

## CFS Activities Relevant to ABoVE

(Maximum 2 page)

<b>1. Project Title</b>
Canadian National Vegetation Classification (CNVC) – vegetation zones map
<b>2. Investigators (include email).</b> a) Project Lead; b) CFS collaborators, c) external collaborators (individuals/institutions)
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<b>3. Project Description (200 words maximum)</b>
<p>The CNVC is a nationally standardized ecological classification that describes Canadian vegetation in relation to primary ecological drivers within an 8-level hierarchy (<a href="http://cnvc-cnvc.ca">cnvc-cnvc.ca</a>). For forests, the 5<sup>th</sup> level of the taxonomic hierarchy (“macrogroup”) recognizes late seral vegetation patterns that have developed in response to regional climatic gradients. These “macrogroup” units of the CNVC are intrinsically mappable at national scales as “CNVC vegetation zones”. The vegetation zones map of Canada, effectively a major update of the Rowe/Halliday forest regions, provides a baseline representation of climatically determined vegetation patterns in Canada prior to significant climate change.</p> <p>We have completed elevation modeling of vegetation zones in the NWT Cordillera and are ready to incorporate the newly revised Yukon bioclimate zones into the national map by harmonizing across borders with NWT and BC. This work will also contribute the bioclimate layer to CBVM mapping (see accompanying document) for western Canada if it proceeds.</p>

<b>4. Timelines and current funding (level and source)</b>
<b>This work is currently unfunded.</b>
<b>5. Reference (1-2 key publication, website)</b>
<b>cnvc-cnvc.ca</b>

**6. ABoVE question being mainly addressed (please highlight)**

1. How are environmental changes affecting critical ecosystem services - natural and cultural resources, human health, infrastructure, and climate regulation - and how are **human societies** responding?

2. What processes are contributing to changes in **disturbance** regimes and what are the impacts of these changes?

3. What processes are controlling changes in the distribution and properties of **permafrost** and what are the impacts of these changes?

4. What are the causes and consequences of changes in the **hydrologic system**, specifically the amount, temporal distribution, and discharge of surface and subsurface water?

5. How are **flora and fauna** responding to changes in biotic and abiotic conditions, and what are the impacts on ecosystem structure and function?

6. How are the magnitudes, fates, and land atmosphere exchanges of **carbon** pools responding to environmental change, and what are the biogeochemical mechanisms driving these changes?

**7. Linkages with ABoVE:**

- a. Data being collected/generated
- b. Expected key benefits and potential challenges from collaborating with ABoVE
- c. Ongoing and / or interest in future involvement in ABoVE

**Possible collaboration with CBVM proposal for Alaska and western Canada, submitted to ABoVE by Jorgenson and Walker.**