Field	Response
1. Contact Information   Name	Anthony Q. Liu
1. Contact Information   Department	Environment and Climate Change Canada- MSC
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2. Please indicate the alignment of your research expertise to one or more of the following GWF objectives/ deliverables:	Improve disaster warning - develop scientific knowledge, monitoring and modelling technologies, and national forecasting capacity to predict the risk and severity of extreme events
3.1 Please indicate the alignment of your research expertise to the GWF Science Pillar 1 –	Hydrometeorology and Climate Change - improve understanding and prediction of how climate

3.2 Please indicate the alignment of your research expertise to the GWF Science Pillar 2 – Developing Big Data and Decision Support Systems:

Diagnosing and Predicting Change in Cold

Regions:

3.3 Please indicate the alignment of your research expertise to the GWF Science Pillar 3 – Designing User Solutions:

Hydrometeorology and Climate Change – improve understanding and prediction of how climate change influences water availability and extreme events

Response

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4. Please indicate the alignment of your research expertise to one or more of the following user needs:

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.

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.

- 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:
- 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:

Western Canada

Mountain Snow Analysis; Lake Evaporation