



# RENEWAL INFORMATION 2022

CATASTROPHE EXCESS OF LOSS PROGRAMME

# OVERVIEW

*Natural Catastrophe Insurance of Iceland (NTI), formerly known as the ICI, was founded in 1975 as a public undertaking by a special Act of the Althingi (parliament) of Iceland, following the volcanic eruption in Vestmannaeyjar in 1973.*



## FUNCTION

NTI functions as an insurance company with compulsory coverage for all properties in Iceland, contents (where insured against fire) and public infrastructures. The perils covered by NTI are earthquakes, volcanic eruptions, avalanches, landslides, rock falls and riverine, coastal, and glacial floods. The insurance does not cover windstorms, hail, surface/flash floods or business interruption.

Buildings are insured in line with their valuation as assessed by the Iceland Registers (Property Registry Office).

Since fire insurance of buildings is compulsory in Iceland, all buildings are likewise insured against natural perils covered by the programme. Water distribution networks, geothermal heating systems, sewage systems, electric power systems, bridges, harbours and ski-lifts, which are not normally insured against fire, are separately insured with the NTI.



## PREMIUM

The catastrophe cover is a stand-alone policy. The private insurance companies receive a fee for collecting catastrophe cover premiums alongside fire premiums. A single premium of 0.25 ‰ is charged for properties and contents and 0.2 ‰ for infrastructure. The policy only covers direct physical losses resulting from the catastrophes mentioned above. A deductible of 2% for each loss as well as a minimum deductible is applied.

**Exchange rate as at August 2021 EUR = ISK 146.6**



# PERILS COVERED



## EARTHQUAKE HAZARD

There are two main earthquake hazard areas in Iceland: the South Iceland Seismic Zone (SISZ) and the North Iceland Seismic Zone (NISZ). Both of these areas are largely rural, with the total insured assets that are likely to be affected by major earthquakes each representing approximately 9-10% of the total asset values in Iceland.

The Southern Region accounts for 10% of the total aggregates, but 25% of this is in areas that are not likely to be affected by a major earthquake. South Iceland covers the largest agricultural region in Iceland, i.e. the South Iceland Lowland (SIL). Several small towns, villages, schools, and medical centres are within this area, as well as industrial, geothermal and hydropower plants and several major bridges.

The Northeast Region, with about 30,000 inhabitants, has a similar structure as the Southern Region and a share of 9% of the total asset values. The principal town of Akureyri and surrounding rural area accounts for 65% of these values and is not located in the main seismic area.



## VOLCANIC HAZARD

Volcanic eruptions are observed in Iceland with individual volcanic events occurring every 3-4 years on average. The largest flood-basalt eruptions (> 10 km<sup>3</sup>) occur at a 500 to 1,000-year interval. Despite the dominance of basalts, explosive eruptions are more common than effusive, since frequent eruptions through glaciers give rise to phreatomagmatic activity. The largest explosive eruptions (Volcanic Explosivity Index - VEI 6) occur once or twice per millennium, while VEI 3 eruptions have an expected recurrence time of 10 to 20 years. No evidence for VEI 7 or larger eruptions has been found in the geological history of Iceland. The volcanic hazard consists of a downpour of tephra, major basaltic flood eruptions, and lava flows.

A downpour of tephra (ashfall) and fluorine poisoning of crops and livestock would not be insured by NTI. The very fine tephra from Eyjafjallajökull 2010 and Grímsvötn 2011 was observed in Reykjavík, although more as an annoyance rather than a calamity. Accumulated ashfall less than 20 cm, is not expected to cause damage to structural systems of roofs.





## OTHER PERILS

Major basaltic flood eruptions (similar to the Laki eruption in 1783, which had widespread effects all over Europe) would mainly be hazardous to power stations and communication systems. Lava flows mostly affect the Reykjanes Peninsula with several small towns like Grindavík and Vogar at risk. Lava flows in Reykjavík last occurred in post-glacial times, but lava flow in Hafnarfjörður (South outskirts of the Reykjavík capital area) last occurred about 800 years ago. Very large explosive eruptions ( $VEI \geq 6$ ) in central volcanoes close to inhabited areas (for instance Öräfajökull 1362) might have a serious effect on farms and villages. However, no active volcanoes are found close to large urban centres in 2021.

Floods and avalanches may cause isolated damage, but it is unlikely that an event could exceed NTI's reinsurance retention. Following a series of isolated avalanche losses in 1995, the defences against this peril were improved significantly, with physical barriers introduced in key exposed locations. NTI has used scenarios to assess the insurance risk related to these perils. Details can be found in NTI's Cat Response Plan, where 9 scenarios were analysed, including snow and mudflow in the Eastfjords, glacial floods and floods related to rockfall in the Westfjords.



# LOSS HISTORY

*Since 1987, 267 events have occurred, consisting of 130 floods, 79 avalanches, 37 rockfall or mudflow, 19 earthquakes and 2 volcanic eruptions. There are only a few events with significant losses during this period. In 1995, villages and several farms in the Westfjords and the Eastfjords were hit by avalanches. The total loss paid by NTI was between ISK 3 and 4 billion in present-day value. In 2000, two 6.5 Mw earthquakes shook South Iceland with a total loss paid out by NTI of about ISK 9.3 billion on present-day value. The only reinsurance loss in NTI's history occurred in 2008, a 6.3 Mw earthquake near Selfoss in South Iceland with nearly 5,000 claims and a total loss of about ISK 17.8 billion on present-day value.*

The largest mud flow to hit an urban area, occurred in the village Seyðisfjörður in December 2020, following record levels of precipitation. NTI's net ultimate loss was about ISK 1 billion resulting from about 100 claims (as at August 2021). The event is similar to a scenario used in the NTI's Cat Response Plan.

In October 2020, a 5.6 Mw earthquake occurred in the Reykjanes Peninsula, with the epicentre about 15 km away from the southern outskirts of the Reykjavík capital area. The earthquake was felt in the entire Southwest part of Iceland. NTI received 49 claims, but only 6 claims exceeded the minimum deductible (ISK 400,000 for properties and ISK 200,000 for contents). The net ultimate loss as at August 2021 was ISK 9 million. In February 2021, a 5.7 Mw earthquake occurred in the same area. The event was part of an earthquake swarm related to the volcanic activity in Fagradalsfjall (see page 10). NTI received 140 claims, thereof 12 exceeded the minimum deductible. Net ultimate loss as at August 2021 was ISK 35 million. The actual loss caused by these two events was significantly lower than the modelled footprints. For a comparison of modelled and actual loss, please see the reinsurance meeting slides.

## LAST YEAR LOSSES JANUARY 2020 TO AUGUST 2021

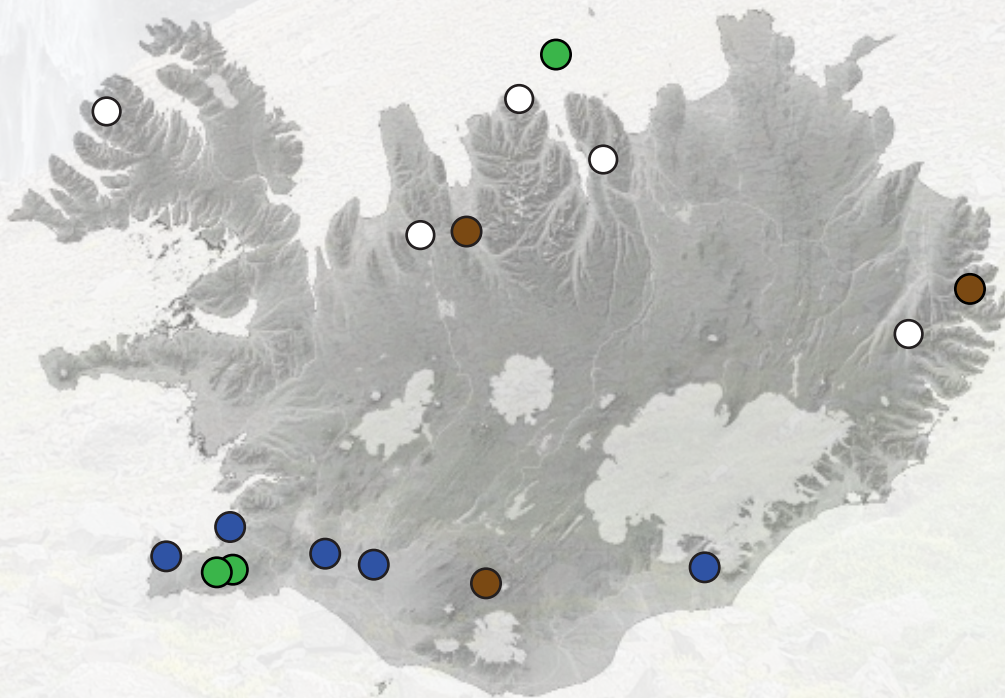
# 386

 Claims in total

- Snow avalanche
- Rockfall / mudflow
- Earthquakes
- Flood

16 events have occurred since January 2020. The total observed loss in 2020 was about ISK 1.2 billion and ISK 100 million in 2021. A detailed overview of all losses back to 1987 can be found in the renewal spreadsheet (renewal data 2022).

5	Snow avalanches
3	Rockfalls or mudflow
3	Earthquakes
5	Flood
<b>16</b>	<b>Events occurred in total</b>



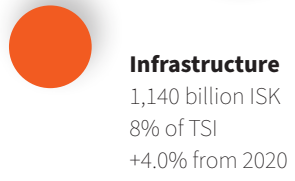
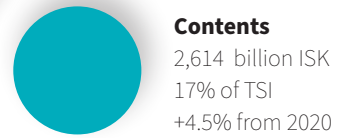
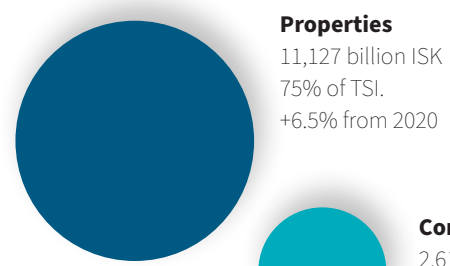


Philonotis fontana (IS: Dýjamosi), Near Geldingadalur in Lónsöræfi

# 04 EXPOSURE INFO

AS AT AUGUST 2021

*NTI covers assets of ISK 14,880 billion spread across the country, which increased from ISK 14,024 billion in August 2020.*





Similar to last year, most of the observed increase in 2021 (6.5%) is due to changes to the fire insurance value of properties, as assessed by the Property Registry Office (Iceland Registers). The Property Registry database is updated every month while the underlying policies are renewed annually. This creates a lag between these figures. By using the Property Registry office data as at August 2021 as the exposure inputs in NTI's seismic risk model, the results of this model essentially incorporate growth that will only be realised in the actual insured values in 2022.

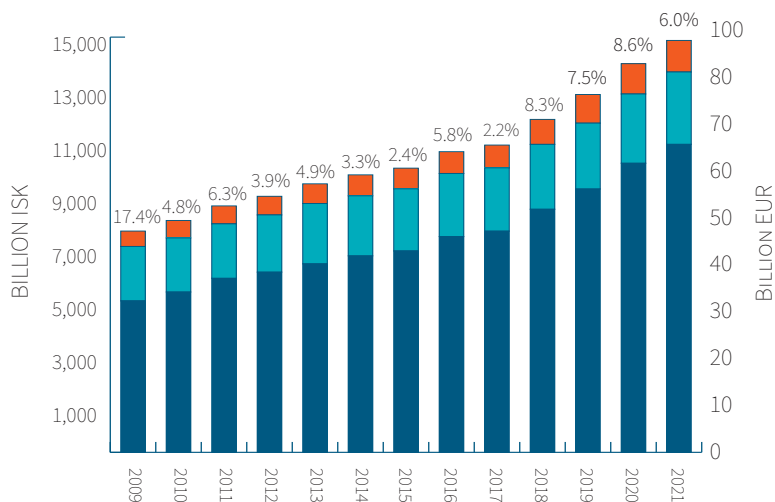
The building cost index in Iceland is assessed independently by

Statistics Iceland. The index measures changes in the building cost for specific residential properties in Iceland. The increase of the building cost index between August 2020 and 2021 was 5.3%.

Following the financial crisis in 2008, there has been an accumulative demand for new buildings and building activity has been growing for the last few years. Since 1960, the average increase in total aggregate sums insured due to new buildings is 1.5%. Because of the compulsory nature of the insurance, assets from relatively low-risk areas such as the capital region make up most of this portfolio (60%). There are also notable

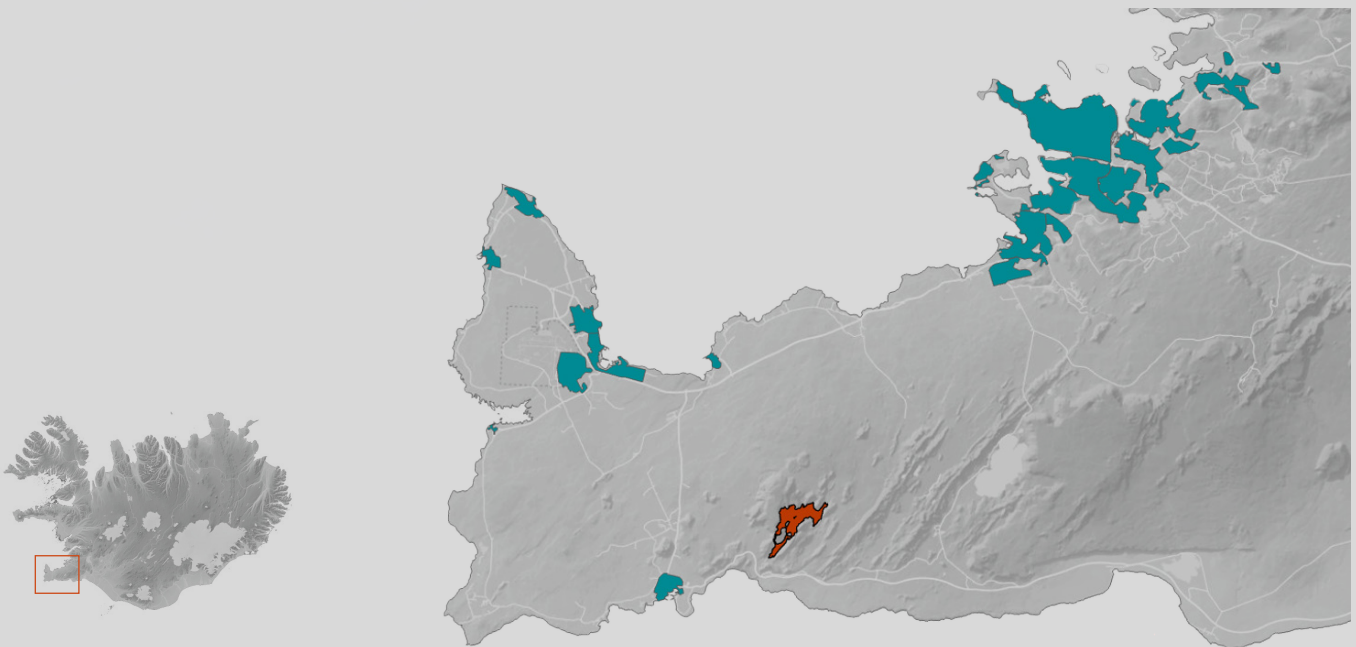
exclusions from cover, such as the hydroelectric power plants in the central region, which are insured separately on a facultative basis. Importantly, all new buildings are built according to considerably improved building regulations and act to reduce the expected overall vulnerability of the Icelandic building stock. This was evidenced in the 2008 earthquake event where significantly fewer losses were observed from properties constructed in the previous decade. Furthermore, the two recent earthquakes in the Reykjanes Peninsula (5.6 Mw and 5.7 Mw) brought negligible damage to properties, despite the notable ground motion in the entire peninsula.

Sum insured aggregates 2009-2021



# THE ERUPTION IN FAGRADALSFJALL

*On the evening of the 19th of March 2021, a volcanic eruption started in Fagradalsfjall Mountain, on the Reykjanes Peninsula. The eruption started as a fissure eruption but quickly developed into a shield volcano eruption. Low effusion rates and eruption from a single vent/crater are characteristics of such eruptions. Such eruptions may go on for years. The lava discharge from the crater has been periodic and varied from approximately 4 to 18 m<sup>3</sup>/s during active phases and no visual activity on the surface between active periods. The most recent surface measurements of the lava, from August 2021, show that the lava has covered about 4,4 km<sup>2</sup> of land and the volume of the lava has reached 0,1 km<sup>3</sup>.*



## PROTECTION OF INFRASTRUCTURE

Before the eruption, earthquakes and crustal movements had indicated that an eruption in the area might be imminent and magma intrusion was observed in the Fagradalsfjall mountain. A group of experts and scientists was formed with the intent to protect, if needed, important infrastructure and urban areas (localities) against lava flows. Extreme eruption scenarios were identified, and computer simulations were run. Pre-design of protection dams was carried out for the area. Memos were published by the group including:

- Case studies of protection dikes from Iceland, Hawaii and Italy.
- Design criteria for protection dikes and earth-fill dams against lava flow.
- Eruption scenarios and lava on the Reykjanes Peninsula, during the last 11,000 years.
- Numerical simulations of lava flow based on predefined, unfavourable eruption scenarios, with and without protection dikes. Emphasis on the Grindavík-Svartsengi area.
- Thermal strain from flowing lava on cables and pipelines, both subsurface and above ground, and powerlines (not buried).
- Protection possibilities for cables, pipelines, boreholes, etc. for the Svartsengi-Grindavík area.
- Database of available and existing machinery and equipment to be mobilized in case of an eruption.
- Mines in the vicinity of Grindavík.

## NUMERICAL SIMULATIONS OF LAVA FLOW

Numerical lava flow simulations with and without pre-designed protection dikes were used to determine the optimal layout of the protective measures. The eruption finally started at the best possible location in the mountain Fagradalsfjall. The eruption site is surrounded by hills and posed no imminent threat to infrastructure. At later stages though, the eruption might pose a threat to infrastructure, involving lava flowing over roads

and underground pipes and cables. At an even later stage (if the eruption will go on for years) it could reach vulnerable infrastructure or towns. Continued monitoring and low effusion rates in the eruption suggest that protection design and construction can be carried out prior to such events. The software used for the simulations has been calibrated to the present lava flow and other lava fields on the Reykjanes Peninsula. A cooperation with the team developing the software has been established and further development of the numerical code is in process for a more realistic description of cooling and stopping the flowing lava. Other research parties have been using different numerical models and the eruption provided a valuable stress test of all the models.

## CONSTRUCTION OF LAVA FLOW PROTECTION DIKES

Five dikes have been constructed in the vicinity of the eruption - three retention dikes and two diversion dikes. The first two retention dikes have already been overtopped, as expected, while the other three have not yet been tested as the lava has not reached the dikes. The purpose of the first two dikes was to delay lava flow into the Nátthagi valley and towards the sea south of the eruption site, due to the importance of the coastal road. Valuable knowledge was gained in the process, regarding the function of the dikes to retain lava and regarding construction work close to flowing lava. A memo on the function and construction of the two dikes will be completed this fall. The third retention dike is located farther south, at the southernmost end of the Nátthagi valley, with the same purpose as the first two dikes. This dike has been equipped with pressure cells and heat sensors to monitor its performance. The lava has reached the edge of the dike but has flowed further for over two months. The group emphasizes that rigorously designed and constructed protection dikes may be used for diverting lava flows, though lava flow is a complicated phenomenon and not always easily predictable.

## **DIRECT MEASUREMENTS OF TEMPERATURE AND LOADING**

It was a common consensus during the eruption to utilize its isolated location to learn as much as possible from the eruption. In a collaboration between the group, power companies and companies owning fibre optic cables in Iceland, equipment for temperature and load measurements were installed in June and July in the vicinity of the flowing lava in and south of the Nátthagi valley.

One of the challenges with lava flowing close to infrastructure is the protection of underground cables and pipelines against overheating. A specific challenge relates to how long will these cables and pipelines be functional sub-lava, if overheating is inevitable. Heat sensors and fibre optic cables for heat measurements have been installed in an area south of Nátthagi valley that lava is expected to overflow, to strengthen the understanding of heat penetration into the ground underneath flowing lava. The sensors were also installed in various insulating filling materials that may be

used to delay the penetration of heat towards underground cables.

At present, the lava has only buried one fibre optic cable that was used for temperature measurements. Continuous temperature readings were obtained for a month until the cable was eventually destroyed by the weight and heat from the lava.

Three load cells (pressure sensors) were installed in one of the retention dikes (dams) to measure the pressure exerted by the lava on the dam. Earth-fill dams or dikes have been used successfully in Hawaii, Iceland and Italy to divert lava flow. The measurements on loading may shed light on the physical processes involved and strengthen the design criteria for such dams.

A draft report has been compiled on the measurement project and a simplified numerical model has been prepared and used to simulate heating of the ground in two or three dimensions. Further development of numerical codes is planned for a more accurate description of the heating processes.

# ASSESSMENT OF THE NTI'S VOLCANIC HAZARD

*Since 2017, scientists and local experts have been working on the NTI's volcanic risk research project. The focus has been on tephra fallout (ash), glacial floods and lava flow during the last 1,000 years, for sixteen of Iceland's most active volcanic systems.*

Maps of the extent of tephra fallout, lava flows and glacial floods have been generated for 10 out of 16 volcanic systems in Iceland, based on published data in collaboration with the Icelandic Meteorological Office (Veðurstofa Íslands) and the National Energy Authority of Iceland (Orkustofnun). The volcanoes were selected based on eruption frequency over the last 1,000 years. The focus of the mapping is on the historical period in Iceland (last 1,100 years) and, where possible, also the Holocene (the last 11,000 years). A memo accompanies the maps for each volcanic system. The memos consist of a description of each volcanic system and a compilation of tables with data on:

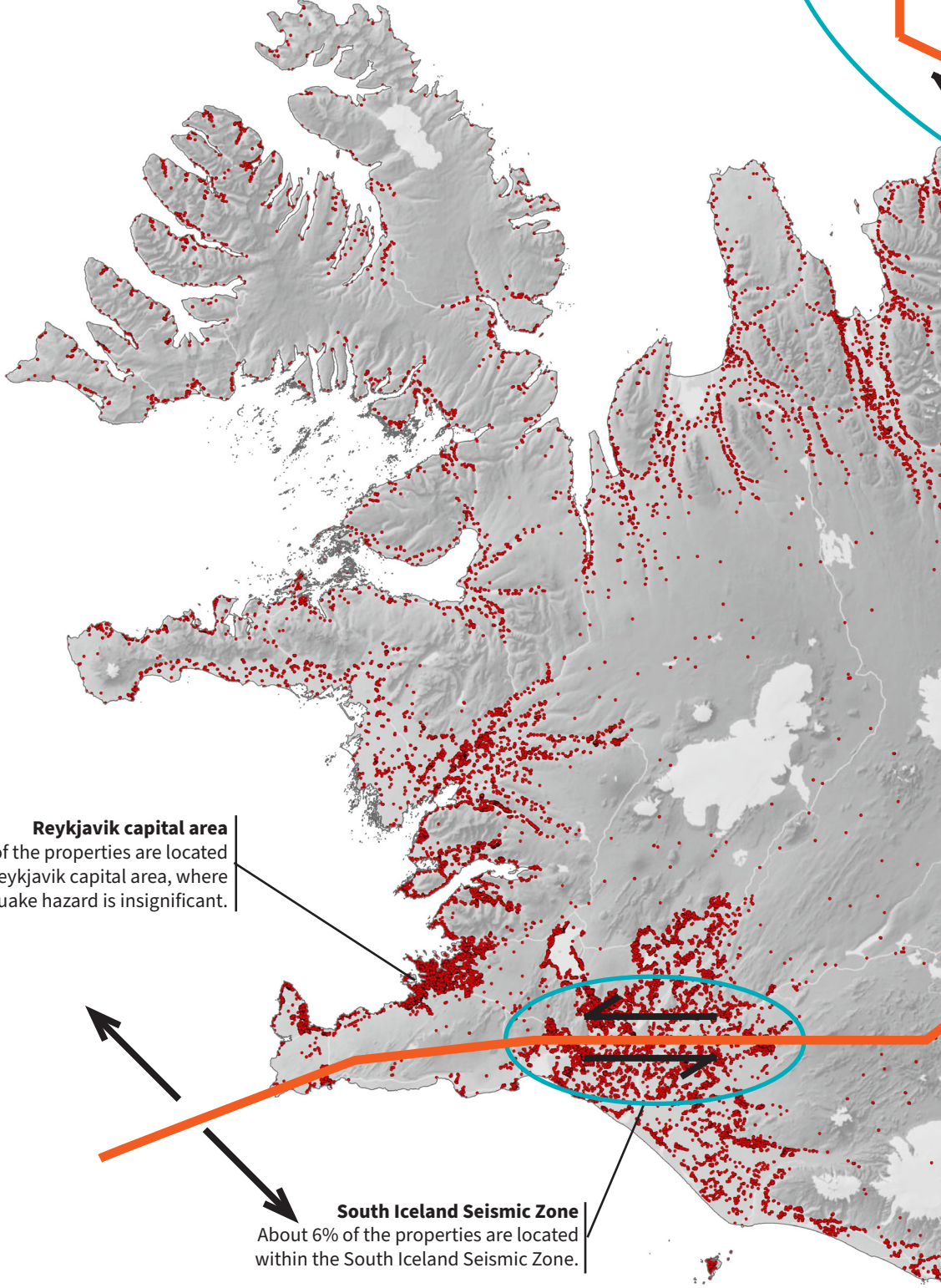
- Lava-fields (name, age, length, area and volume)
- Glacial floods (year of flooding, source of origin, the river that flooded, peak discharge, volume, description of the flood, calculated maximum discharge due to a subglacial eruption)

- Tephra-fallout (source of origin, date, size of eruption on the VEI scale, volume of airborne tephra, description of the tephra field)
- A summary table with statistics about each volcanic system has been deduced. The following statistics have been compiled: Eruption frequency on different parts of the system, reoccurrence time of glacial floods, frequency of eruptions during historical time and the Holocene, last major eruption, the largest known eruption, etc.

The volcanic systems that have been mapped are: Bárðarbunga, Grímsvötn, Örfajökull, Kverkfjöll, Torfajökull and Þórðarhyrna. Almost finished: Katla, Brennisteinsfjöll, Krýsuvík and Reykjanes. Remaining volcanic systems: Hekla, Vetsmannaeyjar, Eyjafjallajökull, Askja, Krafla and Snæfellsjökull.

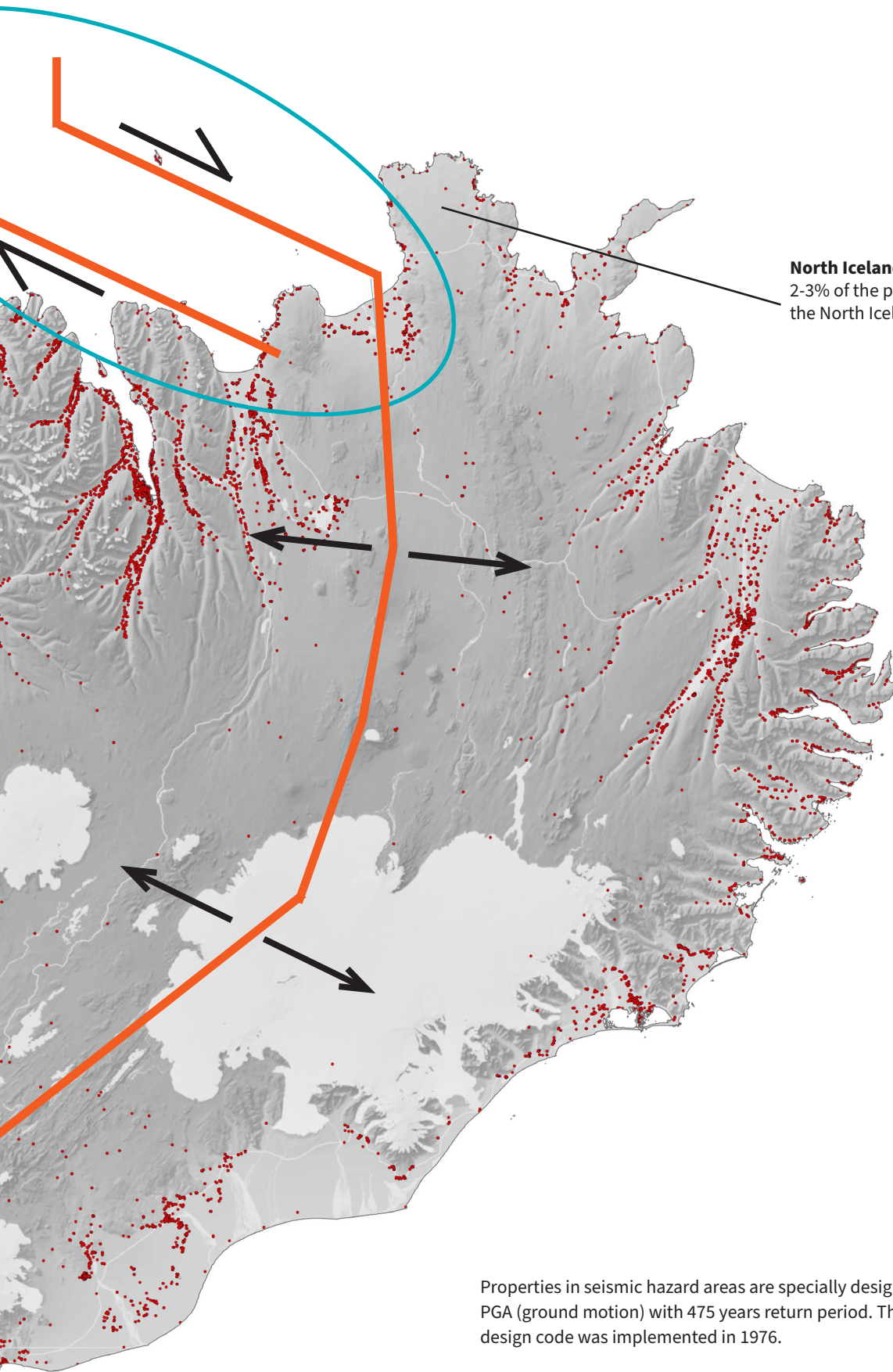
An executive summary of the volcanic hazard assessment will be sent to NTI's reinsurers in late 2022.

# 06 EXPOSURE MAP



**Reykjavik capital area**  
About 56% of the properties are located within the Reykjavik capital area, where earthquake hazard is insignificant.

**South Iceland Seismic Zone**  
About 6% of the properties are located within the South Iceland Seismic Zone.

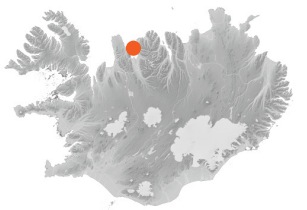


**North Iceland Seismic Zone**  
2-3% of the properties are located within the North Iceland Seismic Zone.

Properties in seismic hazard areas are specially designed to withstand PGA (ground motion) with 475 years return period. The first seismic design code was implemented in 1976.



Drangey in Skagafjörður





# ACT 55/1992

## on The Natural Catastrophe Insurance of Iceland after changes to NTI's legislation in July 2018



### Purpose and board of directors

#### Article 1

The purpose of The Natural Catastrophe Insurance of Iceland is to insure against loss caused by the natural catastrophes listed in Article 4 of this act.

#### Article 2

The board of directors of the agency shall be comprised of five persons. Three shall be elected by the Parliament of Iceland, one shall be chosen by those insurance companies which collect premiums, cf. Paragraph 3, Article [10]1), and [the minister] shall appoint one who shall be chairman 2). Alternates shall be chosen in the same manner. Directors shall be appointed for a term of four years.

1) Act 35/1995, Article 1.

2) Act 10/1995, Article 2.

### The investment of assets and annual accounts

#### Article 3

The board of directors shall safeguard and invest the funds or keep the books of the agency or enter into an agreement with a party in the field of insurance for the investing of the agency's funds and/or keeping the books. When investing, the board of directors shall seek to ensure the value of the capital and risk diversification as possible at each time. The fiscal year of The Natural Catastrophe Insurance of Iceland shall be the calendar year. Audited annual accounts shall be published on the agency's website.

The Icelandic National Audit Office audits the financial statements from The Natural Catastrophe Insurance of Iceland.

### Insured risk

#### Article 4

The Natural Catastrophe Insurance of Iceland shall insure against direct losses incurred on account of the following natural catastrophes: volcanic eruptions, earthquakes, rock slides, avalanches and floods. A regulation shall further define what falls within the purview of the previous sentence.

### Properties with mandatory insurance

#### Article 5

It is mandatory to insure all real estate and all movables that have fire insurance at an insurance undertaking which is licensed to operate in Iceland. It is also mandatory to insure any movables covered by general comprehensive policies which include fire insurance, as such insurance is considered to fall within the category of property insurance, cf. [Article 20 of Act 100/2016 on Insurance Activities]1). Should fire insurance be included in an all-risk insurance policy or a special insurance policy, e.g. fish farming insurance, the movables shall not be covered by natural catastrophe insurance, unless specifically approved by the board of directors of the agency.

It is further mandatory to insure the following structures against natural catastrophes, regardless of whether they are covered by fire insurance:

1. Geothermal heating systems, waterworks and sewage systems owned by municipalities or the government of Iceland.

2. Harbour installations owned by municipalities or the government of Iceland.

3. Bridges which are 50 m or longer.

4. Electric installations, including distributions systems, dams and utility facilities which are publicly owned.

5. Telephone and communications networks which are publicly owned. [6. Ski lifts.]2)

The assets listed in paragraph 2 may be insured elsewhere than at The Natural Catastrophe Insurance of Iceland.

The minister shall issue a regulation further outlining what falls under mandatory insurance according to paragraph 2, including making provisions for what categories of valuables are considered defined structures.

1) Act 84/1998, Article 6.

2) Act 35/1995, Article 2.

### Properties with optional insurance

#### Article 6

[...]1)

1) Act 35/1995, Article 3.

#### Article 7

Upon an insurance undertaking receiving a request for a fire insurance policy for a building or movables which customarily are not subject to fire insurance or the risk of fire damage is insignificant, the insurance undertaking shall seek approval from the agency prior to calculating a natural catastrophe insurance premium from the insurance. Should the provisions of the article not be adhered to, the insured item shall not be considered insured against natural catastrophes.

#### Article 8

It is prohibited to insure structures which are erected in violation of a ban set by public authorities or contrary to law in such a way that it is likely that the building is therefore more susceptible to incurring damage from natural catastrophes than it otherwise would be, regardless of whether it is covered by fire insurance.

### Amount insured

#### Article 9

The amounts insured shall be determined as follows:

1. All valuables covered by a fire insurance policy shall be insured against natural catastrophes for the same amount covered by the fire insurance policy at each time.

2. After having received recommendations from the board of directors of the agency, the minister shall establish rules on the determination of insurance amounts for other assets; cf. Paragraph 2, Article 5....1)

1) Act 35/1995, Article 4.

[Own risk of the insured]1)

Act 119/2008, Article 1

#### Article 10

[The own risk of the insured shall be 2% of each loss, although never of a lower amount than as follows:

1. For movables, insured cf. Paragraph 1, Article 5, ISK 200.000,-.

2. For buildings, insured cf. Paragraph 1, Article 5, ISK 400.000,-.

3. For structures, insured cf. Paragraph 2, Article 5, ISK 1.000.000,-.]1)

1) Act 119/2008, Article 1. The provisions apply to losses incurred from 25 May 2008, cf. Article 2 of the same act.

## Insurance premiums

### Article 11

Annual insurance premiums shall be calculated as follows:

1. For assets insured in accordance with Paragraph 1, Article 5, 0.025%  
[2. For assets insured in accordance with Subparagraphs 1-5, Paragraph 2, Article 5, 0.02%]<sup>1)</sup>

[3. For assets insured in accordance with Subparagraph 6, Paragraph 2, Article 5, the premium shall be calculated in accordance with rules established by the board of directors of the agency.]<sup>1)</sup>

Should the net assets go below 0.1% of estimated amounts insured at the end of the calendar year, the board of directors of the agency may collect premiums in accordance with Paragraphs 1 and 2, Article 5 with a 50% surcharge until the 0.2% objective is reached.

Insurance undertakings which provide fire insurance for assets insured at the agency, cf. Paragraph 1, Article 5, shall collect premiums for the agency in addition to premiums for the fire insurance, with both premiums falling due at the same time. A regulation shall make provisions regarding bookkeeping and the remittance of premiums from insurance undertakings. The agency's access to data held by insurance undertakings shall be governed by Article 24.

Insurance premiums from other assets, cf. Paragraph 2, Article 5, shall be calculated and collected by the agency.

Natural catastrophe insurance premiums are subject to distraint. The insurance premiums are also secured by a statutory lien on the insured property. In order to enforce payment of an unpaid insurance premium a distress sale of the property may be requested without a prior judgment, settlement or levy of execution.

1) Act 35/1995, Article 6.

## Notification of loss

### Article 12

Upon the occurrence of an insurance event, the insured shall immediately notify the agency or the insurance undertaking that sold him the insurance.

Upon receiving such a notification, the relevant insurance undertaking shall immediately notify the agency of the insurance event. When the agency gains knowledge of a loss which can be expected to be subject to natural catastrophe insurance, it shall as soon as possible make arrangements to determine whether the loss shall be compensated and, if applicable, have the loss appraised.

## Arrangements to avert loss

### Article 13

Upon the occurrence of an insurance event, the agency shall determine whether specific arrangements are necessary to rescue insured assets or to avert further loss. Such arrangements shall, insofar as possible, be made in cooperation with the Icelandic Civil Protection Department. The provisions of Paragraph 1 do not release the insured from his duty to make arrangements to avert loss according to the law on insurance contracts.

### Article 14

[...]<sup>1)</sup>

Act 46/2008, Article 11.

## Payment of insurance compensation

### Article 15

The claimant shall use the insurance compensation to repair or restore property damaged by a natural catastrophe. If the insurance compensation is greater than 15% of the insurance amount of the

property or if the damage affects the structure's safety or health standards, The Natural Catastrophe Insurance of Iceland shall ensure that the insurance compensation be rightfully spent before paying them out to the claimant.

The Natural Catastrophe Insurance of Iceland is permitted, in consultation with the municipal government, to grant exemptions from the repair or restoration obligation in Paragraph 1 on the condition that 15% will be deducted from the compensation amount. The deduction shall not be applied if the repair or restoration of a property is prevented by zoning regulations or other reasons that are not within the claimant's control. If a decision is made to grant an exemption from the repair and restoration obligation and if The Natural Catastrophe Insurance of Iceland believes that the amount insured obviously exceeds the insured property's market value the agency is permitted to use the property's market value as a base.

If a property is damaged and the approximated repair costs, with due consideration to the age and condition of the property at the time of the event, exceeds half of the amount insured and the municipal government deems it necessary to remove the property due to risk of repeated insurance events, the municipality can acquire the property. It will then pay the difference between the approximate insurance compensation from The Natural Catastrophe Insurance of Iceland and the property's amount insured.

The board of directors of The Natural Catastrophe Insurance of Iceland issues rules on procedures and handling of claims. The board of directors is permitted to entrust the settlement of claims to insurance undertakings.

[The minister] shall issue a regulation on appraisers and general principles in determining insurances compensation.

### Article 16

It shall be permitted to lower compensation amount or reject a claim entirely:

1. When a building or other structure which is damaged is constructed at a location commonly known to be dangerous with regard to natural catastrophes, e.g. if a structure in the same location has more than once incurred the same kind of damage. The same shall apply to movables stored in a building or another structure in such conditions.

2. When the construction or maintenance of a building or other insured item is unconscionable or contrary to law or regulations and it is clear that this has resulted in loss or more extensive loss than it otherwise would have been.

### Article 17

Insurance compensation shall be paid as soon as possible, cf. Article 48 of Act 30/2004 on Insurance Contracts.

### Article 18

The total payment obligation of The Natural Catastrophe Insurance of Iceland due to each insurance event shall be limited to 0.75% of the total of insured amounts covered at the start of the insurance event. From 1 January 1994, the payment obligation is limited to 1% of the total insured amounts.

Should compensation on account of the same insurance event exceed the amount in Paragraph 1, the share received by each insured which suffered loss shall be reduced proportionally.

### Article 19

The Natural Catastrophe Insurance of Iceland makes decisions regarding payment obligations and compensation amounts in accordance with provisions in the Administrative Procedures Act on

case handling. The claimant can appeal the agency's decision to the Appeals Committee within 30 days from having received the decision. The Appeals Committee shall be appointed by the minister. The Appeals Committee shall be comprised of four persons. One shall be appointed according to nomination from the Supreme Court of Iceland and shall be chairman and have specialised knowledge in the field of insurance law. The second person shall be appointed according to nomination from the School of Engineering and Natural Sciences of the University of Iceland and that person shall have specialised knowledge in structures. The final two persons shall be appointed without nomination and shall have specialised knowledge in the field of insurance, structures or damage assessment. Alternates shall be appointed in the same manner. Appointments shall be made for a period of three years. The Appeals Committee may seek the assistance of experts if deemed appropriate.

Risk management, reinsurance and authorisation to borrow

#### **Article 19.a.**

The Natural Catastrophe Insurance of Iceland shall have an efficient risk management system. The minister is authorised to issue a regulation with further provisions regarding risk management.

#### **Article 20**

The agency shall be permitted to reinsure its risk both domestically and abroad.

Should the agency's assets and amounts received from reinsurers not suffice to pay compensation as prescribed for by this act, the agency's board of directors may, with the consent of the minister, borrow funds in order to be able to discharge its obligations. Such loans are unconditionally guaranteed by the government of Iceland.

### **Sundry provisions**

#### **Article 21**

The board of directors of the agency shall be permitted to allocate funds to research and to subsidise construction intended to avert or mitigate loss on account of natural catastrophes. [Furthermore, the board of directors may allocate grants in relation to the education and training of those national organisations which have entered into a cooperation agreement with the [National Commissioner of the Icelandic Police]<sup>1</sup> regarding intervention teams.]<sup>2</sup> Annual allocation of funds in this regard may not exceed 5% of the book value of premiums received the preceding year.

1) Act 44/2003, Article 11.

2) Act 35/1995, Article 7.

#### **Article 22**

The Natural Catastrophe Insurance of Iceland is exempt from the payment of income tax.....<sup>1</sup>), municipal tax and facilities tax. Stamp duty shall not be paid on account of the agency's documents.

1) Act 129/2004, Article 97.

#### **Article 23**

The board shall negotiate with insurance undertakings and others which operate on behalf of the agency in accordance with this act. Should a disagreement on an insurance undertaking's compensation arise, it shall be resolved by an arbitration court of three persons. Each party shall nominate one person for the court. These court members shall choose a third member which shall be chairman of the court. A chairman shall meet the special conditions of qualification for district judges for processing handling cases. Should a court member not be nominated within 15 days of a demand or court members cannot agree

on a third member, the Act on contractual arbitration shall be followed. The provision of that act shall be complied with in other matters as applicable.

#### **Article 24**

The Natural Catastrophe Insurance of Iceland can demand any data and information from insurance undertakings regarding their operations on behalf of the agency. During regular office hours the agency shall further have a right to unhindered and immediate access to the books of such insurance undertakings and other data regarding premiums on natural catastrophe insurance.

#### **Article 25**

Unless otherwise prescribed for in this act, the provisions on the Act on Insurance Contracts shall be applied as applicable.

#### **Article 26**

After having received the recommendations of the board of directors of The Natural Catastrophe Insurance of Iceland, the [minister]<sup>1</sup> shall issue a regulation<sup>2</sup> with provisions further outlining the implementation of this act.

1) Act 10/1995, Article 2.

2) Regulation 83/1993.

#### **Article 27**

This act shall enter into force on 13 January 1993

Temporary provisions

I.

[...]1)

Act 35/1995, Article 8.

II.

A 10% surcharge shall be collected on premiums prescribed in Article 10 in the years 1995-1999. Income on account of the surcharge shall be diverted to the avalanche and rock slide fund, cf. Article 10 of Act 28/1985 on defences against avalanches and rock slides. The collection of this fee shall be governed by Article 10<sup>1</sup>)

1) Act 36/1995, Article 1.

In the event of a dispute, the Icelandic version of the Act 55/1995, does apply.



# REGULATION ON THE ICELAND CATASTROPHE INSURANCE No. 700/2019

## Scope

### Article 1

This regulation applies to insurance provided by the Natural Catastrophe Insurance of Iceland against direct loss caused by natural catastrophes.

## Risks insured against

### Article 2

The natural catastrophes insured against by the catastrophe insurance, cf. Article 4 of Act No.

55/1992 on the Natural Catastrophe Insurance of Iceland, are:

1. A volcanic eruption, i.e. when lava, ash or tephra cause damage or destruction of insured assets.
2. An earthquake which causes damage or destruction of insured assets.
3. A landslide, i.e. when a slide from a mountain or a hillside abruptly falls onto insured assets causing damage or destruction thereof.
4. A snow-avalanche, i.e. when an avalanche abruptly falls from a mountain or a hillside onto insured assets causing damage or destruction thereof. It is not considered a snow-avalanche when assets are strained or broken from accumulated snow on top of or leaning against them caused by snowfall, drifting snow or blowing snow.
5. A flood, i.e. when a flood occurs due to rivers or brooks that usually flow normally abruptly overflow their banks or when flood waves from the sea or lakes abruptly run ashore causing damage or destruction of insured assets. It is also a flood when sudden floods come from glaciers due to melting of ice. Floods due to precipitation or snowmelt that do not fall under Paragraph 1 do not constitute a flood. The same applies to floods caused partly or wholly by man, e.g. when water tanks, dams or other structures break due to reasons other than natural catastrophes.

The Natural Catastrophe Insurance of Iceland shall compensate losses when insured assets are damaged in a fire which are caused directly by any of the above-mentioned natural catastrophes.

## Movables that are mandatory to insure

### Article 3

Insuring the following movables, is mandatory cf. Paragraph 1, Article 5 of the Iceland Catastrophe Insurance Act no. 55/1992:

1. Movables that are insured against fire by an insurance undertaking which is licensed to operate in Iceland, cf. Sentence 1, Paragraph 1, Article 5 of the Act. Assets that are insured according to Subparagraph 8, Paragraph 1, Article 20 of Act no. 100/2016 on insurance activities.
2. Movables that are insured by a comprehensive insurance policy that includes fire insurance and is classified as property insurance cf. Subparagraph 5, Paragraph 2, Article 20 of Act no. 100/2016 on insurance activities, and Sentence 2, Paragraph 1, Article 5 of the same Act.
3. Movables that the board of directors of the Natural Catastrophe Insurance of Iceland has specifically approved to be insured, cf. Sentence 3, Paragraph 1, Article 5 of the Act.

## Structures that are mandatory to insure

### Article 4

It is mandatory to insure the following structures, cf. Paragraph 2, Article 5 of Act no. 55/1992 on the Natural Catastrophe Insurance of Iceland:

1. Geothermal heating systems owned by municipalities or the treasury along with their distribution systems for hot water or steam, including subterranean pipelines but not boreholes or any equipment or pipelines therein. Pumps above ground level, pump facilities, water tanks shall also be insured as well as facilities for geothermal heating or for other sources of energy.
2. Waterworks owned by municipalities or the treasury, including water harvesting systems, subterranean pipelines other than boreholes and deep-wells and any equipment or pipelines therein. Pumps above ground level, pump facilities and water tanks shall be insured.
3. Sewage systems owned by municipalities or the treasury including pump- and treatment facilities.
4. Permanent harbour installations owned by municipalities or the treasury, i.e. piers, quays, immovable harbour cranes, immovable lighting equipment, electric installations, lamp-posts, junction boxes, water- and drainage pipelines, bollards and pavement on piers but not cranes on rails, wheels or belts or other movable harbour appliances and equipment. Only quays which are boarded with steel or timber, stacked with hewed stones or made of concrete or other comparable permanent materials, shall be insured. Areas which are more than 30 meters from quays are not considered parts of harbour installations. Breakwaters, rubble mound breakwaters, rubble mound shore protection or other installations for the protection of piers, quays or accompanied assets shall not be insured.
5. Permanent bridges 50 m or longer whether they are owned by municipalities, the treasury or privately owned. Roads leading to and from bridges shall not be construed as a part thereof nor shall levees.
6. Electric installations owned by municipalities or the treasury, including distribution systems, dams, utility facilities and streetlights.
7. Telephone- and communications networks owned by municipalities or the treasury, including distribution systems and any related coupling devices, computer- and data centers and cables, including optical fibers.
8. Ski lifts.

Structures according to this Article are considered to be owned by municipalities or the treasury if they are owned in majority by municipalities or the treasury.

Natural Catastrophe Insurance of Iceland can authorize structures according to this Article, that are under construction, to be insured.

## Changes to insurance policies

### Article 5

When a loss has occurred or is imminent it is not permissible to enter into new insurance contracts or to alter older contracts dealing with assets in the endangered location or area.

## Amount of insurance for structures

### Article 6

Structures according to Article 4 shall be insured against their replacement cost estimate (price of reconstruction) plus a 10% demolition cost of replacement cost. The replacement cost shall be based on the reconstruction cost of comparable property given the construction material and construction

practices that are customary at each time. It shall be based on the newest technology, construction methods and cost of materials as well as the building cost of comparable new property. The following factors are included in the replacement cost:

- a. Materials. Based on purchase price, taking into account transport within region and normal atrophy.
- b. Labor costs, including remuneration in accordance with recognized wage rates along with wage-related expenses based on average conditions on the employment market.
- c. Mechanical costs that are priced sufficiently high to cover depreciation, operations costs and a normal profit margin. Facilities at construction site. Including work-sheds, lots and construction cranes.
- d. Architectural and engineering designs.
- e. Supervision during construction.
- f. Administrative costs of contractors and buyers
- g. Insurance during construction.
- h. Cost of capital during construction.
- i. Value added tax.

Owners of structures cf. Article 4 shall submit to the Natural Catastrophe Insurance of Iceland a list of all their structures prior to March 1 each year together with an estimate of their replacement costs as at January 1 the same year. The structures owner is responsible for the accuracy of the replacement cost estimate at any given time.

Owners of structures shall report to the Natural Catastrophe Insurance of Iceland when new structures cf. Article 4 are taken into service and submit new replacement cost estimates as well as submitting revised estimates of existing structures. A structures insurance goes into effect when the Natural Catastrophe Insurance of Iceland has provably received such a report and a replacement cost estimate. The same applies to changes or improvements to older structures. In the occurrence of an ownership transfer, the insurance shall not be discontinued unless confirmation of new insurance is available.

If a structures owner does not update insurance amounts year-to-year, the replacement cost estimate shall be updated according to the building cost index. If there is a reason to suspect that an estimation is unrealistic or the owner of the structure has neglected to provide information of assets, that are mandatory to insure, the Natural Catastrophe Insurance of Iceland can call on two competent and impartial persons to evaluate the assets as well as their replacement cost and their estimate shall be binding as an insurance amount. If replacement cost estimates are unrealistic or a structures owner neglects to provide information, he shall bear the cost of the assessment.

## **Information on premiums**

### **Article 7**

The insurance companies that cover fire insurance of assets which are insured with the Natural Catastrophe Insurance of Iceland under Paragraph 1, Article 5, cf. Paragraph 3, Article 11 of Act no. 55/1992 on the Natural Catastrophe Insurance of Iceland, shall submit to the Natural Catastrophe Insurance of Iceland a monthly report of premiums collected during the previous month and disburse the catastrophe insurance premiums no later than on the 15th of that month. If a premium is in default an insurance company shall collect late payment interest in accordance with the provisions of the Interest Act. If an insurance company fails to disburse premiums or interest in

accordance with the aforementioned, it is obliged to pay late payment interest on the delinquent amount in accordance with the provisions of the Interest Act. Insurance companies shall annually submit to the Natural Catastrophe Insurance of Iceland an itemized report of insurance amounts, premiums and late payment interest. The Natural Catastrophe Insurance of Iceland shall decide on the format of the report.

## **Premium maturity date**

### **Article 8**

The maturity date of premiums which the Iceland Catastrophe Insurance collects itself shall be April 1 each year. If a premium is not paid within four weeks from the maturity date the debtor shall pay late payment interest from the maturity date in accordance with the provisions of the Interest Act.

## **Appointed adjusters**

### **Article 9**

When a loss event has occurred, the Natural Catastrophe Insurance of Iceland shall make arrangements for the inspection and assessment of the loss and it may, according to circumstances, designate a competent and impartial adjuster or adjusters.

The Natural Catastrophe Insurance of Iceland may, according to circumstances, request that loss be assessed by a court-designated adjuster or adjusters. Matters relating to the cost of an assessment done by a court-designated adjuster shall be regulated by the general applicable rules.

The insured party shall at all times have the opportunity to be present at inspection and be able to present his views to the adjuster or adjusters.

The adjuster or adjusters shall submit a written assessment and conclude their work as speedily as possible.

## **Determination of compensation**

### **Article 10**

Compensation shall be determined in accordance with the principal rules of the laws of insurance, cf. inter alia the following rules:

1. The insurance solely compensates for direct loss of insured movables, buildings and structures, cf. Article 5 of Act No. 55/1992 on the Natural Catastrophe Insurance of Iceland. The insurance does not compensate for indirect losses such as operating losses, nor losses that result from the assets not being used in a time or manner that had been planned, as well as other indirect losses.
2. The insurance amount is not a proof of the value of the insured asset which is insured cf. Article 5 of Act. No. 55/1992. Nevertheless, it is always the maximum of the responsibility based upon when compensation is determined.
3. The value of insured assets cf. Article 5 of Act. No. 55/1992 shall be determined with regard to their actual value when the loss event occurred. Depreciation due to age, use, decreased effective value and other conditions shall be taken into account. The value of insured movables cf. Article 3, that pertain to general activities of households, such as furniture, appliances, loose carpets, clothing, books and linens, is based on prices for new items, that is the amount that would have been needed to buy the perished or damaged assets at the latest available price of such assets before the loss occurred minus a

reasonable amount due to depreciation caused by reduced utility or other reasons.

4. Compensation for goods which the insured party has produced for sale are priced at cost. Compensation for goods in production are priced according to the purchase price of raw materials plus accrued cost. Purchase price and cost are based on price levels at the time of loss.
5. When determining compensation for assets cf. Articles 5 of Act. No. 55/1992 in case of partial loss, compensation shall be determined by the cost of reparation of the damaged valuable for its restoration to the same or next to the same condition as it was in before the loss event, having regard to Paragraph 1, Subparagraph 3. Compensation thus determined can never exceed the difference in the value of the item prior to the loss and its value thereafter. The claimant shall preserve the damaged property or asset as best he can until he has been compensated for the loss.  
The claimant shall provide the Natural Catastrophe Insurance of Iceland with a possibility to inspect and assess the loss prior to reparation, or compensation has been provided. Should the claimant dispose of damaged assets or valuables it can result in decrease or loss of compensation in accordance with laws on insurance contracts. When determining compensation for assets cf. Article 5 of Act. No. 55/1992, in case of total loss, the actual value of assets cf. Subparagraph 2 shall be assessed and compared to the asset insurance value on the date of loss, according to Subparagraph 3.
6. If the value of the insured item exceeds the amount insured, compensation for the loss shall be computed as follows:

**loss amount x amount insured / actual value = compensation.**

The insured party's deductibles shall be deducted from the amount of compensation thus arrived at.

## **Demercation of own risk**

### **Article 11**

Upon the payment of compensation, the own risk of the insured, cf. Article 10 of Act No. 55/1992 on the Natural Catastrophe Insurance of Iceland, shall be decided as follows:

1. Movables cf. Paragraph 1, Article 5 of the Act: The insured bears an own risk for each loss in a movable insurance. The own risk is based on each insurance policy
2. Buildings cf. Paragraph 1, Article 5 of the Act: The insured bears an own risk on a building's total loss per each real estate number. In a multi-owned building, the loss to common areas of a property is divided between owners in proportion with their ownership share.
3. Structures cf. Paragraph 2, Article 5 of the Act: The insured bears an own risk on each loss to a structure which is mandatory to insure.

The present Regulation is issued in accordance with the authority provided in Article 4; Paragraph 4, Article 5; Paragraph 3, Article 11; Paragraph 2, Article 15 and in Article 26 of Act No. 55/1992 on the Natural Catastrophe Insurance of Iceland and shall come into force forthwith. At the same time, Regulation No. 642/2017, on the Iceland catastrophe insurance is cancelled.

The Ministry of Finance and Economic affairs, 9th July 2019.

Guðrún Þorleifsdóttir

Sóley Ragnarsdóttir



