

Iceland

National Land Survey of Iceland

Archive aerial imagery supports climate resilience, education and research in Iceland

“Digitising Iceland’s historical aerial images fulfills a long-standing dream of the National Land Survey. The interactive web application format opens this valuable archive for research, education and anyone curious about Iceland’s ever-changing landscapes.”

Gunnar H Kristinsson
Director General,
National Land Survey
of Iceland

Iceland has released its aerial imagery archive as open data to provide a resource that enables a greater understanding of landscape changes for a wide range of uses.

The National Land Survey of Iceland has digitised and mosaicked most of its historical aerial image archive, making the images available as map layers online and available for download as open data that is free for all to use. This digitisation allows for preservation and dissemination of the valuable archive, which spans back to the 1930s and captures changes in Iceland throughout its history as an independent nation.

To create map layers, film rolls from the archive were first scanned into digital format, then automated methods using satellite imagery as reference were used to geolocate and mosaic images.

In addition to map layers, metadata containing information about the flight survey was attached to the resulting image mosaics, allowing the images to be searched in a more user-friendly manner. Distribution of the archive is through a web viewer and as a Web Map Service (WMS) layer. The data is available both in Icelandic and English.



Visit the website:
<https://loftmyndasja.lmi.is>

Benefits

- Makes valuable historical imagery publicly available to all.
- Helps to build a strategy for climate resilience by providing resources for understanding landscape changes in response to climate change, such as glacier retreat.
- Provides educators with a free and open tool for deepening students’ understanding of natural and man-made changes in Iceland’s landscape.
- Preserves part of Iceland’s cultural identity by visually preserving the landscape history.
- Unlocks unlimited opportunities for research in fields such as natural hazards, volcanic eruptions, ecology, geology, and more.
- Encourages public engagement and participation. Citizens, historians, and enthusiasts alike can explore and appreciate their local history, fostering a sense of community pride and connection with the past.
- Creates historical Digital Elevation Models (DEMs) from georeferenced images to provide key information for landscape change studies in three dimensions.