IV.KNO - 37

Global Water Futures Observatories

Section 1: General Information	
Summary	The Global Water Futures Observatories (GWFO) is Canada's premier national university-operated scientific freshwater observation network. It operates 64 instrumented basins, lakes, rivers, and wetlands, 15 deployable water measurement systems, and 18 state-of-the-art water laboratories that monitor Canada's drainage basins and aquatic systems in unprecedented detail at a national scale, across seven provinces and territories, including the Great Lakes Basin and three other major river basins.
Proponent Name(s)	University of Saskatchewan
Proponent Type	International Organizations and Civil Society Organizations
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Section 2: Commitment	
Linkages to SDG 6	Improve Water Quality, Wastewater Treatment and Safe Reuse, Increase Water-Use Efficiency and Ensure Freshwater Supplies, Implement Integrated Water Resources Management, Protect and Restore Water-Related Ecosystems
Target	GWFO's vision is to serve as a national water observatory consisting of a network of instrumented water observing sites, supported by deployable observing systems and major laboratories, that provides open access water data and the necessary infrastructure to collect supplementary data, which informs the development and testing of water prediction models, monitors changes in water sources, underpins diagnosis of risks to water security and helps design solutions for water sustainability.
Linkages to other SDG	Zero Hunger, Climate Action, Life Below Water, Life On Land

Section 3: Actions and Outcomes to Achieve Targets	
Relevant Sub-Theme	Water Security and Prosperity, Water for Humans and Nature, Disaster Risk Reduction and Management, Knowledge and Innovation
Actions and Outcomes	GWFO provides open access to its meteorological, glaciological, hydrological, water quality and freshwater data, which contributes to the development and evaluation of water prediction models, monitors changes in water sources, supports the identification of water security risks, and aids in designing strategies to ensure the long-term sustainability of Canadian water resources. Benefits enabled by GWFO to Canadians, include:

	• monitoring environmental change in the headwaters of major rivers and in critical aquatic ecosystems across Canada such as the Great Lakes • benchmarking for national streamflow, drought, & water quality prediction models • informing floodplain & risk mapping associated with water-related disasters • designing irrigation, beneficial management practices & precision farming technologies • informing flexible responses to climate change, invasive species & extreme events • underpinning the foundation of federal & provincial water management strategies • informing national and transboundary lake restoration – e.g. Lake Erie Watershed • supporting water information for prosperity – industry, agriculture, communities • attracting & retaining talented young professionals & global scientific-thought leaders to Canada. GWFO's international impact includes: • GWFO's data-informed predictive models are being developed for application around the world in collaboration with UNESCO and delivered to users via regional water solutions laboratories under Future Earth. • GWFO supplies the data, informs models and provides knowledge mobilisation to support three UN programs: the World Climate Research Programme, UNESCO, and World Meteorological Organisation. • GWFO is contributing to the science objectives for the UN International Year for Glaciers' Preservation - 2025, such as instituting GWFO-style "Integrated Mountain Observing and Prediction Systems" through collaborations in the World Climate Research Programme.	
Implementation Period	Start Period	4/1/2023
	End Period	3/31/2029
Financial Commitment	$CDN40,5M / USD 29.440.462	