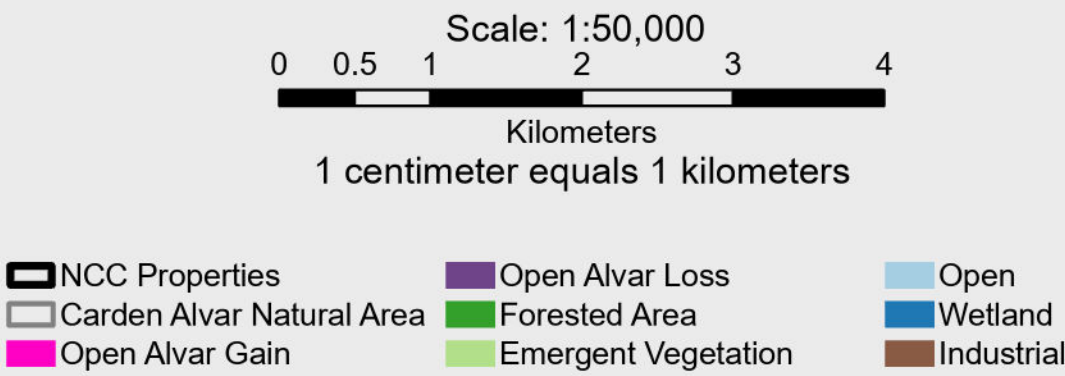


Losses and Gains in Open Alvar in the Carden Alvar Natural Area

Land Cover Change Analysis from 1972 to 2022



Alvar Communities in North America are becoming increasingly compromised due to woody species encroachment. Alvar environments are areas of shallow soils on either limestone or dolostone bedrock. These areas are naturally occurring habitats that offer unique characteristics that allow for species to inhabit that cannot exist anywhere else in the world. Due to the significance of these natural areas and the ongoing threat of an increased abundance of woody plant species, the NCC has focused their conservation efforts on the Carden Alvar, located in Central Ontario (figure 1).

This land cover change analysis investigates how over the course of 50 years, the historical pavement alvar extents in the Carden Alvar have been drastically altered. Using a time series of remotely sensed imagery, an analysis of the total land cover has been assessed. Figure 2 below visualizes the changes to the open alvar from 1972 to 2022. In 1972, the open alvar covered approximately 41 Km² of the Carden Alvar. Throughout the 50 years, there has been a consistent trend of decline throughout the alvar mosaic. In 2022, the open alvar covered only about 15 Km² of the natural area. There also been some gain to the alvar extent, which has been highlighted in pink.

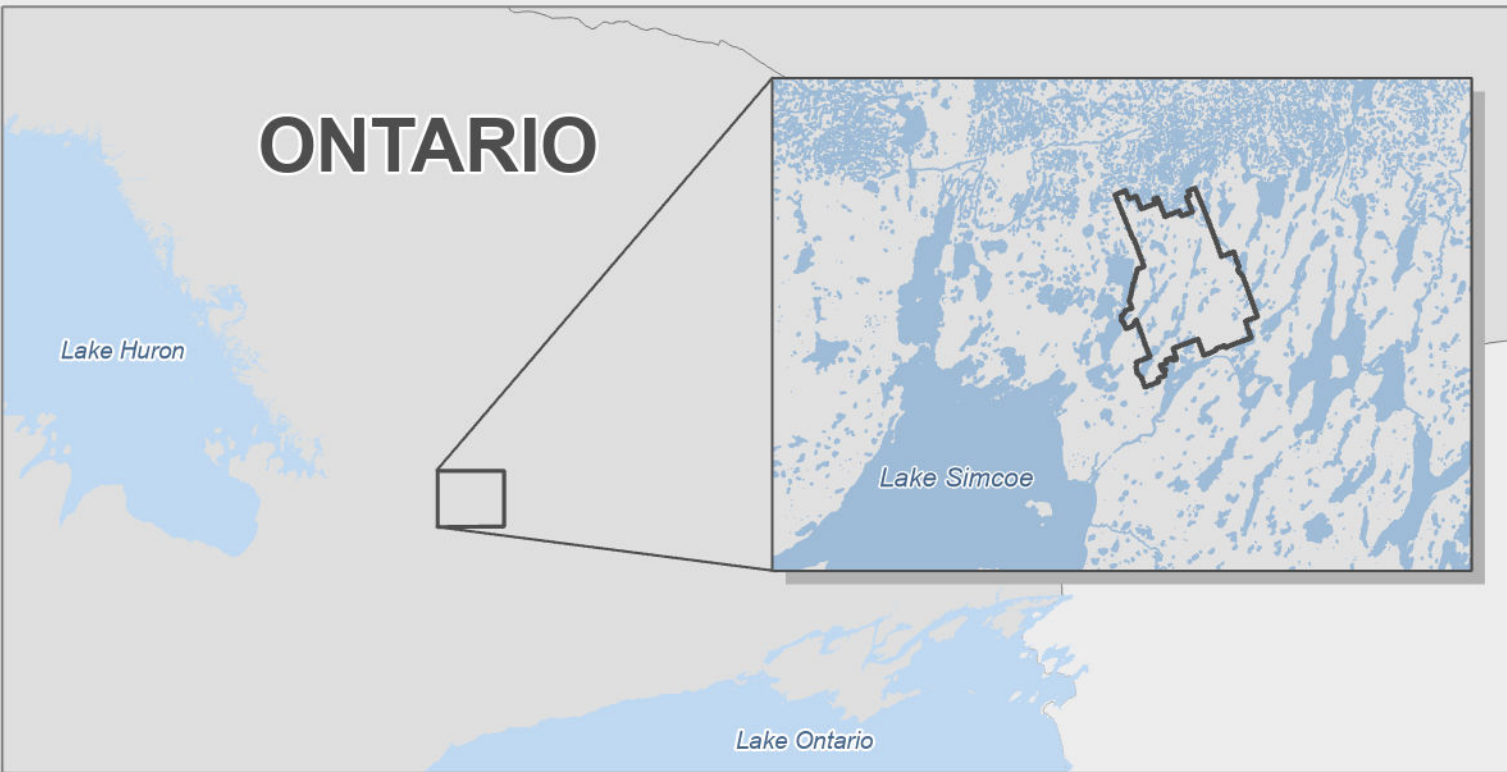


Figure 1: Inset map showing the location of the Carden Alvar in Central Ontario

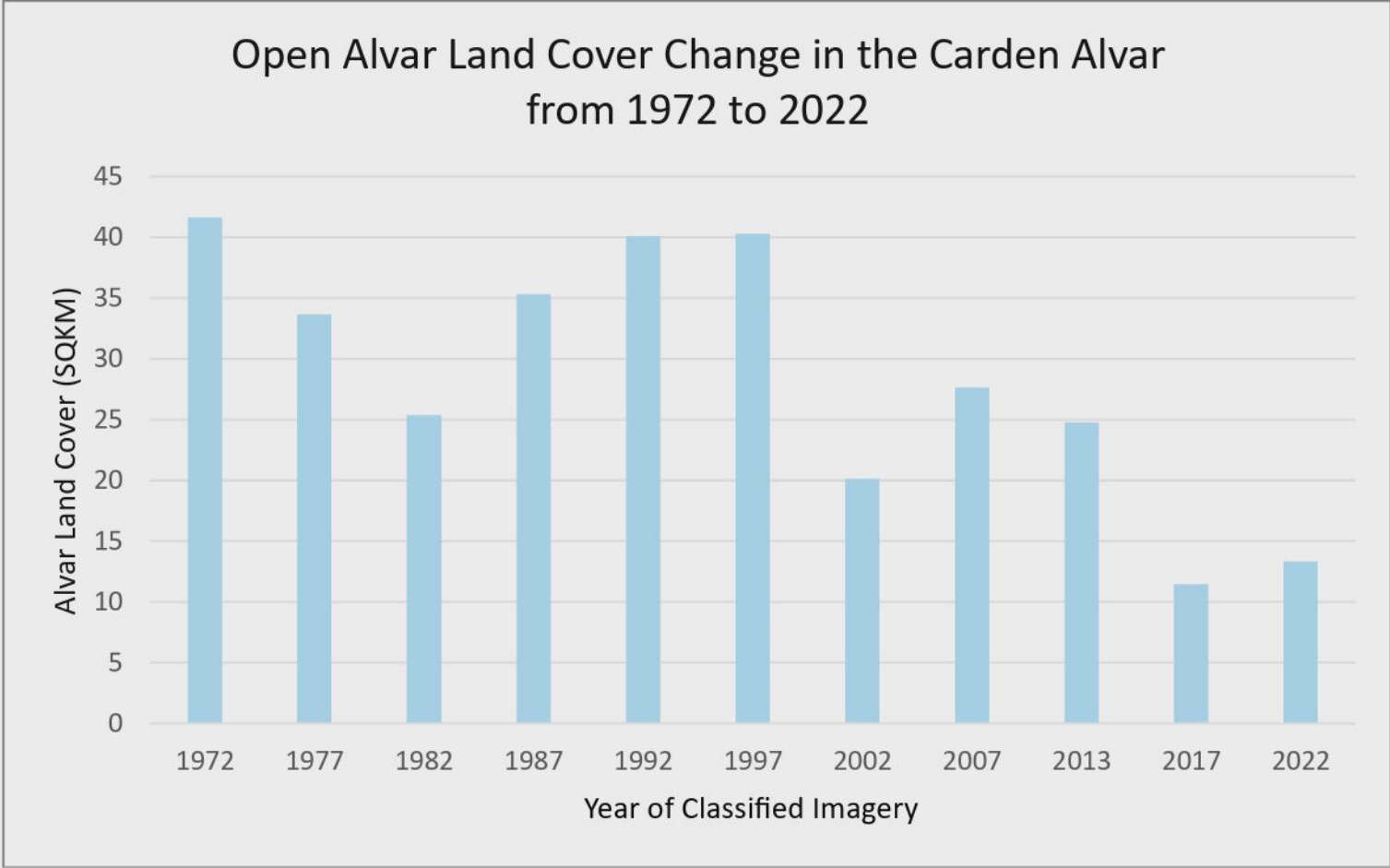


Figure 2: Total Alvar Land Cover (km²) from 1972 to 2022 in the Carden Alvar generated from supervised per-pixel classification results

Disclaimer:
This map is illustrative only. Do not rely on it as being a precise indicator of privately-owned land, routes, locations of features, nor as a guide to navigation. This map may contain omissions or errors. Not survey grade.

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Spatial Reference
Name: NAD 1983 UTM Zone 17N
Datum: North American 1983
Projection: Transverse Mercator
Source: OSM: Waterways, Water; Stats Canada: Provincial Boundary; ESRI Data and Maps: State boundary Government of Canada: NCC Property Boundaries; NCC: Carden Alvar Natural Area