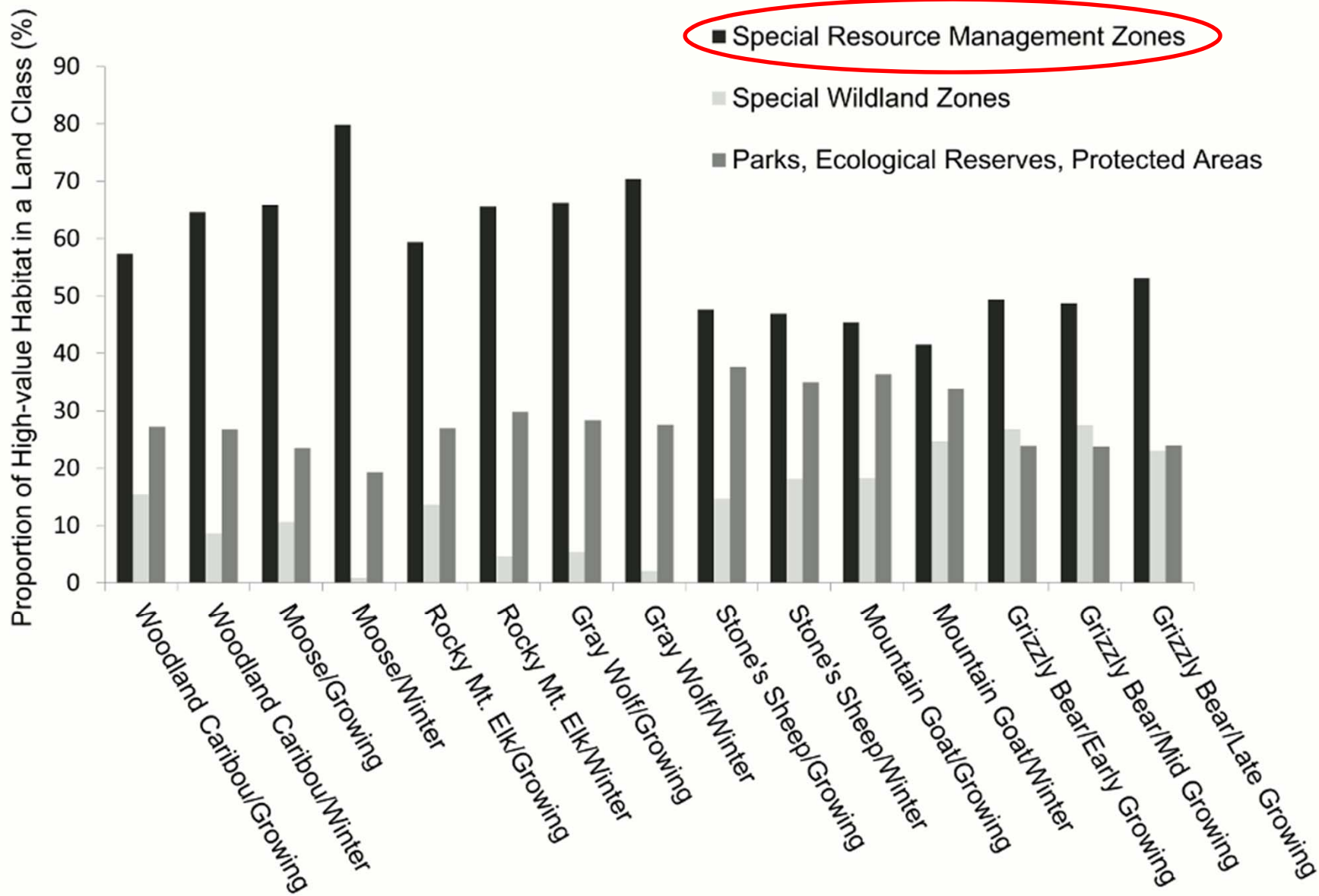
## SCALE IS CRITICAL to avoid ‘death by a thousand cuts’

### Spatial Scale

- Scientific evidence is clear that targets for protection should be 50% or higher.
- Thus conservation measures on rest of land base are incredibly important in order to ensure biodiversity.

- Protected areas encompass 27% of the M-KMA
- < 30 % of high-value habitats for large mammals are in protected areas





## SPATIAL SCALES – nested and overlapping

### 1. M-KMA

- high value for wildlife and wilderness relative to surrounding areas and the province

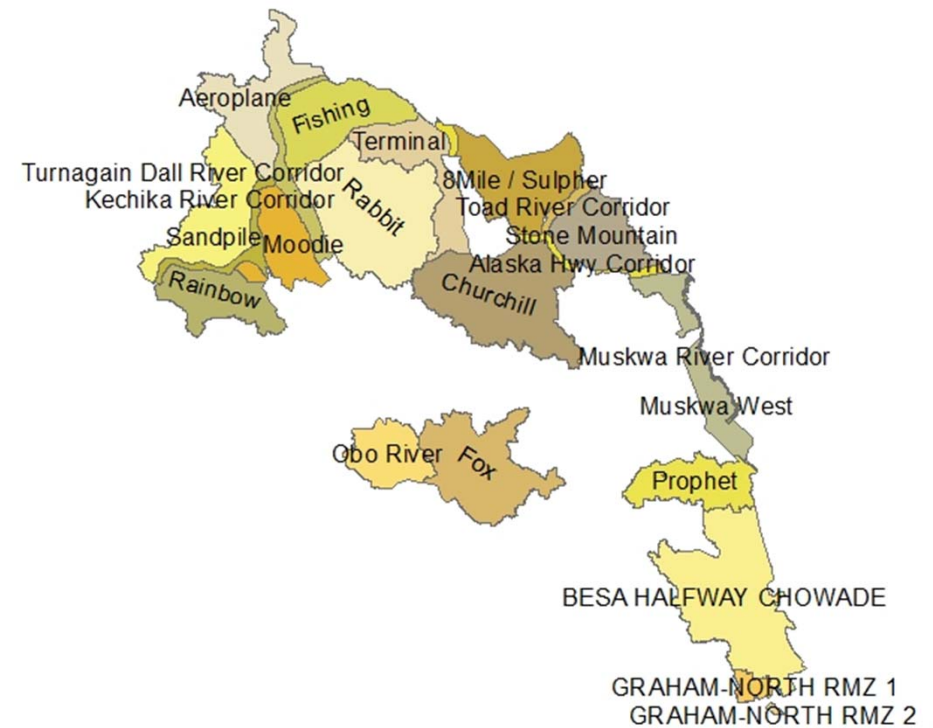
### 2. Watershed

### 3. SRMZs

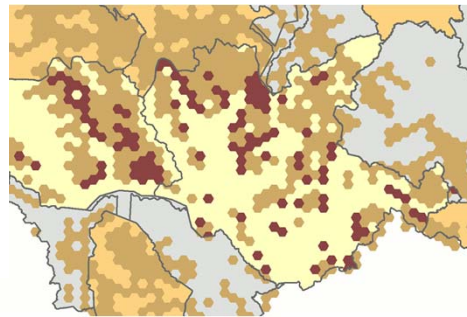
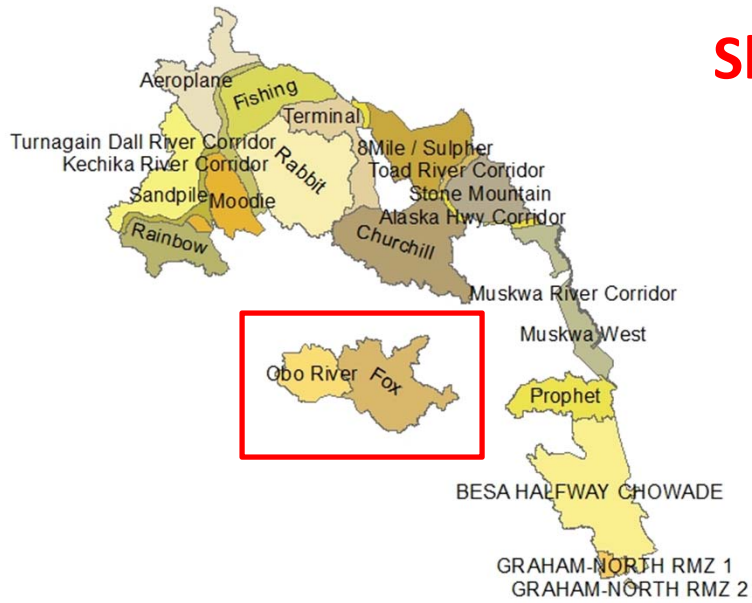
### 4. Scale of element being analyzed (e.g., herd)

### 5. 'No go' areas

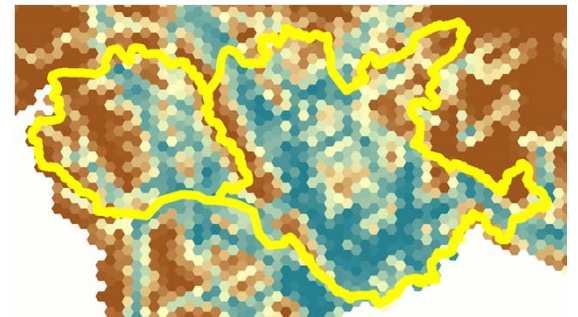
- e.g., licks, karst, wetland



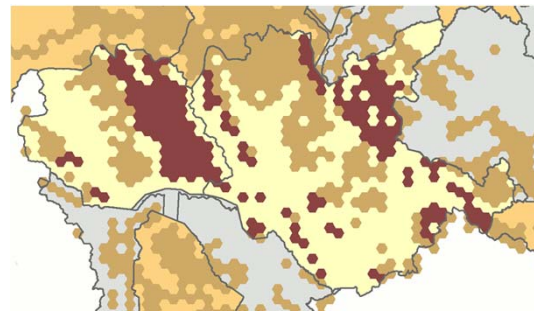
# Should targets be met across scales?



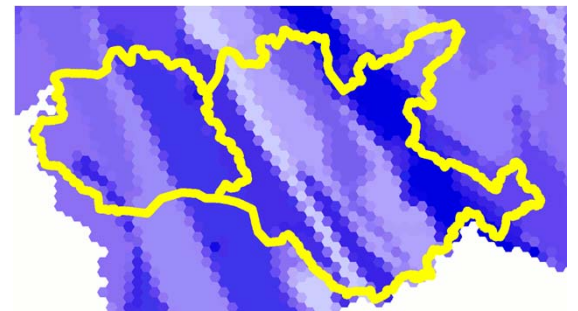
Grizzly / Late Growing



Forest Resource Potential



Grizzly / Late Growing



Mineral Potential



## At each Spatial Scale, what is the TEMPORAL SCALE?

1. When can development occur?
  - **temporal restrictions** on time of year, such as:  
not during calving, lambing, denning;  
not in winter on winter range;  
not during periods of high visitation  
(e.g., **original pre-tenure plans**)
2. How often can development occur?
  - conditions should be met by indicators, **not just a time frame**
  - effectively recovered to have **ecological/wilderness integrity**
  - **decisions based on the slowest indicator to recover**

## Value of Nobi's and Lindi's Research

1. Assessment of relative values (wildlife habitats, wilderness) across the M-KMA and within SRMZs
2. Visualizing potential conflicts between high-value areas and resource use
  - which areas have highest likelihood of conflicts?
  - which areas should be avoided by development?
3. Relative values can inform the indicators
4. Development of an approach that can be used for monitoring changing conditions in the long run

## **VALUED COMPONENTS AND INDICATORS:**

**Wilderness quality**

**Wildlife diversity and abundance**

### **Wilderness Quality**

Watershed intactness

Solitude

Ecological integrity

?????

### **Wildlife Habitat Values by species**

Thresholds based on ??????

**Need to identify gaps – data deficiencies and accuracy, analysis of indicators**

# What is special about the M-KMA compared to the rest of the province?

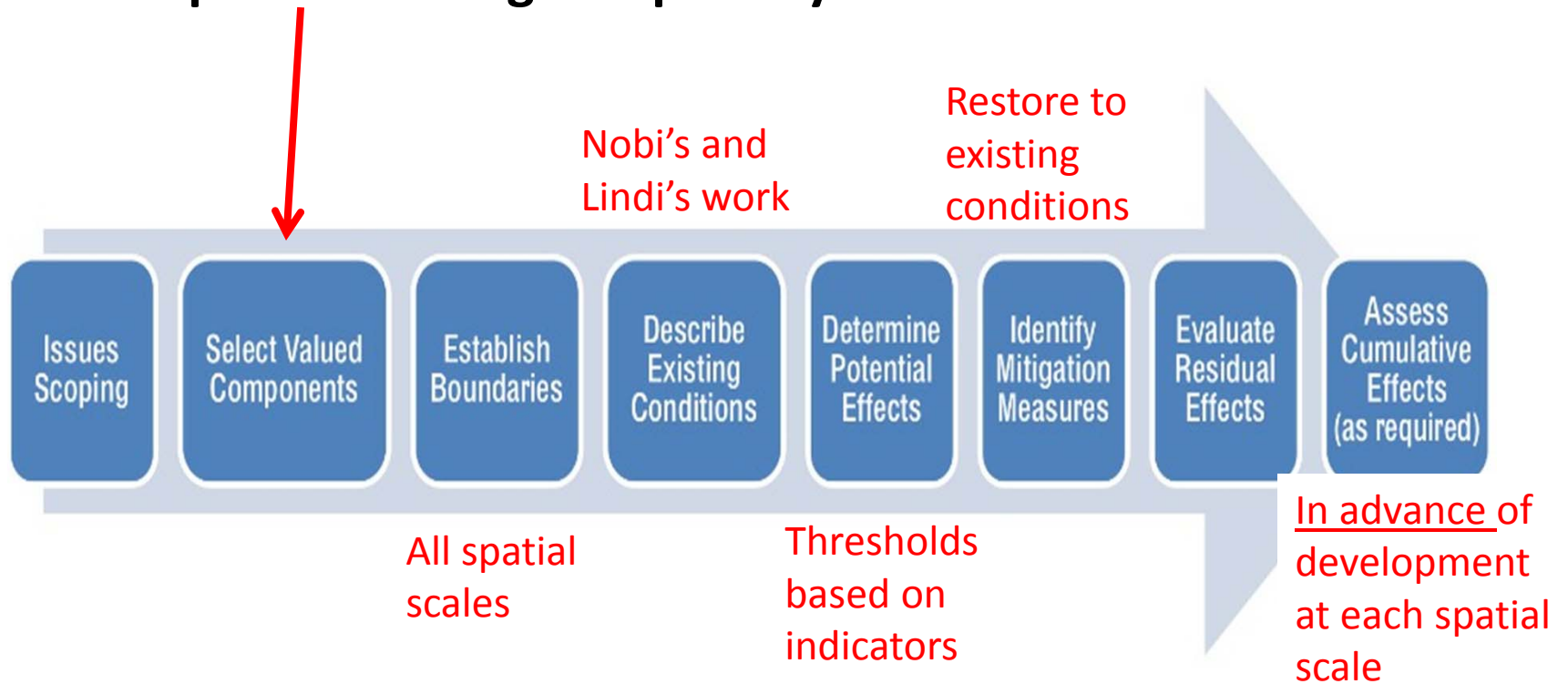
## Initial Values for Cumulative Effects Assessment

An initial set of provincially consistent values for cumulative effects assessment have been identified based on insights from demonstration projects. Key criteria guiding the selection of values included existing legal or policy management objectives, relevance for Aboriginal and treaty rights, and data availability. Fish and wildlife species will continue to be confirmed for each region, with priority given to species with legal management objectives and recovery strategies, and species that are important for supporting Aboriginal and treaty rights, such as hunting, fishing and trapping.

- Forest Ecosystem Biodiversity
- Riparian Condition
- Water Quality and Quantity
- Air Quality
- Visual Quality
- Cultural Heritage
- Fish and Wildlife
- Economic Wellbeing
- Community Wellbeing
- Resource Capability (e.g. Timber)

Source: <http://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/cumulative-effects-framework>

**Maintain wilderness and wildlife as the 2 valued components of highest priority**



Source: [http://www.eao.gov.bc.ca/pdf/EA0\\_Valued\\_Components\\_Guideline\\_2013\\_09\\_09.pdf](http://www.eao.gov.bc.ca/pdf/EA0_Valued_Components_Guideline_2013_09_09.pdf)

## What is special about the M-KMA compared to the rest of the province?

1. **Precautionary principle** – always error on the side of caution to prevent unwanted outcomes .
2. **Minimum valued components** should be the same across spatial scales.
3. **Access** poses the greatest threat to ecological integrity – access should be shared and monitored.
4. Not everything can be restored to existing conditions (roads, open pit mines) and some things may be permanent (permanent structures). Both should be minimized, but always included in the **disturbance footprint**.

## RECOMMENDATIONS

1. Revisit the original pre-tenure plans, which are natural resource management plans
2. Convene a science panel
  - need the same kind of rigour and similar approach as the Clayoquot Sound Scientific Panel
  - need to determine most appropriate indicators and thresholds for multiple scales