We present a comparative analysis and comprehensive inventory of fresh water-related indicators in Canada, the first of its kind.

Rationale: The number of fresh water-related indicators in Canada has proliferated over the past decade. However, no systematic comparative analysis of these indicators has been conducted, nor are they centralized or standardized.

Results 1
We found 365 Canadian freshwater related indicators.
- 40 Federal Level
- 112 Provincial Level
- 143 Regional Level (i.e. large-scale watershed)
- > 70 Community Level (these findings were not comprehensive we recommend further study at this scale)

Results 2
Currently in Canada, there are a large number of indicators focusing on a narrow range of issues. Our findings suggest that certain types of indicators and topics are under-represented, that important gaps and overlaps exist, and that indicators are not sufficiently adapted to the needs of decision-makers.

Results 3
The inventory was analyzed using five topics: resources (water quantity), ecosystem health, human health, infrastructure and governance. The following observations can be made regarding federal and provincial/territorial fresh water-related indicators:
- Water quality indicators dominate over water quantity indicators.
- There are significantly more ecosystem health indicators than human health indicators.
- Surface water indicators dominate over groundwater indicators.
- There are only a few integrated (surface and groundwater) indicators.
- Infrastructure indicators are limited in number and in scope (the main focus is level of wastewater treatment; few indicators reflect the condition of supply infrastructure)
- Governance indicators are sparse and poorly developed.
- Overall, indicators are narrowly focused (i.e. indicators do not enable decision-makers to assess the broader picture such as conflicting demands or land–water management practices).

Conclusions
- The current indicator landscape is too complex and indicator information is exceedingly hard to locate, apply and compare (particularly between jurisdictions).
- These indicators are not being widely or consistently used by water managers.
- The absence of a coordinated pan-Canadian approach in the development and application of indicators has resulted in certain indicators being duplicated, whilst insufficient attention is given to the development of indicators in other key areas.
- Indicator development has focused largely on water quality (ecosystem and human health), whilst quantity, infrastructure and governance indicators are inchoate.

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