



GWF Update – Climate-Related Precipitation Extremes Project Meeting – Mar 26, 2019

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UNIVERSITY OF SASKATCHEWAN

Global Water Futures

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Global Water Futures: Solutions to Water Threats in an Era of Global Change



**CANADA
FIRST**
RESEARCH
EXCELLENCE
FUND

**APOGÉE
CANADA**
FONDS
D'EXCELLENCE
EN RECHERCHE



University of Guelph

University of British Columbia

University of Northern British Columbia

University of Calgary

University of Laval

McGill University

University of Quebec at Montreal

University of Alberta

University de Montreal

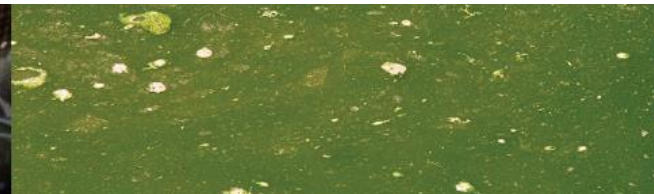
University of Manitoba

University of Victoria

Brock University

Canadian Rivers Institute (University of New Brunswick & University of Prince Edward Island)

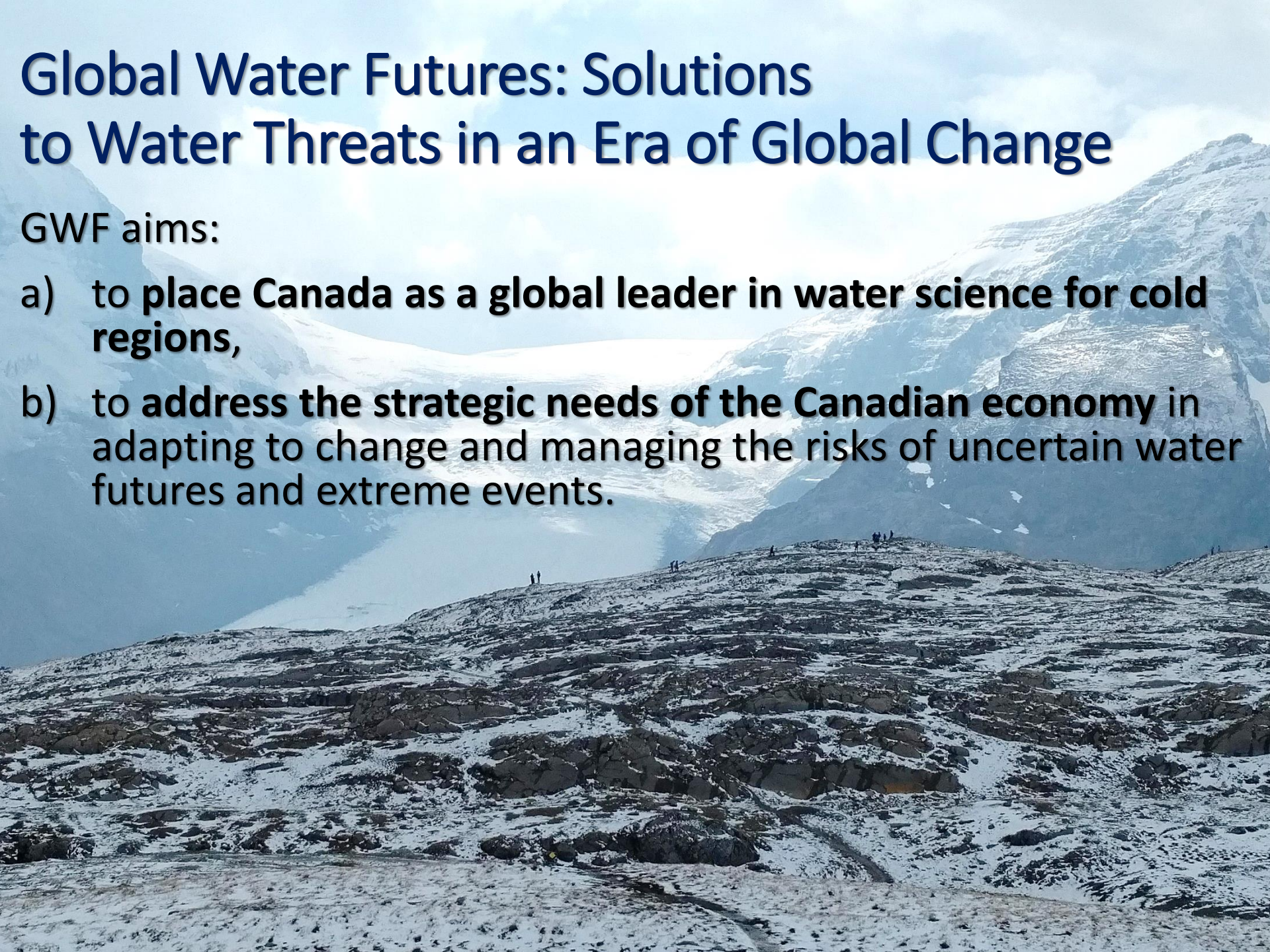
Yukon College



Global Water Futures: Solutions to Water Threats in an Era of Global Change

GWF aims:

- a) to place **Canada as a global leader in water science for cold regions,**
- b) to **address the strategic needs of the Canadian economy in adapting to change and managing the risks of uncertain water futures and extreme events.**



Global Water Futures - Mission



UNIVERSITY OF SASKATCHEWAN

Global Water Futures

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- **Improve disaster warning** – develop:
 - scientific knowledge, monitoring and modelling technologies,
 - national forecasting capacity to predict the risk and severity of extreme events
- **Predict water futures** –
 - use Big Data to make informed decisions,
 - Develop better models to assess change in human/natural land and water systems
- **Inform adaptation to change and risk management** – to reduce the risk of water threats, design adaptive strategies, and enhance economic opportunities, propose
 - governance mechanisms,
 - management strategies,
 - policy tools





Transdisciplinary Science Pillars

- **Pillar 1** - Diagnosing and Predicting Change in Cold Regions
- **Pillar 2** - Developing Big Data and Decision Support Systems
- **Pillar 3** - Designing User Solutions



GWF Today

Awarded
\$ 77.84 M

over 7 years
 **2016 - 2023**

from
 **CANADA FIRST**
RESEARCH EXCELLENCE FUND
 **APOGÉE CANADA**
FONDS D'EXCELLENCE EN RECHERCHE



39 projects

funded across Canada



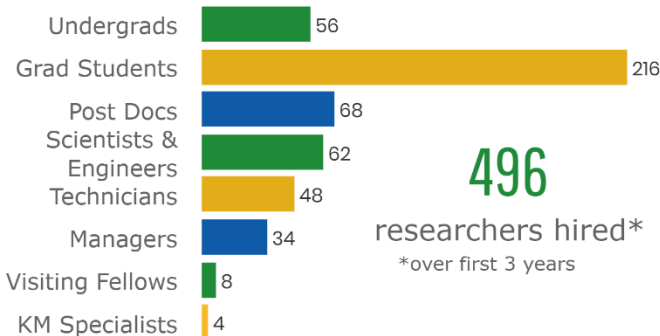
15
universities



162
faculty investigators



335
partners



supports

3 Global Programs



futurearth
research for global sustainability

\$292.6 M

in GWF project & core team funding



\$115.8 M

In-kind



\$176.8 M

Cash

Global Water Futures will position Canada as a:

- Global leader in water science
- Global partner of choice for water research
- Provider to Canada and the world of solutions to water threats

27 UNIVERSITIES, COLLEGES
and ACADEMIC INSTITUTIONS

80 FEDERAL, PROVINCIAL
and CIVIC AGENCIES

32 INDIGENOUS ORGANIZATIONS
and INDIGENOUS COMMUNITIES

61 NON-GOVERNMENTAL
ORGANIZATIONS

66 INDUSTRY
COLLABORATORS

86 INTERNATIONAL
RESEARCH INSTITUTIONS

Our
Global
Team

388*
CANADIAN
RESEARCHERS

3* GLOBAL UNESCO
RESEARCH PROGRAMS | WORLD CLIMATE RESEARCH PROGRAM
FUTURE EARTH

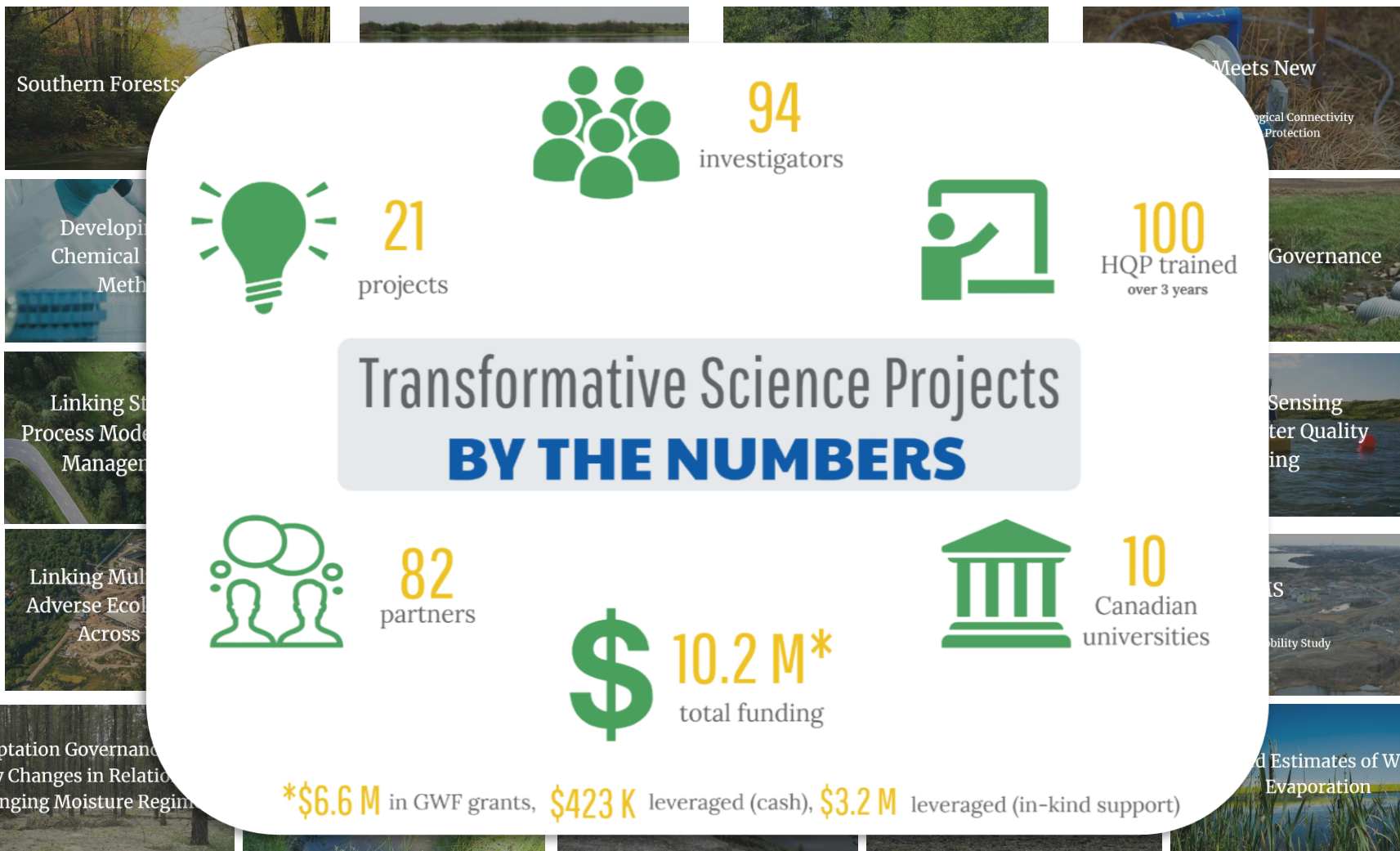
More than 370
National and International Partners

* Research and program collaborators

Transformative Science Projects



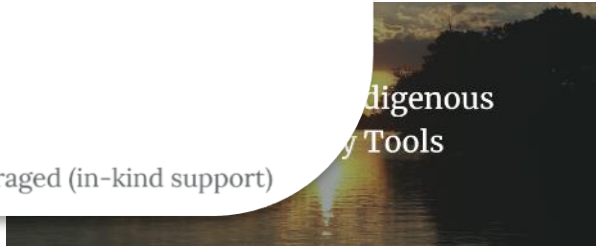
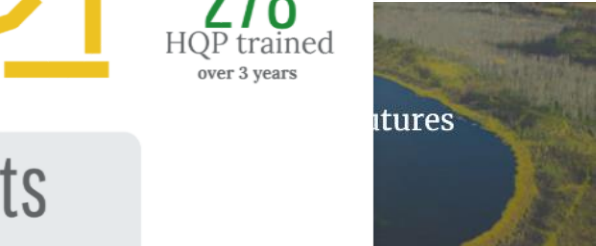
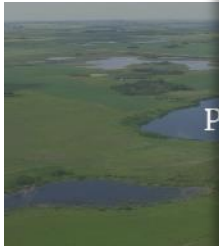
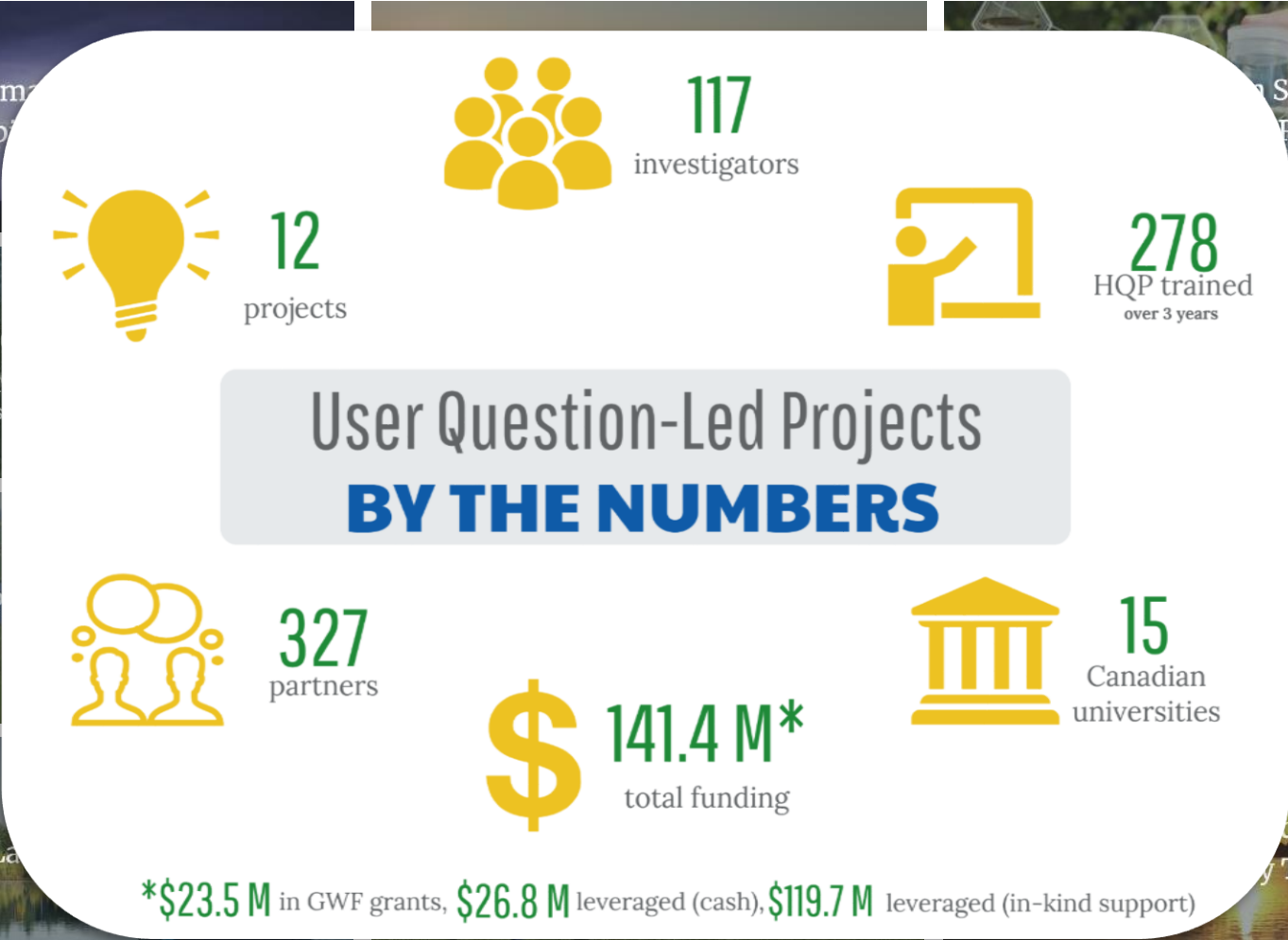
- 21 transformative research, big data and decision support tool projects funded for Pillars 1 & 2




Designing Solutions for Users



- 12 user-question led projects funded for Pillar 3



Indigenous Community Water Research Projects



Is our Water Good to Drink?
Water-related practices,
perceptions, and TK indicators
for human health




FISHNET (Fish & Indigenous
NorthErn health): Healthy
Water, Healthy Fish, Healthy
People



Ohneganos – Indigenous Ecological
Knowledge, Training and
co-creation of mixed method tools



Water Knowledge Camps: Building
Capacity for Cross-Cultural Water
Knowledge, Research,
and Environmental Monitoring

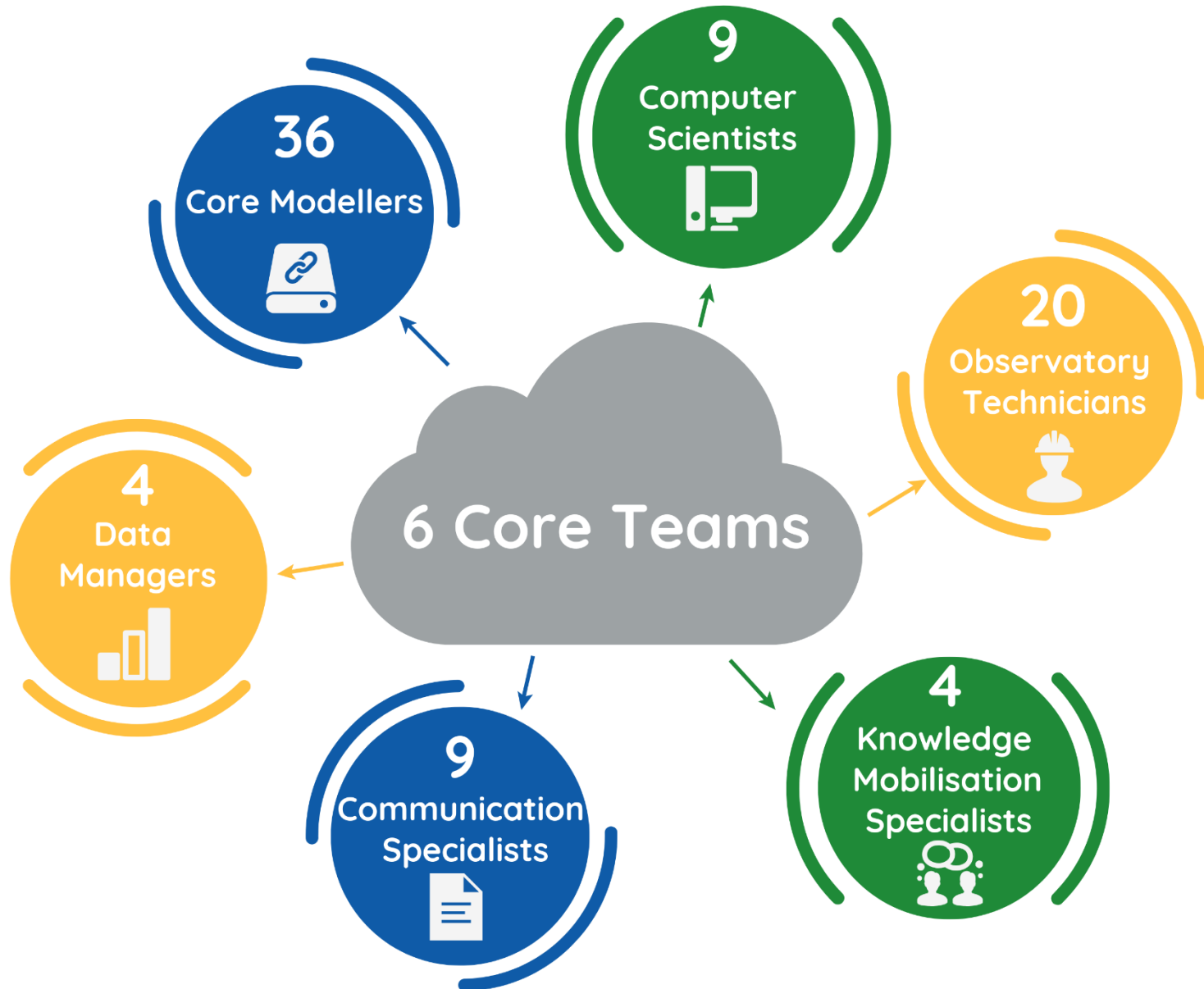


We need more than just water:
Assessing sediment limitation in a
large freshwater delta

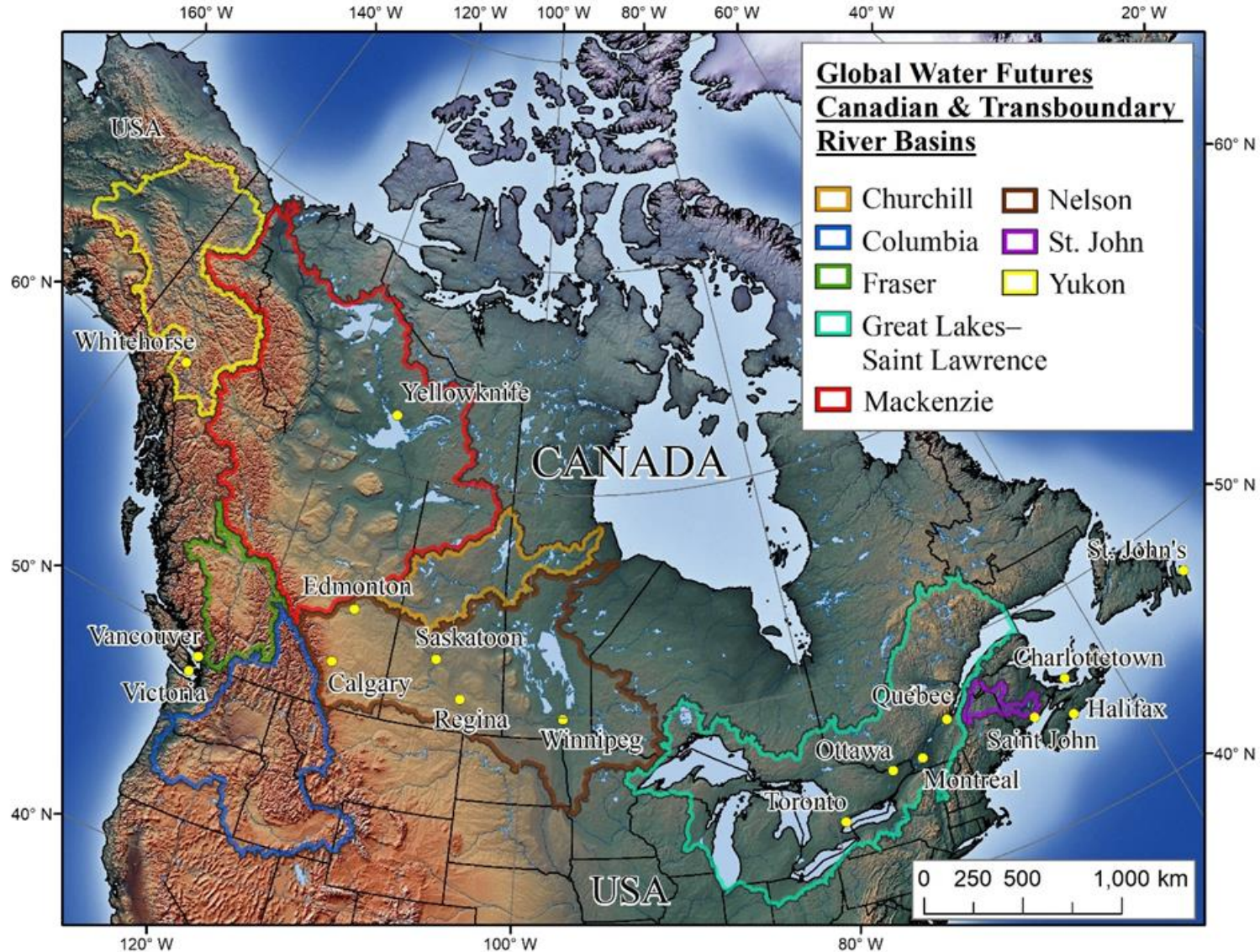


Matawa Water Futures: Developing
an Indigenous-informed framework
for Watershed Monitoring and
Stewardship

GWF Core Teams



GWF's 8 River Basins





By 2023, GWF will contribute to

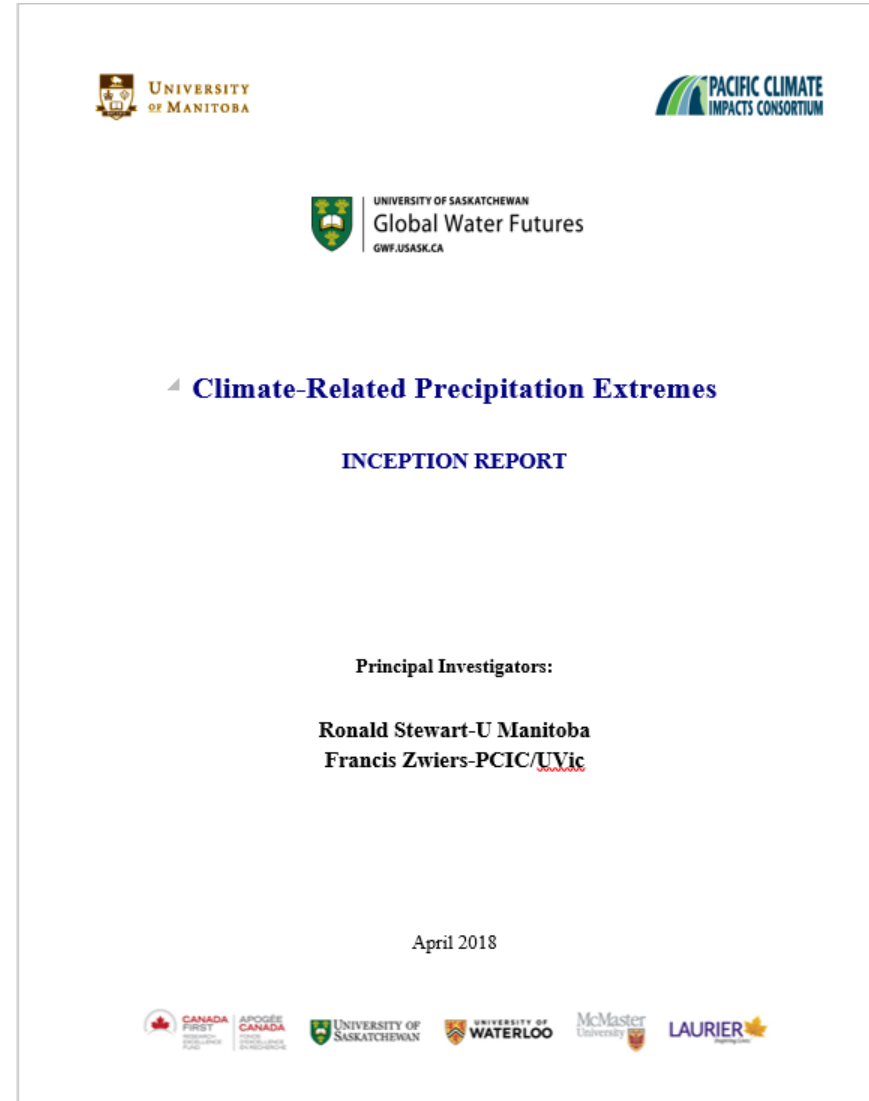
- *Improved scientific foundations* for solving water problems.
- National *water forecasting and prediction* system
- *Predictions of water futures* around the world
- *Water solutions* for food security, energy security, infrastructure, economic development, safe communities, ecosystem conservation, governance.
- *Decolonialization* of Indigenous water management in Canada.
- *Water, peace and security* around the world
- Revitalized *water strategy for Canada*
- Making Canada known as the *water solutions country*.



Inception Report

Feedback on the report

- “The report will be a useful document to help guide the team as the project is carried out and evolves, and in particular, it will help facilitate interaction with the broader GWF membership, projects, and core teams by providing clear insight on your plans and activities.”
- “After reviewing your inception report it is clear that the project is well-managed and on track. This is a very nice report that reflects much thought and consideration of the goals, aims, and plans to achieve these, and the gaps and further issues.”
- “It adequately describes how the project is being run and who is doing what. The PIs had addressed the SMC comments in their original responses and have built on these here.”
- “There will be an ongoing need to liaise with the GWF data management core team in developing and implementing effective data management strategies. In particular, please communicate your project’s metadata information to the data team.”

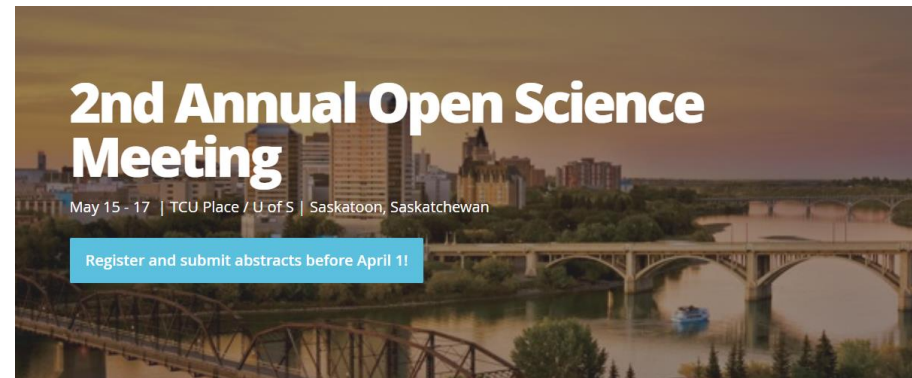




GWF 2nd Annual Open Science Meeting

- 15–17 May, 2019, in Saskatoon
- Parallel sessions on *Climate and Hydrology*, *Human dimensions and Hydro-economics*, and *Ecosystems and Water Quality*
- Keynote talks by leading scientists on key issues relevant to GWF
- Indigenous cultural learning
- Other PD and networking opportunities
- **Register and submit abstracts by April 1**

<https://gwf.usask.ca/news-events/upcoming-events/annual-science-meeting-19.php>



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The second Global Water Futures (GWF) Annual Open Science Meeting is open to all members and affiliates of the GWF program and its extended community of partners, as well as all who wish to be involved with GWF. This meeting will bring together the entire program for the second time, and will include a number of exciting, informative, and unique events and activities meant to review and better link



Pillar 3 Project Renewal

- Projects will be invited to apply for renewal for the period September 2020 – August 2023
- SMC is still working out the details of the proposal process
- Timeline:
 - call for renewals Spring 2019
 - Proposals due Fall 2019
 - Decisions and announcement: Late Fall or Winter 2019/20



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