

Field	Response
1. Contact Information Name	Corinne Schuster-Wallace
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2. Please indicate the alignment of your research expertise to one or more of the following GWF objectives/ deliverables:	<p>Predict water futures – use Big Data to make informed decisions, better models to assess change in human/natural land and water systems Inform adaptation to change and risk management – propose governance mechanisms, management strategies, and policy tools to reduce the risk of water threats, design adaptive strategies, and enhance economic opportunities</p>
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 – Diagnosing and Predicting Change in Cold Regions:	<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 Human-Water Systems – address the human dimensions that will determine water futures, including governance, policy, communities, border, and water resources management Water and Health – determine how changes to climate, extreme events, hydrology and water quality will affect human health in urban, rural and Indigenous communities</p>
3.2 Please indicate the alignment of your research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:	Decision Support Systems – predictive and diagnostic modelling system development and deployment for hydrology, water quality and water resources

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3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:	<p>Water Environment – ecosystem health and conservation, water management Urban and Rural Communities Indigenous Communities Government and Governance</p>
4. Please indicate the alignment of your research expertise to one or more of the following user needs:	<p>Risk reduction and analysis tools, including forecasts of floods, droughts, wildfires, and freezing rain (and other weather and climate extremes); water quality assessments; disease risk analyses; and integrated assessments. These tools alert industry and government to potential problems and allow cost/benefit analyses for potential risk mitigation.</p> <p>Complex system modeling and analyses reflect the growing awareness of interacting dynamics in human–natural coupled systems. These studies emphasize the inter–relationships between water resources and transportation systems, infrastructure, energy generation, mining, food production, and source water protection.</p> <p>Knowledge mobilization for decision support, including the facilitation of communities of practice, stakeholder engagement with science, visualization and Decision Theatres, development of place–based solutions for climate adaptation, and evidence–based decision making.</p> <p>Merging Indigenous traditional knowledge with science for more effective climate adaptation, risk management, water governance, and sustainable development. Studies of environmental change and long–term, generational impacts of economic development on First Nations ecosystems and water resources.</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>Current research activities are focused in rural and indigenous communities in Ontario and internationally (Caribbean and East Africa). Important elements of all tool development are transferability and scalability, enabling opportunities in rural, remote, marginalised communities across Canada.</p>

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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:	My expertise lies in coupled systems approaches to water–environment–health issues and development of local tools that support evidence–informed decision–making, especially in low resource settings.