INTRODUCTION

Soil geochemical properties are critical to the health of the environment and virtually all organisms. The natural and anthropogenic processes that influence the composition and distribution of these properties are complex and vary depending on a wide range of factors, including climate, soil type, land use, and pollution. Therefore, it is essential to develop comprehensive protocols for soil sampling and analysis to ensure consistent geochemical data.

SAMPLE SITE SELECTION

The Tri-national protocols are comprehensive for field, laboratory, and data management practices, and are designed to ensure the quality and comparability of the data collected. These protocols are developed through collaboration among experts in each country and are based on a thorough review of existing literature and best practices.

TRI-NATIONAL PROJECT PROTOCOLS

The Tri-national protocols are comprehensive for field, laboratory, and data management practices, and are designed to ensure the quality and comparability of the data collected. These protocols are developed through collaboration among experts in each country and are based on a thorough review of existing literature and best practices.

THE CHALLENGES

Developing a set of protocols to ensure a consistent data set for North America is not without challenges, as there are differences in soils in each country:

1. Differences in the scale and size of the country.
2. Differences in the depth and extent of the country.
3. Differences in the types and range of organisms found in each country.
4. Differences in the types and range of soil types and land use.
5. Differences in the types and range of pollutants found in each country.

A soil sample pit near Ottawa, Canada

SAMPLING, ANALYTICAL, AND DATA HANDLING PROTOCOLS FOR THE NORTH AMERICAN SOIL GEOCHEMICAL LANDSCAPE PROJECT

ADDITIONAL SOIL SAMPLING AND ANALYSES IN 3 COUNTRIES

Each country will carry out certain other procedures and analyses that are particular to its environmental and/or policy needs.

PROTOCOL DEVELOPMENT AND DOCUMENTATION

A major part of the Tri-national Project is the development and documentation of protocols for soil sample collection and analyses to ensure consistent geochemical data.

PROTOCOLS FOR DATA MANAGEMENT, ANALYSIS AND PRESENTATION

The development of the Tri-national Project was the result of a collaborative effort between scientists and organizations from different countries. The project involved the collection of soil samples and the development of protocols for their analysis, with the goal of producing a seamless geochemical database. The data collected as part of the project are made available through a web portal, and the protocols are published in a manual.

SUMMARY

The Tri-national protocols are comprehensive for field, laboratory, and data management practices, and are designed to ensure the quality and comparability of the data collected. These protocols are developed through collaboration among experts in each country and are based on a thorough review of existing literature and best practices.

Each country will carry out certain other procedures and analyses that are particular to its environmental and/or policy needs.