Icelandic Volcanoes – Help

General

This is a BETA version of the website!

Give us feedback	Please send us feedback by using the feedback button at the top of the page. This requires logging into Basecamp.

The website is divided into two main categories:

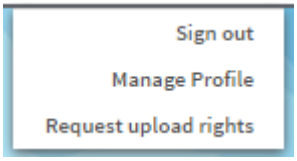
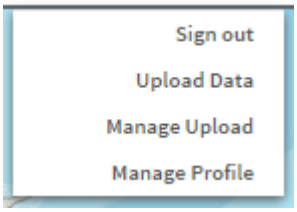
- **Data Portal** – provides the option of searching and downloading volcanic research data.
- **Catalogue of Icelandic Volcanoes** – provides general information about Icelandic volcanoes.

Sign in

Everything on the website is accessible without signing in, except uploading and downloading data from the ***Data Portal***.

Sign in	Click on the „sign in“ link in the upper right corner to sign into the website.

When signed in, more options become available:

If you do not have upload rights	If you have upload rights
 To get upload rights, click the „Request upload rights“ link. After you have been approved for upload, the „Upload Data“ and „Manage Upload“ become available.	

The links „Manage Profile“, „Upload Data“ and „Manage Upload“ open a separate „**Manager**“ webpage.

Upload Data

To upload data, enter relevant information for your data and browse to the file to be uploaded.

Maximum upload size is 200 MB.

There are three „areas“ of information:

- **File**
  - ***Name*** – The name that appears in the search results.
  - ***File*** – Opens a file browser, browse to the file you want to upload.
  - ***Category*** – Select the category the data belongs to, if nothing fits select „Other“ Category must be filled out in order to upload data.

- ***Data level*** – The level of your data.
  - ***Level 0*** – raw or basic data
  - ***Level 1*** – data products coming from (nearly) automated procedures
  - ***Level 2*** – data produst resulting from scientific investigations
  - ***Level 3*** – integrated data producst resulting from complex analysis, or community shared (multidisciplinary) product
- ***Event*** – Events are in fact predefined Time Periods and Location.
  By selecting an Event the Time Period and Location are automatically populated.
  If either the Time Period or Location are changed after selecting the Event, the Event is „deselected".
- ***Description*** – Description of the file, appears in the metadata form in the ***Data Portal*** search results.
- ***Instructions*** – Any instructions regarding the file can be entered here, appears in the metadata form in the ***Data Portal*** search results.
- ***Terms of use*** – If there are any terms of use those can be entered here, appears in the metadata form in the ***Data Portal*** search results.
- ***Access restrictions*** – if chosen to lock the file, the file appears in search, but can not be downloaded for two years from the end of the given time period.

- **Keywords**
  - Enter any keywords, separated by a comma, describing the data.
    Keywords can be used to search for the data in the ***Data Portal*** search.
- **Location**
  - ***Location type*** – Point or Polygon.
    If Point is chosen, click on the map to select the location
    If Polygon is chosen, click on the „Draw polygon" button on the map and then drag the polygon you want.
  - ***Longitude/Latitude*** – click on the map to pick up the coordinates.
    Map navigation:
    - Pan – Click on map and drag to pan.
    - Zoom – Zoom by scrolling, using +/- buttons or hold shift down while drawing a rectangle.

submit	When ready, click the submit button to upload the file. The file is then searchable and downloadable (if not locked) from the ***Data Portal***.

Manage Upload

An overview of all uploads made by the person that is signed in, can be found on the ***Manage Upload*** tab.

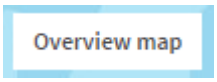
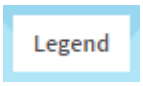
Short name	File name	
SamsynTest	futurevolc_logo_plain.jpg	

	By clicking on the metadata icon, the upload information for this file opens on the ***Upload*** tab where the information can be edited and saved.

Manage Profile

Under Manage Profile it is possible to see and change your account information as well as change the password.

Map

	By clicking on an icon for a volcano, information for that specific volcano is displayed in a popup window.
	Displays an image of Iceland with locations of volcanoes marked with triangles. The image can be moved by clicking on it and dragging it to another position.
	Opens a checkbox list of various layers that can be turned on/off. This includes the current location of measurements stations and location of earthquakes within the last 48 hours. When searching the dataportal and downloading data, bear in mind that the shown location of measurement instruments is the current location and not neccessary the location of the instrument at the given search period.
	Displays a legend for maplayers if any maplayers have been turned on, either from the „Layers“ button on the map, or from the maplayers chapter for a specific volcano in the catalogue. The legend window can be moved by clicking on it and dragging it to another position.

Map navigation

Zoom

	Zooms to the original extent.
	Zooms one level in.
	Zooms one level out.
Scroll	Zoom in/out by using the scroll on the mouse.
Shift	Hold the shift button down while drawing a rectangle to zoom in.

Pan

Click on the map and drag it in order to pan the map.

Alerts

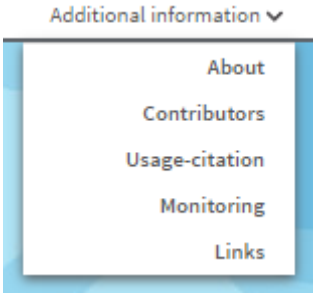
The alerts that appear on the website are the same as the alerts on the Icelandic Meterologic Office official website.

The number in the black circle indicates the number of alerts.

Click on the alert button to view the alerts.

Additional information

The *„**Additional information**“* dropdown list in the upper right corner contains links to various additional information.



Those links open a separate *„**Additional Information**“* webpage.

About

Information about the **Catalogue** and the ***Data Portal*** are found here.

Usage-citation

Information on how to reference the **Catalogue** are found here.

Monitoring

Under development.

Links

Under development.

Content window

The window on the left hand side serves as a content window for the website.
It contains 3 tabs:

- ***Volcanoes***
- ***Data Portal***
- ***Eruption Search***

Hide	Hides the content window.

Show	Shows the content window.

Volcanoes

The ***Volcanoes*** tab contains a list of Icelandic volcanoes.
The list can be sorted by the following criteria:

- Aviation Color Code
- Activity level
- Alphabet
- Last eruption

	Shows the volcanoes as a cluttered list with only pictures and volcano names. • Click on the photo of a volcano to pan to the volcano and get access to further information.
	Shows the volcanoes as a detailed list with links to more information. • Click on the title of a volcano to pan to the volcano and get access to further information. • Click on a volcano photo to display more photos of the specific volcano.
Catalogue information	Opens catalogue information for the specific volcano in the result window.
Activity status	Links to the activity status in the catalogue in the result window.
Photos	Displays more photos of the volcano.

Data Portal

The ***Data Portal*** tab is the „window“ for searching and downloading data.

The following search parameters are optional:

- **Event** – Defines the geographical extent and time period for a specific event.
  If either the location or time period is changed after selecting an event, the event is „deselected“.
- **Location** – Click on the  button and draw the extent on the map and the relevant coordinates are entered into North/South/East/West fields.
  If no location is specified the search is for the whole country.
  Bear in mind if searching for specific data and the location of the measurement instruments is not known, it is better to specify no location.
- **Time Period** – Enter the time limits here fo a search here.
  The maximum Time Period for a search is one year.
- **Category** – the types of data availible is listed here. Check the relevant boxes.

- **Keywords** – if the category „Upload“ is checked, additional search parameters can be entered.
  When data is uploaded the author can put in keywords for the data that can be used to find the data in the search.

Search	Opens the search results for the given parameters in the „***Data Portal Search***“ tab in the result window.
Clear	Clears the search form.

Eruption Search

The „***Eruption Search***“ tab provides the option of searching the **Catalogue** for eruptions giving various search parameters.

Search	Opens the search results for the given parameters in the „***Eruption Search***“ tab in the result window.
Clear	Clears the search form.

Result window

Results from searches, both ***Data Portal*** and ***Eruption Search***, are displayed in a popup window on the right hand side of the webpage.

	Hides/shows the result window.
	Enlarges/reducts the result window
	Closes the result window.

Volcano Information

The ***Volcano Information*** is divided into five chapters/areas.
To open/close a chapter, click on the blue titlebar.

The chapter „***Map Layers***“ contains various layers that can be displayed on the map.
Click on the layer on the map to get further information about the specific layer.

Data Results

	Click on the metadata icon to get further information about the dataset.

The metadata information include the following:

- **Description** – a description of the dataset in question.

- **Instructions** – if there are any instructions on how to interpret the data they can be found here.
- **Terms of use** – if there are any restrictions on how to use the dataset, information is given here.
- **Owner** – lists the owner of the dataset in question.
- **Contact info** – an email or other contact information if further information is required about the dataset.

Eruption Results

Parameter information

Click on the eruption in the result list to get further information about the specific eruption.

The parameter values are displayed in a separate table that can be exported to excel by using the export button at the bottom of the window.

Export to excel

Export table into Excel	Exports the results of the eruption search to excel. All parameters for all eruptions in the result window are included.

Description of material in the Catalogue

Each of the volcanic systems (total of 32) is represented by an icon on the CIV website (Figure 1). Behind each icon is a detailed chapter describing the characteristics of the given volcanic system. Each chapter includes detailed information on:

- The geology and structure of the volcanic system
- The eruption history, pattern and products
- The known precursory signals and current monitoring level
- Associated hazards
- Detailed descriptions of possible eruption scenarios based on eruption history of the last 1100 years (post-settlement, good eruption record). The eruption scenarios are defined as Small, Moderate and Large based on the volume of erupted material. The Largest known eruption for each volcanic system is also described in as much detail as the state of knowledge allows, and is not confined to a specific time limit.

Eruption source parameters for individual eruptions can be accessed and downloaded via a database search (see more in section ***Database search for individual eruptions***).

The chapters are illustrated with

- Interactive maps of tephra dispersion. These include the maximum range of tephra dispersal for the volcanic system, and isopach maps for individual eruptions. Eruption isopach maps are accompanied by grain size distribution where such information exists (see more in section Cartographic material).
- Maps of lava flows with detailed information (see more in section ***Cartographic material***)
- Number of photographs (see more in section ***Viewing information about a volcanic system***)

The colour of the volcano icons represents the current aviation colour code for that volcanic system (Green, Yellow, Amber, Red or Grey). Click here for information on aviation colour coding. The aviation colour code is live and will be updated when a change is made by IMO. Similarly, the red icon in the bottom right of the screen will display text alerts about volcanic activity if such are released by IMO.

CIV also includes a new online tool to help the users assess the activity level of each volcanic system (**Activity status** accessible through each volcano's icon). The tool accesses the seismicity database of the Icelandic Meteorological Office and compares the current level of seismic activity in a volcanic system with the background level. For example, the number of earthquakes occurring today in Katla can be compared with an average daily value since 1991 (see more in section ***Live activity status***).

How to use the Catalogue

Finding the right volcanic system

The 32 volcanic systems can be searched and sorted according to their activity level, aviation colour code, most recent eruption year, or simply alphabetically using the **Sort by** drop-down menu on the **Volcanoes** list on left hand side (Figure 1). The **Volcanoes** list can be hidden using **Hide** at the top.

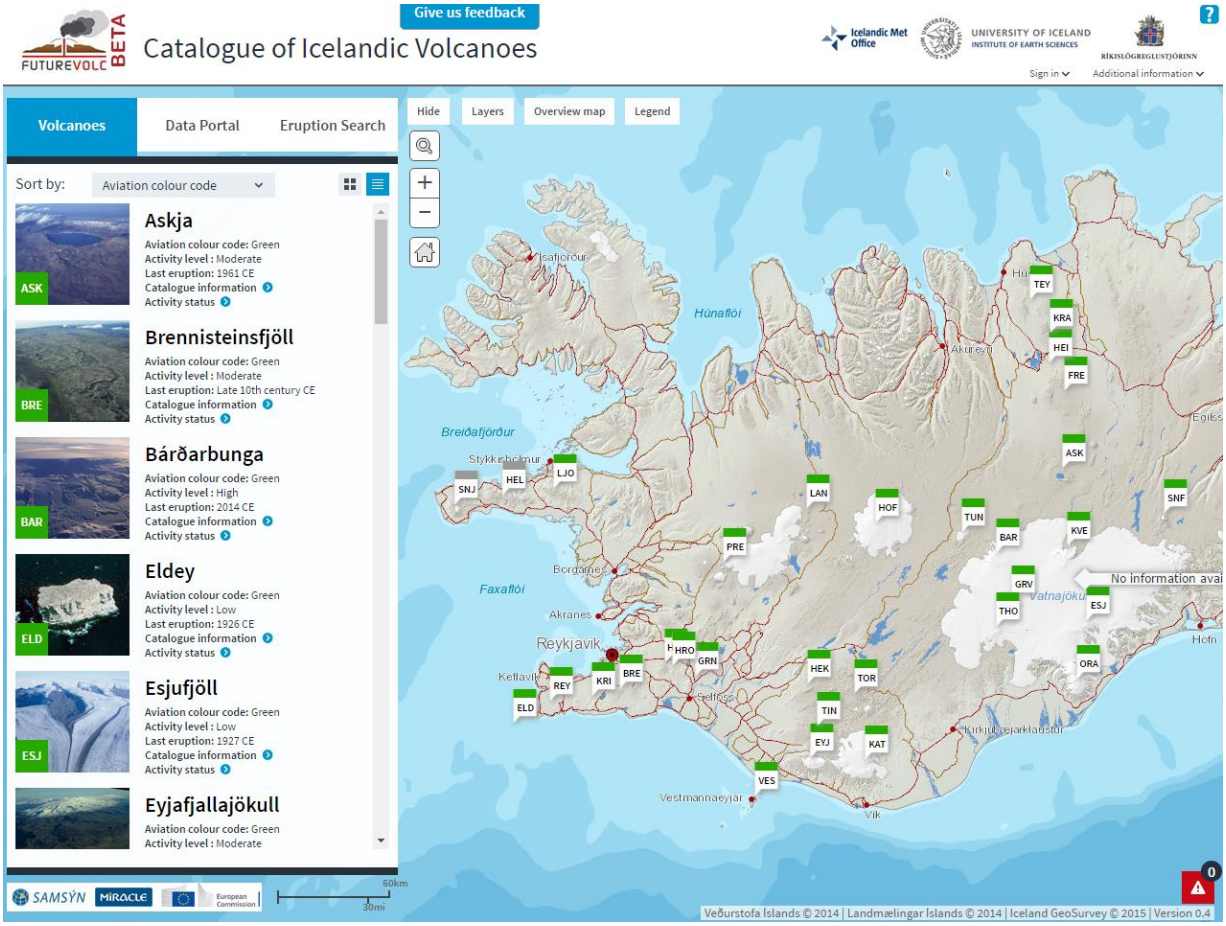


Figure 1. Each of the volcanic systems is represented by an icon both on the left hand side list, and on the map view. Volcanic systems can be searched using **Sort by** according to various parameters, such as last eruption year and activity level.

Viewing information about a volcanic system

A volcanic system can be selected either from the **Volcanoes** list on the left hand side, or by clicking on its icon in the map view. A more detailed menu then appears on the right hand side (**Volcano information**). **Short description** provides a quick overview of the characteristics of the volcanic system. Table-view information is found under **Central Volcano** and **Fissure Swarm**. Much more comprehensive information follows in detailed sublayers numbered 1-14 (Figure 2). **Volcano information** menu can be minimized or hidden using the arrow or the cross above it.

Photographs of each volcanic system can be viewed by either selecting **Photos** on that volcano's icon, or by clicking on the icon's thumbnail image.

Figure 2. Comprehensive information about each volcanic system (here: Katla volcanic system) can be accessed by selecting the **Volcano information** sublayers

Eruption types and erupted volumes have been statistically analysed for volcanic systems where data are of sufficient quality. The statistical analysis is visually displayed by graphs (Figure 3) under **Selected figures** and also within the sublayers where they are referenced, e.g. under **4. Eruption history and pattern**.

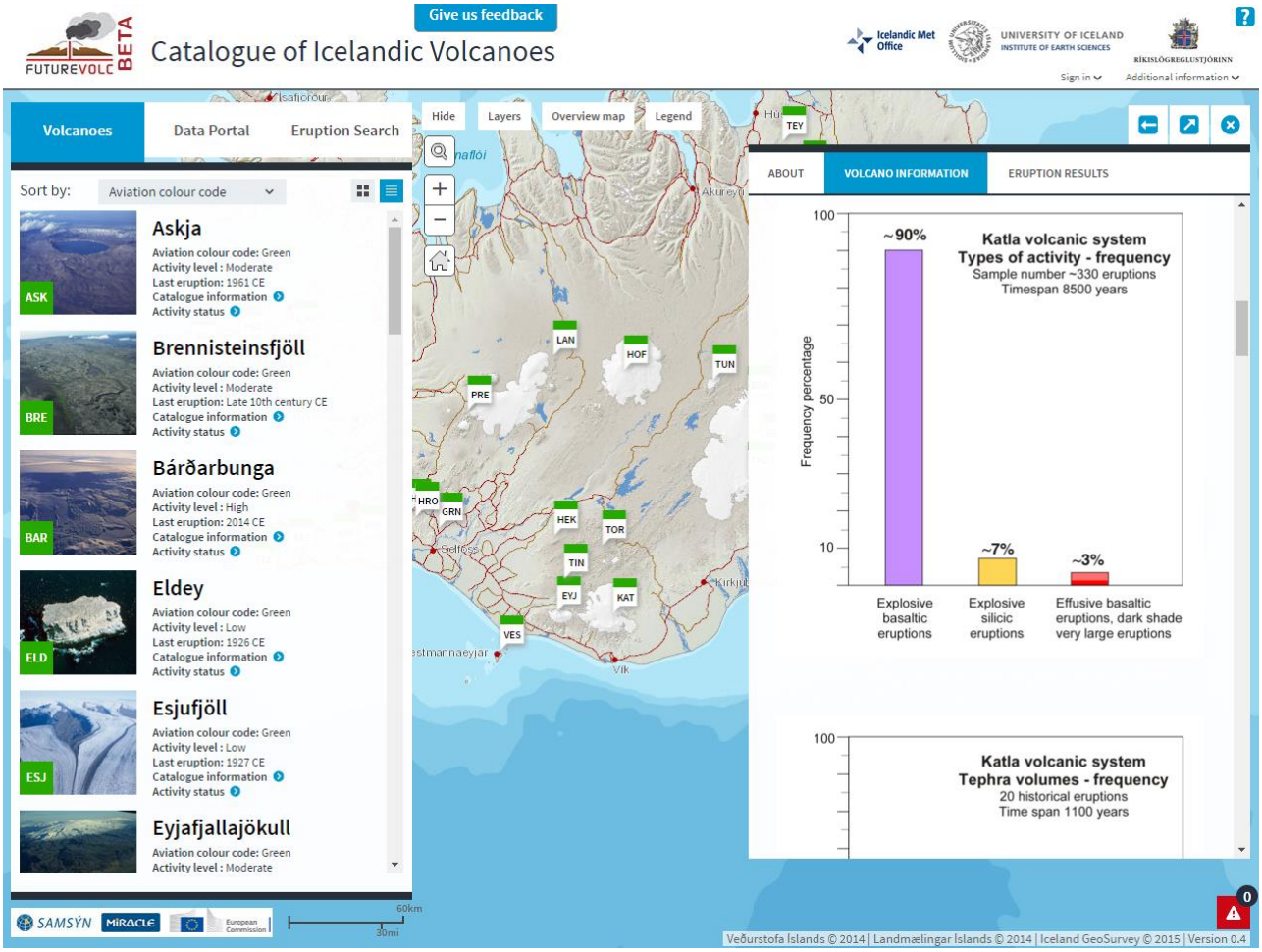


Figure 3. Statistical analysis for types of activity is shown graphically for the volcanic systems which are sufficiently well known.

Database search for individual eruptions

Eruption source parameters for individual eruptions can be accessed using **Eruption Search** from the left hand menu. Variety of search parameters can be selected, as shown on the left in Figure 4 (top image). Summary results appear on the right under **Eruption results**, and more detailed info can be accessed by clicking on individual eruptions (Figure 4, bottom image). The search results are downloadable (**Export table into Excel**).

Currently the **Eruption Search** database holds information for the following volcanic systems and eruption periods:

Katla (KAT): Historical eruptions (since ~870 CE)
Hekla (HEK): Historical eruptions and large prehistoric explosive eruptions
Grímsvötn (GRV): Eruptions since 1800 CE
Bárðarbunga (BAR): Historical eruptions

CIV will continue to be populated with information in its following editions.

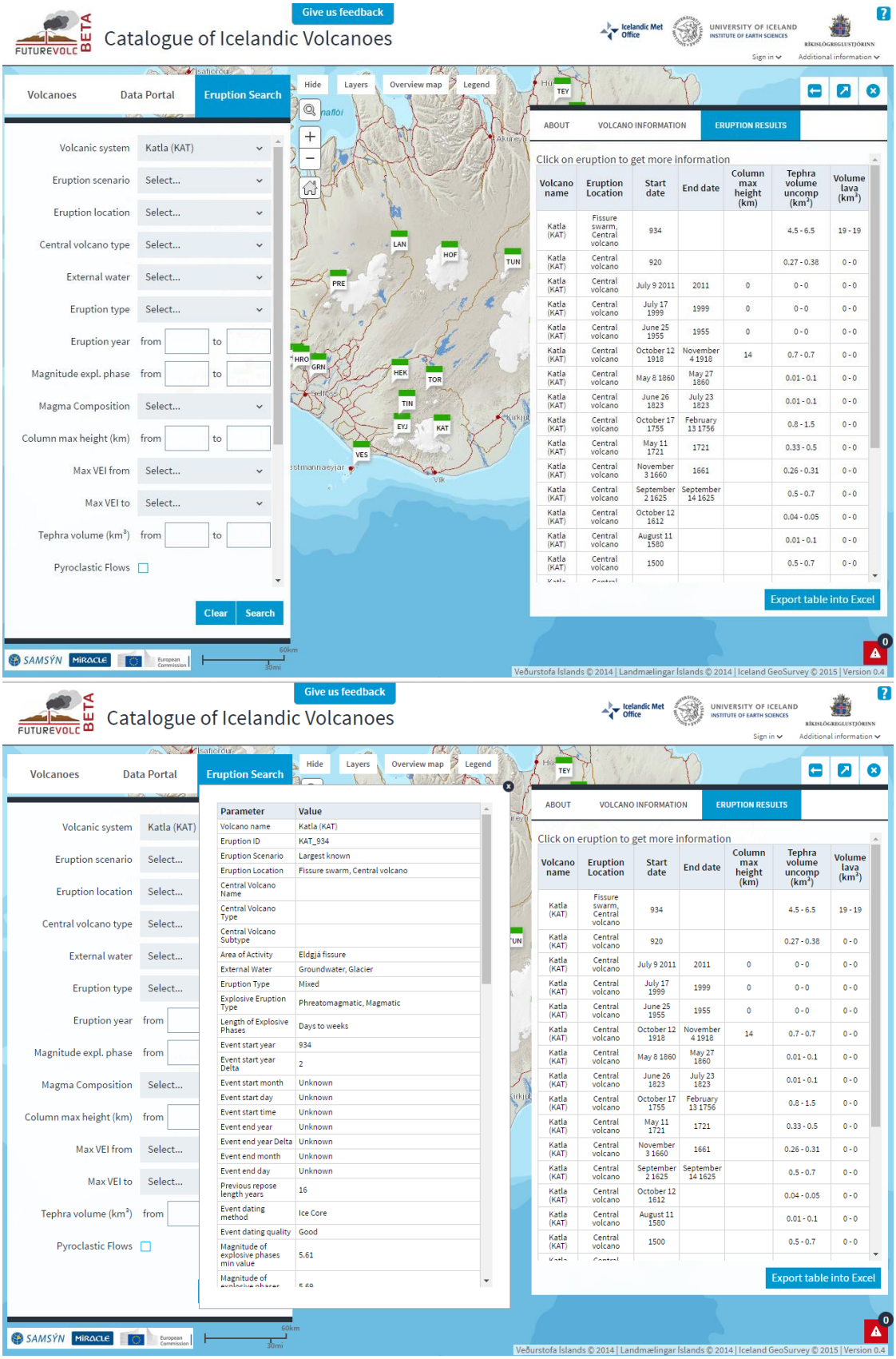


Figure 4. Searching in the database for individual eruptions (**Eruption Search**)

Cartographic material

Map layers contain a huge amount of cartographic material. There are maps of volcanic systems, including e.g. Holocene lava flows, eruptive fissures, craters and calderas (Figure 5, top image), and maps of tephra dispersal from various eruptions (Figure 5, bottom image). Note that Figure 5 show only a snapshot of the available maps. Each map item (e.g. individual lava flows, eruptive fissures, crater outlines) can be queried for metadata by clicking on them. Zoom in and out to get the best view of the map contents.

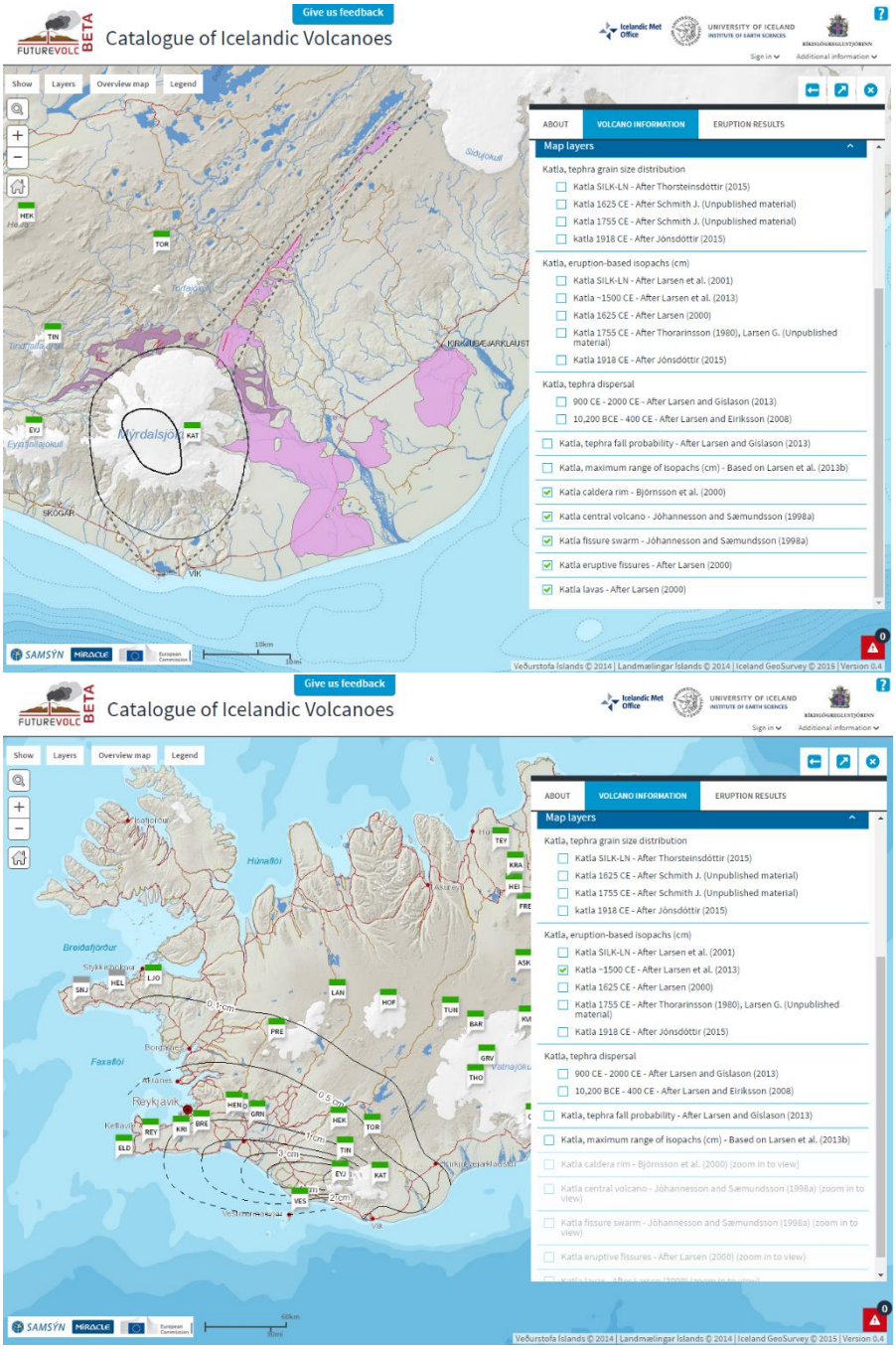


Figure 5. Examples of cartographic material available in CIV. Map items can be queried for metadata by clicking on them. Top image shows tephra dispersal map (isopach map) for Katla eruption in ~1500 CE. Figure 5a. Bottom image shows Katla lava flows, eruptive fissures, outlines of caldera, central volcano and fissure swarm

Tephra grain size distribution

Information on tephra grain size for a number of explosive eruptions can be accessed through **the Map layers**. This is done by selected the eruption of interest, for example **Katla SILK-LN** under **Katla, tephra grain size distribution** as shown on Figure 6. The tephra sampling locations will be shown on the map as yellow triangles. More detailed information about each sampling location and its grain size distribution can be accessed by clicking on the yellow triangles. Grain size distribution can also be displayed as a graph by clicking on **Grain size distribution graph**.

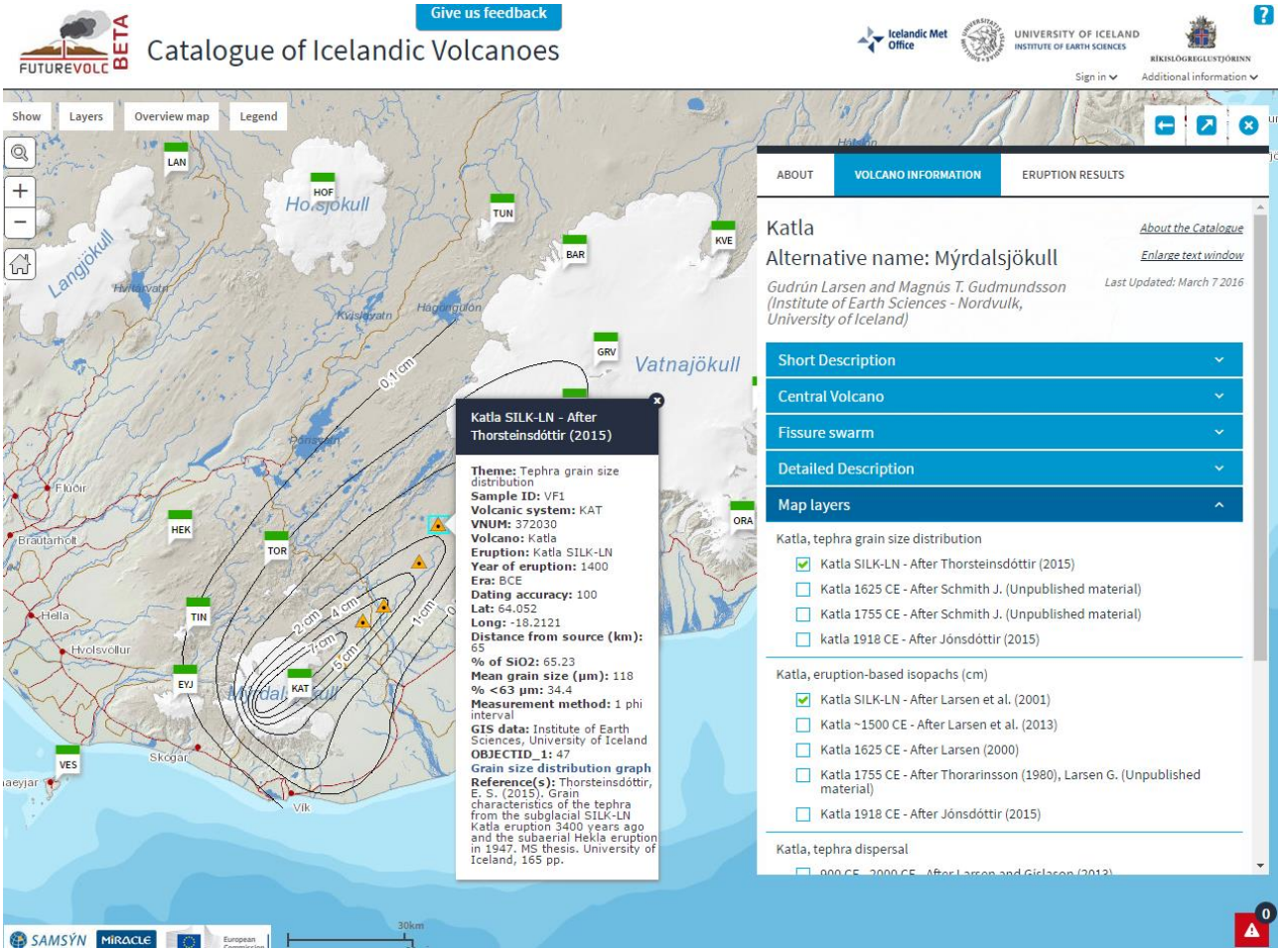


Figure 6. Tephra grain size distribution can be viewed for a number of explosive eruptions

Live activity status

Activity status is a live webtool designed to help assess and understand the current level of activity in different volcanic systems (Figure 7). It is accessed through the icon of each volcanic system. The recent number of seismic events ('recent' being one day, one week, one month or one year) is compared with the 'background' average value. The seismic data used by this webtool is accessed from the IMO database.

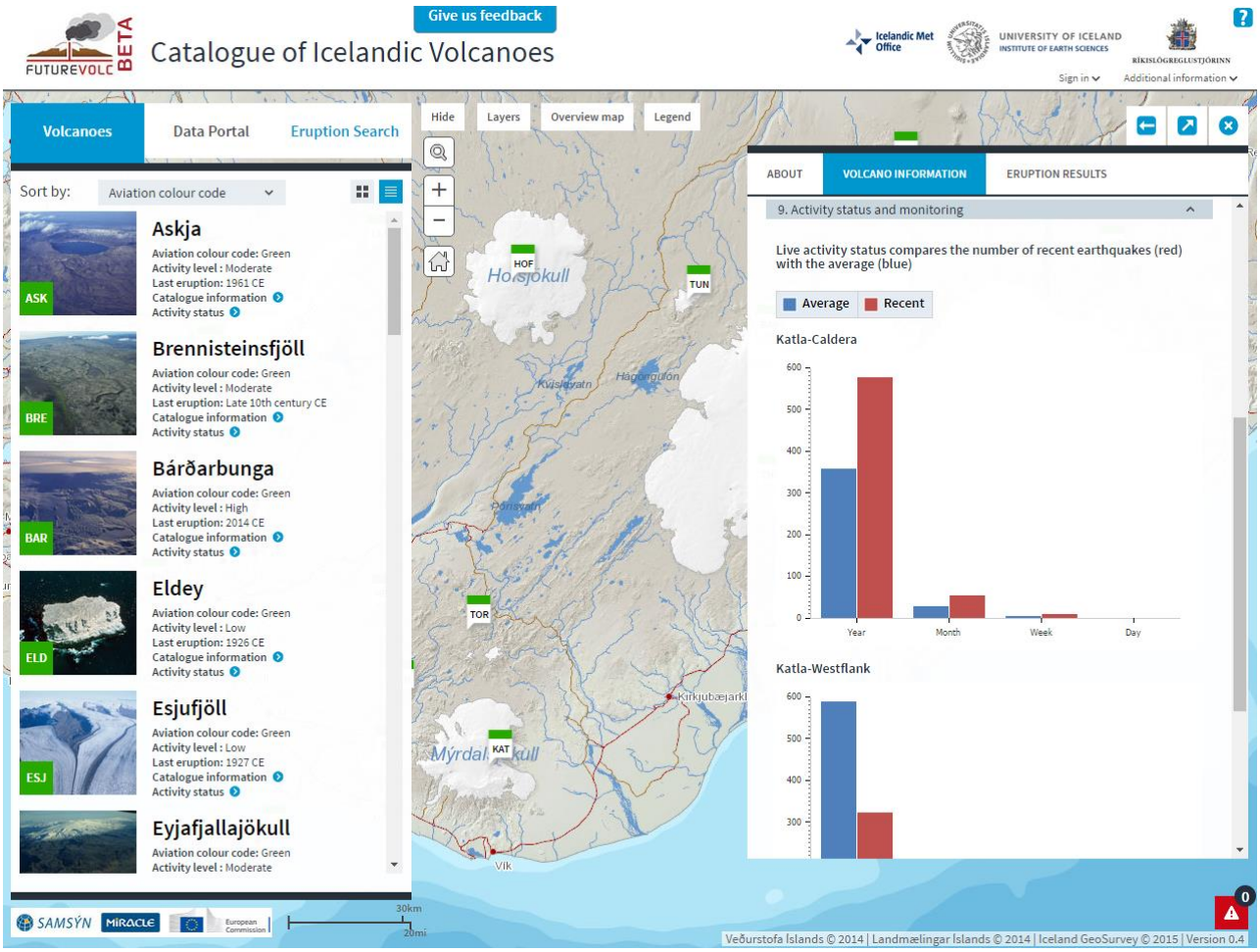


Figure 7. **Activity status** is a live tool which helps assess the current level of seismicity in a given volcanic system. The red bar is the recent number of earthquakes (one day, one week, one month or one year) and the blue bar is the 'background' average number of earthquakes