

Uses:

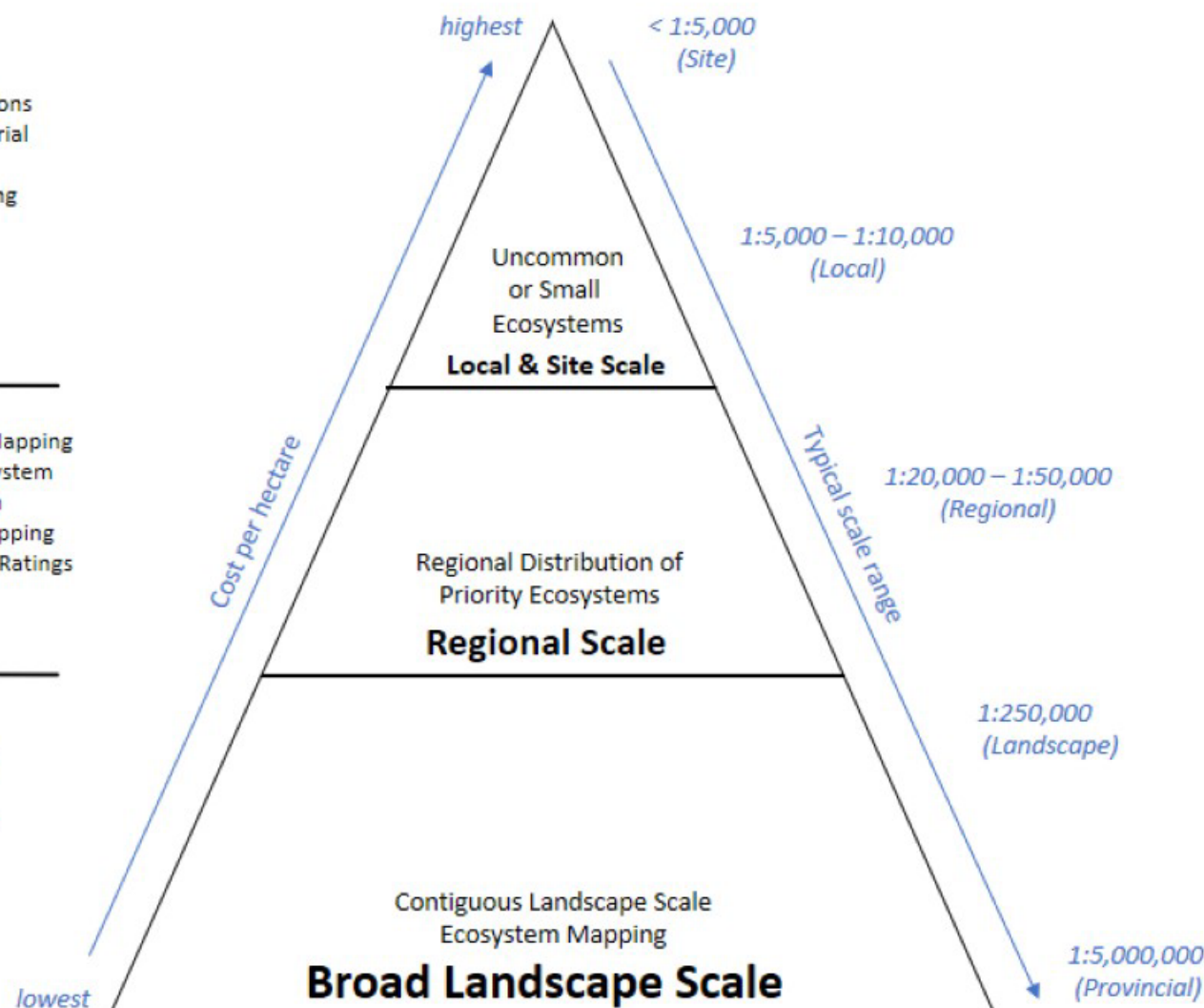
- Management of ecosystem and wildlife habitat features, small-ranging species, uncommon and small-patch habitat (e.g., provincially and federally listed species and ecosystems).
- Identify and display small and uncommon ecological features such as caves, mineral licks, perennial pools, etc. that are difficult to map across the entire region
- Wildlife Habitat Area and Wildlife Habitat Feature designations
- Critical Habitat designations
- Small study areas (e.g., conservation lands mapping and official community plans, local study area for environmental assessment)

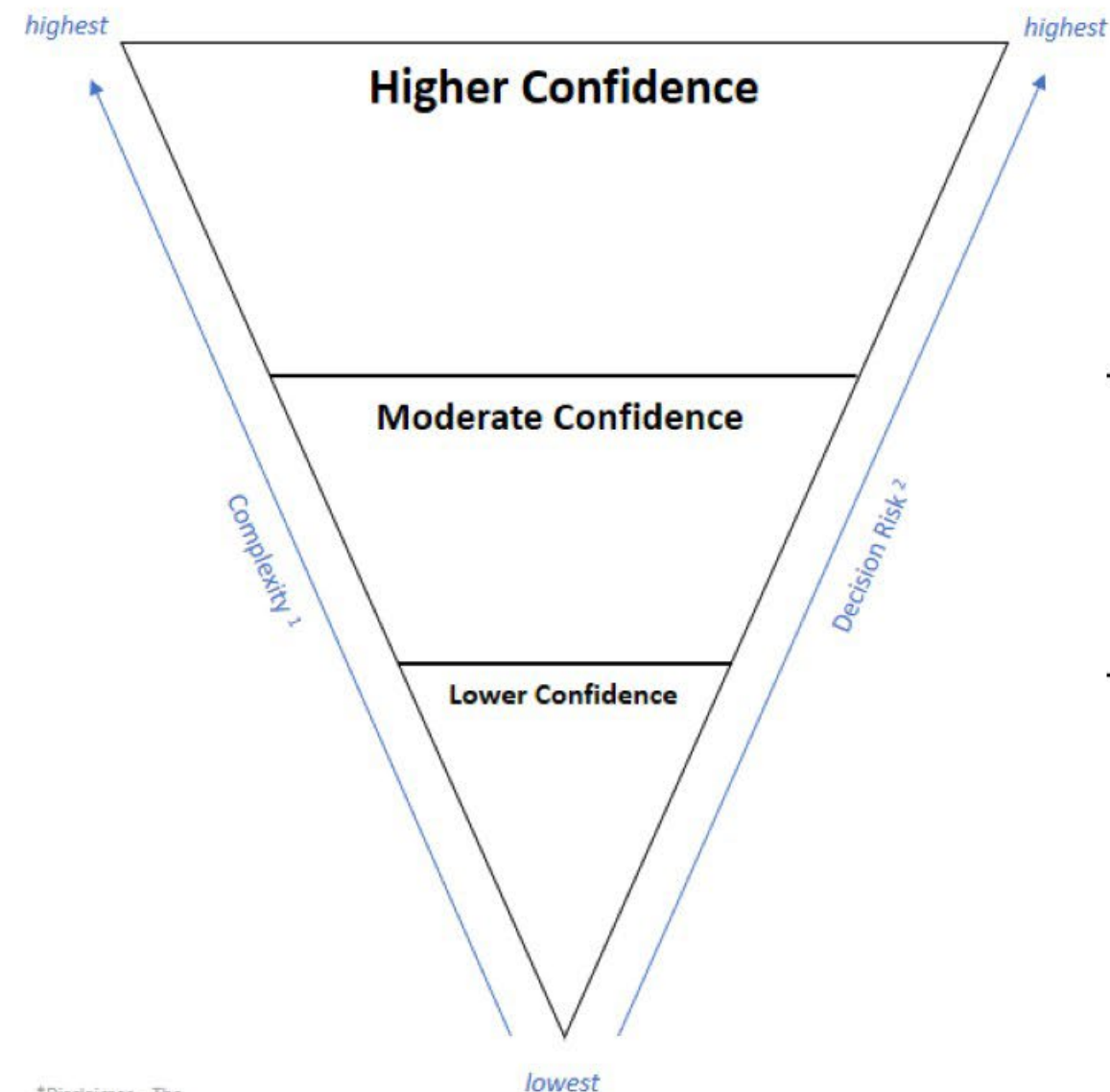
- Map and model the distribution of regional priority ecosystems
- Informs specific valued components for cumulative effects
- Establish zoning and development permit areas for local government
- Medium size study area (e.g., Tree Farm License (TFL) area, landscape unit, community watershed, provincial parks and large conservation lands)

- Management of wide-ranging species and matrix ecosystems
- Complete seamless TEI mapping database with up-to-date structural stage covering the entire region
- Map and model habitat characteristics such as ecosystem representation, patch size, edge habitat, fragmentation, connectivity, etc.
- Provide a spatial framework for predicting ecosystem change in response to climate change, land use, and other threats to wildlife
- Large study areas (e.g., Timber Supply Area (TSA), province-wide, Natural Resource Sector (NRS) regions)

Project Type Examples

- Sensitive Ecosystem Inventory (SEI), Exceptions Mapping (EXC), Terrestrial Ecosystem Mapping (TEM), Wetland Mapping (WET)
- Predictive Ecosystem Mapping (PEM), Terrestrial Ecosystem Mapping (TEM), Terrain Mapping (TER), Soil Mapping (SOIL), Wildlife Habitat Ratings (WHR)
- Broad Ecosystem Mapping (BEM), Broad Ecosystem Inventory (BEI), Broad Ecosystem Mapping Vegetation Resource Inventory (BEMVRI)





Decision Characteristics:

- High consequences/risk
- High economic impacts
- competing land use needs/development pressures
- High number of stakeholders
- Uncertainty is high (e.g., lack or limited knowledge/data)
- Well defined values
- Politically sensitive
- Outcome of decision is highly sensitive to ecosystem information (i.e., critical influencing factor)

Ecosystem Characteristics:

- Provides critical ecosystem services (e.g., biodiversity, water quality, climate resilience)
- Complex landscapes (e.g., number of ecosystem types and spatial patterns)
- Site level variability and complexity is high (e.g., transitional ecosystems, temporal variations, seasonal patterns)
- Uncommon, small or difficult to detect
- Vulnerable

Mapping Characteristics:

- Use-specific (i.e., targeted) mapping
- Spatially explicit
- High accuracy/reliability
- Fine resolution/scale
- Higher survey intensity level (observation densities)
- Detailed classification (e.g., Site-level)

- Allocate limited resources (e.g., restoration)
- Regional and operational strategic and planning level decisions and needs
- Legislated requirements (e.g., land use orders)
- Unknown, vague or poorly defined need
- Multiple uses or needs

- All ecosystem types, sizes, patterns, variability and complexity

- General purpose mapping
- Multidisciplinary products (e.g., ecosystem, terrain, wildlife)
- Seamless coverage
- Serving several unknown needs

- Low consequences/risk
- Low economic impacts
- Provincial strategic and planning level decisions
- Simple, well-defined question or values
- Broad-based decision making
- Outcome of decision is less sensitive to ecosystem information

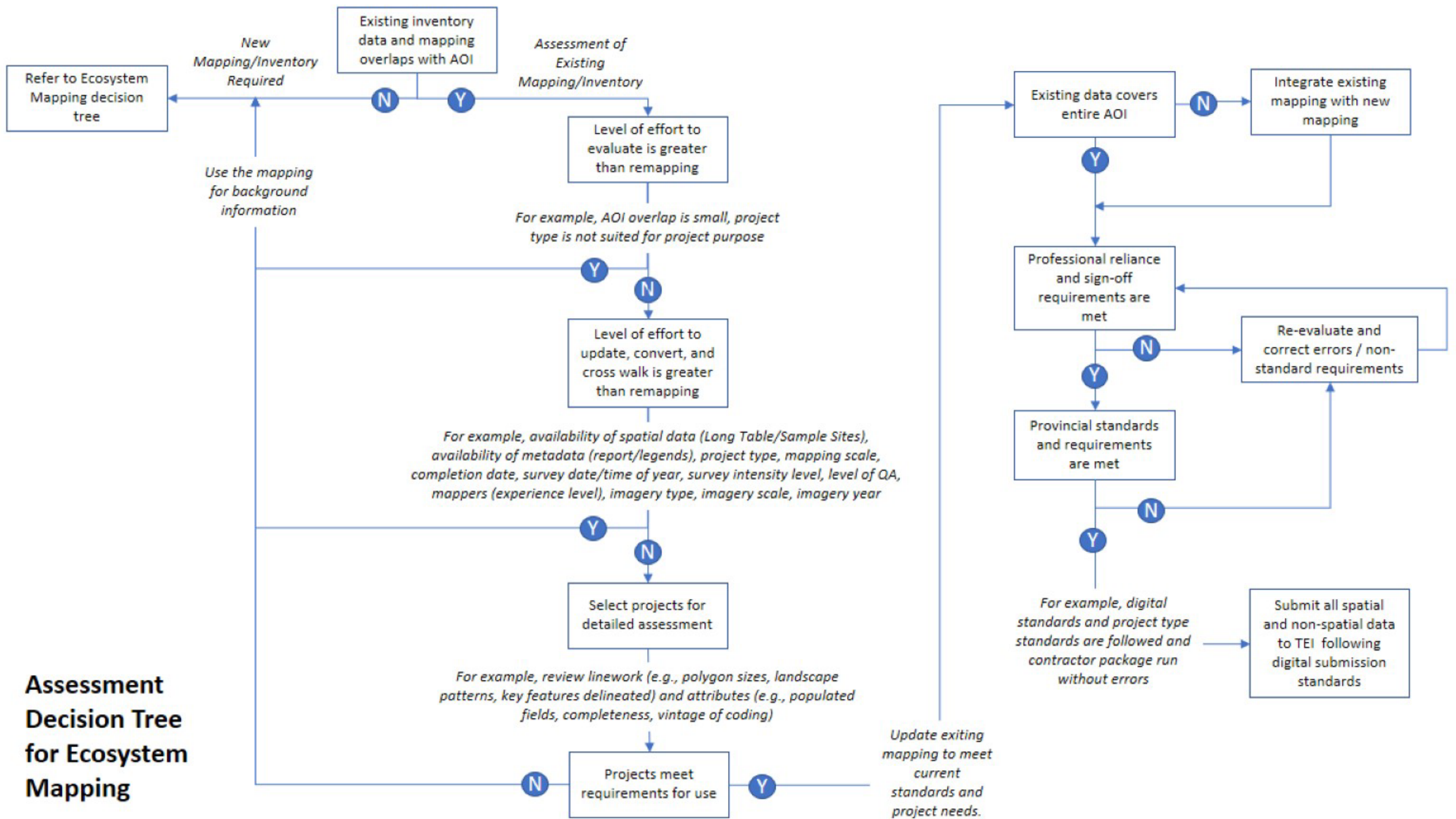
- Matrix, common, zonal and/or wide-ranging ecosystems
- Resilient ecosystems and landscapes
- Simple and predictable landscapes

- Large study area, low risk
- Landscape level proportions (e.g., percentage of watershed or Timber Supply Area)
- Coarse resolution/scale
- Broad-level classification

*Disclaimer – The mapping, ecosystem, and decision characteristics are examples and may not be an exhaustive list

¹ Complexity describes the variability of mapped characteristics and spatial patterns (e.g., attributes, spatial distribution, number of mapping categories or ecosystem codes). For example, number of BEC zones or geology types.

² Assess relative risk to evaluate available options in the context of multiple contributing factors (e.g., ecological value/rarity, legislation, and/or economic value) and the probability of the decision impacting those factors/values identified.



Ecosystem Mapping and Inventory Decision Tree

