BEC - Integration of 3 Classifications

- Links climate, site and vegetation in an integrated classification across scales
- Framework for ecological understanding, planning and management
- Plant Association – on a zonal site is a diagnostic of a climatic subzone
- Occurrences of a plant association across climatic units define a site association

BGC Subzones - Definition and Delineation with Zonal Plant Associations

- Focus on the vegetation on zonal sites to determine and delineate your BGC subzone
- Zonal sites
  - vegetation driven by climate rather than site conditions
  - average moisture and nutrient conditions
Site Series

Site Identification Procedure

Biogeoclimatic Unit (Subzone/Variant)

PREFIELD
- Determine geographic location (including elevation)
- Refer to maps of BGC unit distributions and cross-sections
- Refer to other resource mapping (e.g., soils, terrain, TEM)

EN ROUTE TO SITE
- Observe terrain and zonal vegetation en route to the site
- Refer to environment and vegetation summary tables for BGC units

Site Unit (Site series)

AT SITE
- Describe site, soil and vegetation conditions
  - Select sample area
  - Estimate % cover for vegetation in plot
  - Collect site information
  - Collect soil information from soil pit
  - Determine soil moisture and soil nutrient regime
- Identify site unit
  - Examine description of units
  - Integrate site, soil, and vegetation information

• Subzone/variants have multiple site series indicating site conditions capable of producing different plant associations
• Site series are the most commonly used category for field use
• Edatopic grid presents the range of soil moisture and nutrient conditions associated with the site series

Coast Area BEC-
Working on updates to:
- Classification
- Mapping

Also inputs to:
- Climate Change Informed Tree Species Selection (CCISS)/stocking standards
- Climate-based Seed Transfer (CBST)
Climate Change Informed Tree Species Selection (CCISS) – components and research inputs

**BEC** provides a foundation for prediction and detection of climate change at multiple scales

**BEC** to inform silvicultural decisions at stand and landscape scales to reduce economic and ecological risk and increase these values

### BEC considerations:
- Predictability of bioclimate envelopes
- Changing site – vegetation relations
- Shifting species interactions and individual responses
- Increase in reliance on site factors, less on vegetation

### Species
- Tree species (and ecosystems) (Gray; Rehfeldt; Iverson; Aitken)
- Dry coastal species (CDFmm and CWHxm) (Klassen)
- Seed source and deployment zones (O’Neill)
- Plant hardiness zones (CFS – McKenney)

### Site level/site types
- Sayward Forest (Carpenter & Dymond)
- Dry south coast climate change project (Coast Research, MFLNRO)

### Stand Level Diversity:
- **Reduces:**
  - risk of complete stand failure
  - pest outbreak severity
- **Enhances:**
  - stand yield in a changing environment
  - structural attributes of habitat diversity
  - range of forest products

### Landscape Level Diversity:
- **Reduces:**
  - cumulative effects of individual stand-level decisions
  - risk of widespread losses from species-specific pests
  - spread and impact of other natural disturbances (e.g., fire)
- **Enhances:**
  - flexibility in stand management while meeting broader targets
  - feasibility of evaluating experimental options