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**United Nations Group of Experts on  
Geographical Names**

**2021 session**

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**Item 14 of the provisional agenda \***

**Toponymic data files and gazetteers**

**Harmonization of the Canadian Geographical Names  
Database**

Submitted by Canada \*\*

Summary

A primary objective of the 2020–2025 strategic plan for the Geographical Names Board of Canada is to improve the content and the management of the Canadian Geographical Names Database.

An accurate, comprehensive and accessible national database of geographical names is fundamental to supporting the role of the Board. Natural Resources Canada maintains the Database on behalf of the Board's naming authorities: each province and territory, Parks Canada, Fisheries and Oceans Canada, Indigenous Services Canada and the Department of National Defence.

The fundamental obstacle to having a consistent national database is the lack of standardization between the 13 provincial and territorial databases. There are discrepancies in the use of generic codes by the naming jurisdictions, as well as inconsistencies in the types of features that each jurisdiction is responsible for naming.

The Board has commenced work on reviewing the content of the Database with the objective of identifying inconsistencies between information collected from various jurisdictions, and developing a standardized, consistent and up-to-date national database

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## **Background**

The Geographical Names Board of Canada (GNBC) is the national coordinating body responsible for standards and policies for geographical naming in Canada. The Board is established under a federal Order in Council, and is composed of members from federal, provincial and territorial government departments and agencies, each with specific responsibilities for their respective jurisdictions and mandates. Working together as a multi-jurisdictional national body, GNBC members ensure that geographical names are consistently managed in Canada.

The GNBC is supported by a Secretariat provided by Natural Resources Canada (NRCan), a department of the Government of Canada. NRCan provides infrastructure and support for the Canadian Geographical Names Database (CGNDB), the national database of authoritative geographical names and a key component of Canada's Spatial Data Infrastructure.

The CGNDB was conceptualized in the late 1970s and the lengthy data entry process began using the information contained from hardcopy card records. In 1982, the CGNDB was officially launched containing approximately 300,000 official names and 100,000 unofficial names. At the time, provincial and territorial naming jurisdictions did not have their own databases, and would submit their naming decisions on paper to the GNBC Secretariat for data entry. As technology progressed, the provinces and territories set up their own databases to serve their specific needs: for mapping purposes or for recording cultural and historical information. Different jurisdictions were capturing different feature types while all adhering to the same core database fields.

In the 1990s, the CGNDB was also beginning to be used not only for recording geographical names, but also for recording a range of information for topographical mapping purposes. In the late 1990s, the feature types in the CGNDB expanded greatly to include human made features such as mines, bridges, airports, dams, correctional institutions, etc. to serve Canada's National Topographical System (NTS) mapping program. These records served a purpose at one point in time, however they were not adequately maintained or nationally consistent. This results in thousands of records that do not fall under the jurisdiction of the GNBC members and are left orphaned in the CGNDB. The features were added to the CGNDB to facilitate updates to specific NTS map sheets, and they are not consistent across the country. For example, if one were to search using the feature type "Mine" in the national database, 26 published records would be returned, one each in Manitoba and Newfoundland and Labrador, and 24 in Quebec. Currently, there are approximately 200 operational mines in Canada, yet the CGNDB is only showing a fraction of them.

### **Challenges**

The main challenge associated with this project is identifying which records belong to the provincial and territorial naming jurisdictions, and which were added during the NTS mapping process – this is highlighted in the Mine example in the previous section. In order for this project to be successful, complete copies of all jurisdictional databases would be required for a thorough review and update of the national database.

## **Objectives**

The aim of the project is to review the contents of the national names database with the objective of identifying inconsistencies between information collected from various provincial and territorial jurisdictions, and develop a standardized, consistent and up-to-date database for Canada. Additionally, the project will initiate an implementation plan to: enter all relevant data from the jurisdictional databases into the national database, remove non-relevant data from the national database, and develop an ongoing approach to maintain synchronization of the national database with all jurisdictional databases. This will ensure the national database is built from authoritative data provided by jurisdictions, and contains a consistent core set of features that are common to all jurisdictions.

## **Methodology**

The GNBC has established a Database Harmonization working group to work with the GNBC Secretariat on the following plan to achieve a consistent national geographical names database:

### **1. Conduct Content Review**

Initially the project will examine the content and terminology of all jurisdictional databases and compare this with the content and terminology of the CGNDB. This will involve identifying common elements and inconsistencies, and establishing a standard set of features. For example, some provinces are responsible for the naming of urban features such as streets, whereas others are responsible for geographical features.

### **2. Establish a Consistent National Core Dataset**

Based on evaluation of jurisdictional databases, international best practices and user needs, the project will develop a consistent national core dataset of geographical features that can be extracted from federal, provincial and territorial jurisdictional databases and incorporated in the national database.

### **3. Remove Non-relevant Data from the National Database**

Based on evaluation of jurisdictional databases, data currently stored in the national database that is not aligned with a national core dataset set of geographical features will be removed

#### **4. Import Jurisdictional Data into National Database**

A viable transfer process will be established with each jurisdiction for importing data into the national database. Where technically possible, the update process will be automated and involve the use of an API. Over time, a complete import of data from all jurisdictional databases will take place to ensure that the national database reflects jurisdictional databases. The project will establish ongoing interoperability and regular data transfer processes.

#### **Conclusion**

It is estimated that this project will take approximately 1.5 years to complete and will result in an accurate, comprehensive, accessible, and consistent national geographical names database for Canada. The success of the project hinges on the active participation of federal, provincial and territorial naming jurisdictions of the GNBC.

#### **Points for discussion**

##### **The Group of Experts is invited to:**

- (a) Take note of the work to harmonize a national database;
- (b) Comment and provide input on similar work being carried out in other countries and effective or innovative tools being used.