



STATE OF ONTARIO'S PROTECTED AREAS

Earth Science Representation

2021

State of Ontario's Protected Areas Indicator Report

Earth Science Representation

This indicator summarizes provincial representation for geological environments and targets.

Status



Status: Good



Trend (Long-range): Improving

Why it's important

Numerous protected areas are identified, established and managed based on earth science features. These protected features and landscapes serve as sites of scientific study, education, benchmarks and as a foundation of biological diversity. A total of 60 geological environments and approximately 1,000 geologic targets have been defined for the province. These environments characterize more than three billion years of geological history and include ancient rocks and primitive life forms of the Canadian Shield, sedimentary rocks and fossils of the Hudson Bay Lowlands and the Great Lakes, tectonic forces and assemblages that formed Ontario as well as complex landscapes left behind by Pleistocene glaciation.

How we monitor

Monitoring is focussed on mapping and understanding what geological elements are located within protected areas and then assessing how these features support the geological themes as described in the "Framework for the Conservation of Ontario's Earth Science Features, 2017". This evaluation includes examination of the overlap between geographical limits of protected areas and sites representing the geological themes and targets established for Ontario. A gap analysis can then be conducted to determine which themes or targets are not captured in protected areas such that uncaptured themes or targets can be prioritized for future protection.

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Data



What's happening

Geological features on the landscape become protected when new protected areas which encompass these features are created. When this happens, geologic targets within the boundary of the new protected area are added to the list of protected geologic sites and features. All the 60 geologic environments and 8 geologic themes described in Ontario are represented by at least one geologic target. As shown on the figure above, protection of geologic features ranges from 100% for the Cochrane Event theme to 81% for the Cenozoic theme. Total average achievement of targets over all eight themes is approximately 87%. As new mapping and understanding of the geology of Ontario grows, protection of geologic targets is expected to continue to improve.

Indicator last updated:

January 2020

Data source:

Earth Science Conservation Database

Related links

N/A