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### **Application for a permit to collect research samples within Reykjanes country park and Fjallabak Nature reserve**

The Nature Conservation Agency of Iceland has received an application from NASA Goddard Space Flight Center, dated April 10<sup>th</sup>, 2025, for a research permit within Fjallabak nature reserve, Hekla, Hverdalir and Reykjanes country park.

Fjallabak is protected as a nature reserve, cf. regulation no. 354/1979. Construction work, extraction of minerals, disturbance to geological formations, vegetation and wild animal life in the protected area is prohibited. The use of unmanned aircraft (drones) within the nature reserve from June 15<sup>th</sup> – September 15<sup>th</sup> is subject to a permit from the Nature Conservation Agency of Iceland.

Reykjanes country park is protected cf. regulation 520/1975. Disturbance to geological formations is prohibited.

Hverdalir and Hekla are not protected areas. The applicant needs to apply to landowners/municipality of the areas.

#### ***Description of the project:***

The research team will be exploring sediments hydrothermal vents at Seltún, and lake water and sediments from Kleifarvatn, Grænavatn, Djúpavatn, Spákonuvatn, Gígvatnsvatn/Grænavatn, and Gestsstaðavatn. At Fjallabak sampling will take place in a geothermal area near Landmannalaugar. Coordinates for the sampling areas were included in the application. The team will be collecting rocks, sediments and water. All flora and fauna will be avoided while sampling, surface will be raked over where surface sediment will be sampled, where there is need to go off paths any tracks will be covered, over sampling will be avoided and only the bare minimum will be collected, loose samples will be collected, when possible, instead of intact rocks. At Kleifarvatn 8-10 samples will be collected (each sample 5 kg) of sediments and 8-10 samples of lake water (each sample 0,1-0,5 kg) by scuba diving in areas where divers rarely visit. Around 20 volatile samples, 50 water samples (each 0,1-0,5 kg) and 10 sediment samples (<0,05 kg each sample) will be collected from the lake bottom of Kleifarvatn, Seltún, Grænavatn, Djúpavatn, Spákonuvatn, Gígvatnsvatn and Geststaðavatn. At Kleifarvatn ≤30 rock samples (0,1-0,2 kg each), ≤8 sediment core samples (0,1-0,3 kg each), ≤4 water samples (0,1-0,3 kg each) and ≤20 crust fragment samples (0,1-0,2 kg each). At Seltún

and Landmannalaugar 20 (0,1 kg each) samples of sulphur will be collected with rock hammer and small spade out of view of trails wherever possible. Water and volatile samples will also be collected there. Water samples will be 5 (<50 ml each) and 15 (<50 mgr) gas samples. Total number of participants in the project would be 28-32 persons and the project would take place in the period of June 24<sup>th</sup> – July 2<sup>nd</sup>, 2025.

***Impact assessment:***

The Environment Agency of Iceland considers the project not likely to have negative effect on nature or conservation value of the sites if conditions of the permit are followed.

***Conclusions and conditions:***

The Nature Conservation Agency of Iceland hereby grants NASA Goddard Space Flight Center permission on its behalf to conduct research within Fjallabak nature reserve and Reykjanes country park as described above on June 24<sup>th</sup> – July 2<sup>nd</sup>, 2025, on the following conditions:

- Keep this letter with you on site during the project. The permit conditions must be introduced to the staff of the project before work begins.
- The applicant must inform the rangers in the area about their arrival and departure. This is to be done no less than 24 hours before entering the area and again before leaving it.
- If the project dates or description changes the Nature Conservation Agency shall be notified as soon as possible.
- When it is necessary to go off-path, extra care must be taken not to cause damage to terrain, including vegetation, soil and geological formation. All tracks of activity must be removed afterwards.
- All traces of the work must be removed carefully from the site by the end of the work/project.
- If any complications occur during the project, please contact the ranger or the Nature Conservation Agency of Iceland, tel. +354 556 6800.
- This permit is only valid for research purposes. It does not include permits to utilize the samples for commercial purposes. The samples cannot be signed over to third party for commercial use.
- Every measure should be taken to avoid damage to the sites and unnecessary disturbance while collecting samples.
- Samples should be collected where any resulting disturbance to soil, vegetation or geological formations is not visible to other visitors.
- All off road driving in Iceland is **prohibited**. All driving must be done on registered roads. All equipment must be carried or transported by other means if no registered roads lead to the sampling areas. Rangers from the Nature Conservation Agency can give information on hiking trails if needed.

- All vehicles used during field exploration must be labelled with the identity of the researcher's institute. All participants in the project must wear high-visibility clothing during field work, labelled with the identity of the researcher or the research institute.

If the licensee causes damage to nature, according to art. 87 in the Nature Conservation Act no. 60/2013, the Nature Conservation Agency of Iceland can, according to the Nature Conservation Act, f.e. order the licensee to fix damage to nature and vegetation and/or stop the project.

The Nature Conservation Agency of Iceland can according to art. 89 in the Nature Conservation Act no. 60/2013 change conditions of the permit, add new conditions or withdraw the permit in order to prevent damage to nature if environmental conditions change.

According to art 89. in the Nature Conservation Act no. 60/2013, the Nature Conservation Agency of Iceland can withdraw the permit if conditions of the permit are not complied to.

A permission from the landowners and/or the municipality might be needed for the project.

A permit from the Icelandic Environment and Energy Agency is needed for research projects in geothermal areas ([www.uos.is](http://www.uos.is)).

If you wish to export samples from Iceland a special permit is needed from the Natural Science Institute of Iceland ([www.ni.is](http://www.ni.is)).

The Nature Conservation Agency of Iceland requests access to reports and scientific articles of the studies, which could be used for educational purposes about the area and/or assist in its management, free of charge.

#### ***Permission fee:***

Nature Conservation Agency of Iceland charges a fee for processing applications for permits in protected areas based on Article 92 of Act no. 61/2013 on Nature Conservation. The fee for operational, events, research and other activities is **62.400 ISK** according to art. 7. a. in the agency's tariff no. 354/2025.

#### ***Supervision:***

The Nature Conservation Agency will supervise the project. The supervisor will be a ranger from the Nature Conservation Agency.

René Biasone

***advisor***

Ingibjörg Marta Bjarnadóttir

***advisor***