

Field	Response
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2. Please indicate the alignment of your research expertise to one or more of the following GWF objectives/ deliverables:	<p>Improve disaster warning – develop scientific knowledge, monitoring and modelling technologies, and national forecasting capacity to predict the risk and severity of extreme events</p> <p>Hydrometeorology and Climate Change – improve understanding and prediction of how climate change influences water availability and extreme events</p> <p>Hydrology and Terrestrial Ecosystems – improve understanding and prediction of hydrological and terrestrial processes and watershed hydrology and how processes and systems will evolve and interact under a changing climate</p> <p>Water Quality and Aquatic Ecosystems – improve understanding and prediction of how climate changes in climate, hydrology, and land use impact water quality and the health of aquatic ecosystems</p> <p>Human–Water Systems – address the human dimensions that will determine water futures, including governance, policy, communities, border, and water resources management</p>
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 – Diagnosing and Predicting Change in Cold Regions:	
3.2 Please indicate the alignment of your research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:	

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<p>3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:</p>	<p>Projects to improve environmental monitoring, including sensors, drones, satellites, river basin observatories, lake buoys, software development, chemical fingerprinting, real-time monitoring, citizen science, and integration of Big Data platforms for Cold Region water science. Model development to support climate change impact assessment, including regional climate change modeling, hydrological and ecological modeling, specifically involving improvements in forecasting and predictive capacity, downscaling, and scenario development of water futures.</p>
<p>4. Please indicate the alignment of your research expertise to one or more of the following user needs:</p>	<p>Region : The boreal forest (balsam fir dominated forest stands), located on the boreal shield, in Québec province.</p>
<p>5. Please list regions of Canada and the biomes (e.g. mountains, boreal forest, Great Lakes–St Lawrence), watersheds, and/or river basins where you are interested in conducting research for GWF:</p>	<p>Watershed : the BEREV (Bassin Expérimental du Ruisseau des Eaux-Volées), located in the forêt Montmorency, the Université Laval experimental forest. A 50-year old, multiple scale gauged watershed (4 weirs; 1.2 to 9.6 km²) under forest management.</p>
<p>6. Please list any other expertise or recent experience (subjects, river basins, technology) not covered by above query that could help us in assessing your alignment with the GWF programme:</p>	<p>River basin: The Montmorency river, gaged at the outlet (1 107 km²) and at mid-distance (267 km²). The BEREV is part of the Montmorency river bassin, enabling multi-scale modeling approach</p>
	<p>The NEIGE site, also located at the forêt Montmorency, has been developed since 2013. It is now the most equipped experimental site in Québec for snow measurement and intercomparison. Easily accessible year-round, in a very snowy environment, this site could play an important role in snow studies in eastern Canada.</p>