

**Appendix 4: Vatnajökull National Park
Management Plan 2013**

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Summary

Vatnajökull National Park

A milestone in Icelandic nature conservation was attained with the establishment of Vatnajökull National Park on 7 June 2008. Preparations for the event had taken almost a decade; indeed, the project was complex and extensive.

In the new Vatnajökull National Park, several conservation areas were united, and within the park boundaries were also areas not previously defined as national park or nature conservation areas. The national park has been extended four times since it was founded. It encompasses the whole of the Vatnajökull ice cap and a large area beyond that is influenced by this vast glacier. The national park is now about 13,950 km² in area, of which the Vatnajökull ice cap is about 7,800 km². The total area of Iceland is estimated at 103,000 km², so Vatnajökull National Park covers over 13.5% of the country.

Almost all of the land within the national park is public land, property of the Icelandic State.

PROTECTION, EDUCATION AND UTILISATION

The principal objective of the establishment of Vatnajökull National Park is the protection of nature, landscapes, the biosphere and geological formations in the highlands of Iceland. In addition, the national park and its activities provide opportunities to promote research on natural phenomena, many of which are unique or extremely rare. And since it holds numerous clues to the development of the earth's past climate, studying the ice cap can generate important knowledge about Earth history and the influence of climate change on the world's glaciers.

Vatnajökull National Park is also a valuable education resource for the public, and it provides the opportunity to experience and sense the beauty and greatness of pristine nature. Such opportunities are increasingly rare and this may be seen as one of the most important things that Vatnajökull National Park has to offer. The protection of cultural heritage and the sharing of information about historical places in the national park, as well as the sharing of the history of the Icelandic nation, are among the statutory objectives of Vatnajökull National Park.

The activities of Vatnajökull National Park aim to promote and support the economy and communities in the national park's neighbouring municipalities. The national park must make

contracts for business activity within its boundaries, and business activities other than those for which contracts exist are prohibited.

The main objectives of Vatnajökull National Park are to:

1. **Protect nature, landscape, biosphere, geological formations and cultural heritage**
2. **Ensure public access to the area for the purpose of enjoying its nature and history**
3. **Promote research, education, information-sharing and promotion about the national park's unique qualities and value**
4. **Promote communities and businesses in the vicinity of the national park, and support sustainable utilisation of its qualities.**

Governance of Vatnajökull National Park

Vatnajökull National Park is a government institution under the aegis of the Ministry for the Environment and Natural Resources. The national park is divided into four administrative regions, named after the cardinal points of the compass. Its board is multimembered, and the management style and organisation of the board are designed to guarantee powersharing and ensure that local people are involved in both decision making and policy making.

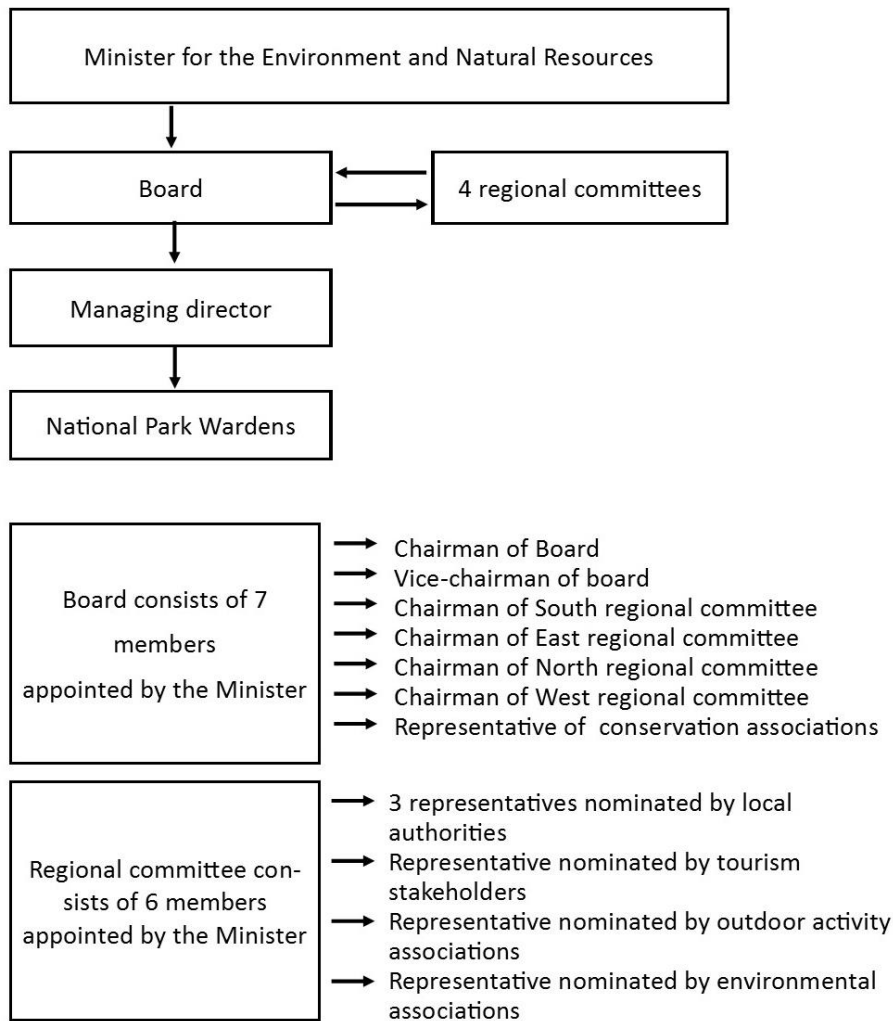
The Minister for the Environment and Natural Resources appoints the national park board for four years at a time. The board is composed of seven members, the chairs of the four administrative regional committees, one representative proposed by conservation associations, and a chair and deputy chair appointed directly by the Minister.

Two observers have the right to sit on the board; one is nominated by outdoor activity associations and the other by tourism stakeholders.

The Minister appoints a regional committee for each operational area, for a term of four years. Each regional committee comprises six members; three are nominated by the local authorities, one by tourism stakeholders, one by outdoor activity associations and one by environmental associations.

A managing director, appointed by the Minister for five years at a time, is responsible for day-to-day running of the national park, on behalf of the board.

Governance of Vatnajökull National Park



At least one national park warden works in each administrative region. There are two national park wardens in regions with headquarters at two locations, i.e. at Ásbyrgi/Mývatn and

Höfn/Skaftafell. Park wardens are in charge of day-to-day running, staffing and local management, in cooperation with the managing director.

The main role of the Board is:

1. Policy making in national park matters
2. Overseeing of proposals for the Management Plan and Regulations for the national park
3. Approval of the budget, allocation of funding to the park regions and approval of a financial plan for each region
4. Coordination of operations in the park regions
5. Supervision of the implementation of rules and the Management Plan

6. Collaboration with government bodies, local councils and stake holders
7. Making proposals to the Minister about appointing a managing director
8. Overseeing business policy, shaping conditions for businesses operating in the national park, and making contracts
9. Providing the managing director and park wardens with job descriptions.

The National Park is a public space

Vatnajökull National Park works for the benefit of the public in the present and future. It is available

to all. Everyone who adheres to the Vatnajökull National Park code of conduct is allowed to travel within and stay in the park for legitimate purposes. The park is a sanctuary where nature may evolve unhindered, and also a haven where people can enjoy a coexistence with untouched nature.

In order to facilitate the work of staff and administrators of Vatnajökull National Park, the organisational structure and decisions have been made based on the National Park Act and other Acts and Regulations relating to its operation. The objectives behind the activities of Vatnajökull National Park and the means of achieving them are described in this document and aim to help those concerned to tread the challenging path between ensuring public access to the park and addressing conservation commitments.

Ten rules for Vatnajökull National Park:

- 1. It is forbidden to spoil or disturb the biosphere, geological formations, landscape and cultural heritage in the national park**
- 2. All developments/constructions within the national park shall be consistent with conservation objectives, laws and regulations**
- 3. Everyone who travels through the park or stays within its boundaries is required to respect nature and the cultural heritage and comply with the rules about behaviour**
- 4. Off-road driving of motor vehicles is illegal in the national park. However, it is permitted in certain areas during the winter, when the ground is snow-covered and frozen**
- 5. Permission from national park wardens is required for landing aircraft in the national park**
- 6. In the event of damage to an area of land or the biosphere, a national park warden may immediately effect a temporary closure**
- 7. A licence from a national park warden is necessary for organised events and projects requiring facilities, manpower and the use of equipment, such as film making, gatherings and research**
- 8. National park wardens may temporarily close areas within the park because of events that are taking place there**
- 9. Business activities in the national park may only operate if a contract has been made with the national park**

10. Vatnajökull National Park operates information and service centres that provide information, education and services for visitors.

1 Introduction

1.1 VATNAJÖKULL NATIONAL PARK MANAGEMENT PLAN

The Vatnajökull National Park Management Plan is composed and presented in accordance with provisions in the Vatnajökull National Park Act, no. 60/2007, and subsequent amendments, see especially Section III of the Act, and the Vatnajökull National Park Regulation, no. 608/2008, including subsequent amendments.

The management plan is the main instrument for management of the national park, on which national park policy-making is based. It shall include “objectives of conservation, policy of the board and ways to implement management and protection” according to paragraph 1, Article 12 of Act no. 60/2007; and according to paragraph 2, Article 12 of the same Act, the management plan shall outline “the objectives of conservation in individual areas within the Vatnajökull National Park, individual safeguards, land use, construction work, transport and other infrastructure in the area. It will cover the public right of travel, access to the area and its use.” The national park’s management plan may also include conditions for the arrangement of projects and for monitoring them, with the objectives of preventing unnecessary disturbance of the biosphere, geological formations, water systems, landscape or cultural heritage sites within Vatnajökull National Park.

The board of the national park shall also supervise the development of a business policy which includes conditions for business activities within the national park, and the issuing of permits for this purpose.

Local authorities are bound by the content of the management and plan pertaining to local planning for land areas within Vatnajökull National Park, and all those who make their way through the park or dwell there should, as appropriate, comply with the provisions of the management plan, see Article 13 of Act no. 60/2007.

As stated above, the role of the management plan is multi-faceted and comprehensive. It provides for far-reaching, statutory consultation of parties that are involved in the administration of Vatnajökull National Park or that have professional duties in the field of environmental affairs or nature protection relating to it.

In the management plan, a policy is proposed for Vatnajökull National Park, including nature conservation, outdoor recreation, and regional development. The policy was formulated in consultation with many stakeholders, representatives of the public and non-governmental organisations. It touches on numerous aspects of conservation and utilisation of the national park’s qualities. The policy also outlines how best to optimise the opportunities offered by the foundation of the national park; how to strengthen existing opportunities, and also create new ones.

The management plan provides the basis for a vision for the national park of the future, setting objectives that are consistent with long-term plans for the role of Vatnajökull National Park and its development.

An action plan shall be prepared on the basis of the management plan, in which the objectives and means to achieve them are further elaborated.

1.1.1 Review and changes

The maximum duration of a management plan without review is 10 years, but changes may be made within that time, if warranted. The national park board may make proposals for such changes on its own initiative but shall seek the opinion of the regional council before a proposed change is sent to the Minister for confirmation, see paragraph 7, Article 12 of Act no. 60/2007. By the decision of the board of Vatnajökull National Park and with reference to the management plan’s position in relation to local authority plans, it does not include a detailed action plan as such a plan would always depend on the budget of each year. Budgets may vary, and may disturb long-term plans. A short-term action plan and a number of specific work and action plans that comply with the management plan will be made as necessary and appropriate during the lifetime of the plan.

According to paragraph 7, Article 12 of Act no. 60/2007, it is permitted to add an annex to the management plan if the boundaries of the national park are extended, describing the new national park area without reviewing the overall plan. The same procedure and methods shall be used as when the overall review of the program is carried out. This Annex should be combined with the main content of the management plan when the next review takes place.

1.1.2 Formulation and approval process

The four national park regional committees each make proposals for the management plan “in collaboration with the Environment Agency of Iceland, the Icelandic Institute of Natural History and, as appropriate, other relevant government agencies” as it says in paragraph 4, Article 12 of Act no. 60/2007. The regional committees must consult with stakeholders in their region. The board of Vatnajökull National Park reviews their proposals, and based on them makes proposed changes to the Vatnajökull National Park management plan which are then officially submitted and the public are given the opportunity to comment and make suggestions.

At the end of the six weeks allowed for comments, the proposed changes are sent to the Minister for approval. The Minister may make changes to the proposals, if he/she considers this necessary in order to comply with legislation. When the proposed changes have been approved by the Minister, they are advertised in Section B of *Lögbirtingablaðið* (the Official Gazette) and take effect on publication.

1.1.3 Older versions of the Management Plan and its title

Provisions for the drafting of a conservation plan for Vatnajökull National Park were in the first edition of the Vatnajökull National Park Act, no. 60/2007, which entered into force on 1 May 2007, and in the notes and comments to the Bill (Record no. 439 of the 133rd parliamentary session) it states that it was anticipated that the national park's conservation plan would be its main management instrument and that it would provide for all major decisions about national park issues within the framework of the Act, such as conservation, land use, projects and development, see Articles 12 and 13 of the Act, and comments therein.

In keeping with the multifaceted role of the plan, the board of Vatnajökull National Park and the Ministry of the Environment decided that its name should reflect its wide-ranging remit and become the Conservation and Management Plan of the Vatnajökull National Park, not merely the Conservation Plan as originally envisaged in the Vatnajökull National Park Act. The plan soon became known by this name, and was introduced into a law by amending the Vatnajökull National Park Act in the autumn of 2016; see the Changes to Vatnajökull National Park Act no. 101/2016.

The English version of the conservation and management plan has been known as the Vatnajökull National Park Management Plan since 2013.

The management plan was, from the outset, the most important management tool for Vatnajökull National Park, and care was accordingly taken in its composition. The plan was intended not only to support the national park administrators in their work, but also to reflect the common expectations and intentions of those involved in a variety of activities in the park, outdoor activities within its boundaries or other interests. The objectives of the plan are put forward with the intention that the management of the national park, and other public bodies, can fulfil their obligations as well as possible; and at the same time, by their actions, management and procedures, support other parties in achieving their objectives to the advantage of the working of the national park and the surrounding areas.

The management plan is a joint project by the Vatnajökull National Park board of directors, the committees of the four park regions, national park personnel and many specialists and stakeholders. The plan is based on suggestions from the regional committees and their advisors regarding conservation plans for each operational area; these are founded on a base of wide-ranging information gathering, mapping, and consultation with stakeholders. Many individuals and bodies were involved in working with, and advising, the regional committees; they are detailed in the actual proposals from the regional committees. The board also worked with many stakeholders to jointly produce a policy for the national park.

The consultation process began with proposals from the regional committees for conservation schemes, and continued throughout the development period. Various consultations took place. The regional committees, national park wardens and their advisors held public meetings, meetings with regional organisations, and presentations. There were also closed meetings on specific subjects, and the views of visitors and staff at the National Park were examined separately.

The policy section of the management plan is based largely on material collected during a consultation meeting with a large number of stakeholders in November 2009. Amongst other things, answers were sought to questions about the uniqueness and value of the national park, the vision and objectives for the park's work, and a definition of the influence of the park and its role as a driving force in various fields.

During the development period of Vatnajökull National Park's management plan, various public organisations and government ministries were also consulted. This was not simply to fulfil legal

obligations, but also to elicit valuable comments and get helpful information from them. Various associations were also consulted, as were regional committee members, national park staff, specialists in particular fields, and others as relevant.

The company Alta Consulting Ltd. assisted the board of directors with policy development for the national park, coordinating the proposals from the four regional committees, and finalising a management plan for Vatnajökull National Park. Members of the regional committees and their advisors, park wardens and other national park personnel and experts from Alta Consulting wrote the original management plan. Glaciologist Helgi Björnsson, biologist Snorri Baldursson and geophysicist Magnús Tumi Guðmundsson wrote the sections about nature and society, and the unique qualities of the park.

1.1.4 Revision in 2013

Due to the expansion of the western region of the national park in July 2011, it was necessary to make an addition to the management plan, about the area that had been added to the national park. The committee for the western region, together with its staff, formulated the matter in consultation with stakeholders and submitted its recommendations to the board. The conclusions of a special consultation group on transport were also available; it had been established on the recommendation of the Minister. A special assessment was conducted on two routes, Vikrafellsleið and Vonarskarð, performed by a group of specialists at the University of Iceland. Furthermore, experience and knowledge gathered during the approval process of the management plan at the end of February 2011 were available, including various issues related to the management of the national park and the conservation interests within it. The proposal to review the management plan, as advertised by the board of the national park in March 2013 and approved by the Minister for the Environment and Natural Resources on 12 July 2013, was founded on all this information.

In the final stages of the work, in April 2013, the eastern region of the national park was enlarged by the entry into force of Regulation no. 463/2013 regarding amendments to Regulation no. 608/2008 about Vatnajökull National Park. The Krepputunga area, including the natural monuments of Kverkfjallaráni and Hvannalindir, was incorporated into Vatnajökull National Park by this measure. The general part of the management plan is valid for

the whole of the national park, and thus also for the newest part of it. However, the development of content specific to the new area was a lengthy process and it was not possible to fully reflect the new addition to the national park in the whole management plan. The new national park land areas, Krepputunga and Kverkárrani are shown in Figure 3.1 of the 2013 edition, but the management plan is otherwise based on national park territory as it was defined before Krepputunga and Kverkárrani were added.

1.1.5 Revision in 2015–2017

Another revision of the management plan took place in 2015–2017. The reason was the aforementioned addition to the eastern region, the volcanic eruption that occurred at Holuhraun, south of Ódáðahraun, from the end of August 2014 until the end of February 2015, and which called for a new chapter in the management plan, about new natural formations.

The entry into force of Act no. 101/2016, about changes to the Vatnajökull National Park Act no. 60/2007, on 24 September 2016, also made necessary some rewording of the text in the Vatnajökull National Park management plan, which was somewhat altered in the process. Material changes derive from the aforementioned changes to the National Park Act, but in addition the opportunity was taken to shorten text, place related text together in one place and make the organisation of chapters clearer. However, the management plan is essentially unchanged from the original plan.

1.2 ENVIRONMENTAL REPORT

In association with the initial formulation of the management plan an environmental report was written, in compliance with the Strategic Environmental Assessment Act no. 105/2006. The final chapter of the environmental report summarises the environmental assessment's conclusions, which are reported below; the entire environmental report is appended.

1.2.1 Overall impact of the management plan on all the environmental factors combined

In environmental assessment of proposals for the management plan the objectives not deemed to relate to projects or activities falling under the Environmental Impact Assessment Act no. 105/2006 were excluded. Also excluded were those objectives considered to have such insignificant or so little effect on the environment

that there was no reason to consider them further. The remaining objectives were reviewed with respect to their perceived effect (positive or negative) and their consistency with the environmental criteria on which the management plan is based. This review showed that the objectives of the management plan are consistent with the environmental guidelines of international agreements and commitments, and the policy and aims of the Icelandic government.

The objectives as a whole are deemed likely to have a significantly positive effect on all defined environmental aspects.

No appreciable negative effects are predicted to happen as a result of the management plan or its implementation, but some objectives could have both insignificant negative and positive effects.

Although the provisions of the Vatnajökull National Park management plan are not considered to have a significant negative effect on the environment or society, the plan includes policy to define and monitor developments and changes in the operational environment of the national park. It is believed necessary to closely monitor changes to economic, natural and social factors. This makes it possible to seize an opportunity, react to dangers and use strength and uniqueness to achieve even more operational success. The national park will therefore define and monitor the principal influencing factors in its operational environment in order to consolidate the basis for good management and careful decision-making.

1.2.2 Probable environmental development in the absence of the management plan

Under the Strategic Environmental Assessment Act the environmental report is to address probable environmental developments if the relevant strategy is not implemented (zero option, business-as-usual).

As Vatnajökull National Park was already protected by law, and its management was provided for to a large extent by government regulations, when the first version of the management plan was implemented it is likely that its impact on the park's environment was initially low. However, the impact of the management plan can be expected to be significant in the long term, as responses to increased visitor numbers in the national park are and will be largely based on it. It is therefore likely that in the long term, the management plan will have a positive impact on the environment in the park and contribute to its preservation and

progress on its own terms and along an undisturbed natural pathway.

1.2.3 Changes to the environmental report

Changes to the management plan have thus far not provided reason to make changes to the environmental report.

2 Background to the management plan

A considerable history lies behind the foundation of Vatnajökull National Park on 7 June 2008, and some knowledge of the events leading up to the park's foundation is a prerequisite to understanding the policy of the national park and its objectives. Furthermore, it is important that the management plan is seen in context and that all connections with legislation pertaining to it and Icelandic government policy regarding the environment and nature conservation in general, and Vatnajökull National Park in particular, are clear. The same applies to the position of the management plan in relation to the relevant local authority planning schedules and the application of international criteria for classifying and operating conservation areas in the context of managing the national park: background knowledge of them is a prerequisite to understanding the provisions and objectives of the Vatnajökull National Park management plan. For this reason, the aforementioned items are briefly discussed here.

2.1 FOUNDATION OF VATNAJÖKULL NATIONAL PARK

In the 1990s, a regional plan for the central highlands was commissioned, and completed and approved in 1999. This and other things directed people's attention to the central highlands, its nature and conservation value, to a greater extent than before.

Hjörleifur Guttormsson, a member of parliament with a background in natural sciences, submitted to the 122nd parliamentary session (1977–1998) a proposal for a parliamentary resolution about a national park in the central highlands (Item 406), in which it was proposed that four national parks would be created around the main ice caps in the central highlands: Vatnajökull, Hofsjökull, Langjökull and Mýrdalsjökull. Since discussion of the proposal was not completed in the 122nd parliamentary session, Hjörleifur resubmitted it in the 123rd session (Item 16), and Parliament approved the proposal in late winter 1999, as parliamentary resolution no. 15/123, with alterations: the four national parks in the original proposal were replaced by one – Vatnajökull National Park.

Preparation for founding Vatnajökull National Park began in spring 1999, in agreement with the content of parliamentary resolution no. 15/123, by

the setting up of a working party which submitted their conclusions in March 2000. At the beginning of 2002 the Minister for the Environment appointed a committee for the foundation of Vatnajökull National Park; later in the same year this committee filed its report, which proposed the foundation of a Vatnajökull National Park encompassing the whole glacier, the existing Skaftafell National Park and the Lakagígar natural monument.

In October 2002 the then Minister for the Environment, Sív Friðleifsdóttir, appointed a committee of four members of parliament under the leadership of the Ministry for the Environment, which put forward a proposal in May 2004, regarding a national park which would encompass the whole of Vatnajökull and an extensive area of influence north of the ice cap, along the river Jökulsá á Fjöllum all the way to the coast at Öxarfjörður. During that same period, an advisory committee set up by the Minister worked on the project and in 2004 proposed enlarging the existing Skaftafell National Park as the first stage in founding Vatnajökull National Park, and this proposal was approved in Regulations by the Minister for the Environment. Skaftafell National Park became about three times bigger after the enlargement and encompassed 57% of Vatnajökull ice cap in addition to the Lakagígar area.

On 25 January 2005 the Icelandic government agreed to charge the Minister for the Environment to proceed, in collaboration with residents of the surrounding areas and other stakeholders, towards the foundation of Vatnajökull National Park. The process was based on the recommendations of the parliamentary committee's report from 2004. In November 2005 the Minister appointed a working committee for the foundation of Vatnajökull National Park, with the role of advising the Ministry for the Environment on preparations for the foundation of the national park. This committee consisted of the representatives of communities adjoining Vatnajökull National Park, as well as representatives from the Ministry and from independent organisations. The committee submitted its report in November 2005, containing proposals on the size of the national park, its administrative structure and service network.

The next step in the process was that the then Minister for the Environment, Jónína Bjartmarz, introduced a bill on Vatnajökull National Park at the 133rd parliamentary session (Item 395) that passed into law as the Vatnajökull National Park Act no. 60/2007 on 17 March 2007.

The formal establishment of Vatnajökull National Park took place on 7 June 2008 when Þórunn Sveinbjarnardóttir approved Regulations no. 608/2008 on Vatnajökull National park. The national park extended over a somewhat smaller area than had been proposed by the parliamentary committee and the advisory committee that was set up in 2005 and recommended that the park should include an extensive area of influence north of the ice cap, all the way to the coast at Öxarfjörður. The main difference being that large areas north of Vatnajökull were not within the boundaries of the national park, and only part of the river Jökulsá á Fjöllum was inside the park.

The first enlargement of Vatnajökull National Park took place on 16 April 2009, when almost 2,000 km³ north of the ice cap were added, with Mt. Askja, Dyngjufjöll, Trölladyngja and Ódáðahraun. The next enlargement was on 29 June 2009, a further 50 km², and the mountainous area adjacent to Hoffellsjökull glacier in the district of Hornafjörður became part of the national park. In July 2011 Langisjór and part of Eldgjá were added, about 420 km². In 2013, two square kilometres of Meiðavallaskógur west of Ásbyrgi were added to the national park, and on 26 April 2017, the park's area increased by 672 km² when Krepputunga and Kverkárrani were added. The expansion of Vatnajökull National Park continued on 25 July 2017, when Jökulsárlón and the surrounding area were protected as part of the national park, a total of 189 km². This most recent addition is under the jurisdiction of the southern region of Vatnajökull National Park and its regional committee.

2.2 OBJECTIVES AND AIMS OF FOUNDING VATNAJÖKULL NATIONAL PARK

Article 2 of the Vatnajökull National Park Act no. 60/2007 states that the foundation of the national park has as its objective to "protect the area's landscape, biosphere, geological formations and cultural relics, and to give the public the opportunity of enjoying its nature and history." In Act no. 101/2016 (to amend Act no. 60/2007), the expression of the provisions about Vatnajökull National Park's objectives were changed slightly, adding the objective that the operations of the national park shall aim at strengthening local communities and businesses, including by encouraging a sustainable use of the area's qualities. In the notes and comments attached to the Bill to amend Act no. 60/2007 (in document no. 1101 of the 145th parliamentary session), it says that there was some discussion about this in parliament, prior to the enactment of Act no.

60/2007, and in fact this emphasis had always been one of the objectives in the activities of Vatnajökull National Park, from the outset.

In a memorandum of the draft Vatnajökull National Park Act (document no. 439 of the 133rd parliamentary session) it deals with the reasons and premises behind the establishment of Vatnajökull National Park. It is stated that the area included in the national park is unique from a nature conservation point of view, both in Iceland and the world as a whole. It is also said that the establishment of Vatnajökull National Park would involve the protection of nature and landscapes, "which would draw attention in Iceland and outside."

The main objectives of the establishment of Vatnajökull National Park were, and are, to protect the unique nature within its boundaries (landscape, biosphere and geological formations) and its cultural heritage, promote research in the area and educate people about it, promote public awareness of the area's qualities and unique position, and seek to strengthen communities and businesses in the vicinity of the national park. Implicit in such a decision is a policy statement about conservation and utilisation of natural resources that has a general validity for the progress and development of such matters in Icelandic society; and this is also an indication of the Icelandic government's position on nature conservation in an international context.

2.3 ONE NATIONAL PARK, ONE AUTHORITY, FOUR COMMITTEES AND A MANAGING DIRECTOR

Founding Vatnajökull National Park involved the merging of several nature conservation areas, and also encompassed land areas that had not previously been classed as national park or nature protection areas. Vatnajökull National Park also embraced privately owned land. As might be expected, it was not without difficulties to design a suitable management programme when so many and different entities were involved and for an area as extensive as Vatnajökull National Park was when it began operations.

In an appendix to the Vatnajökull National Park Bill (record no. 439 of the 133rd parliamentary session), the section covering the foundation of the national park stressed that the whole area, the glacier and its adjacent areas, should be "regarded as one entity, and that the national park with Vatnajökull at its core, together with its surrounding areas,

should be a single national park under one central administration.”

It also stated that both in the opinion and proposals of the parliamentary committee from May 2004 and in the context of the Ministry of the Environment advisory committee, there had been strong indications that it was important that local inhabitants and representatives from local environmental associations should be members of the Vatnajökull National Park board.

The statutory governance structure of Vatnajökull National Park reflects the intention to share power as described above, and it is also influenced by the vastness of the national park that impinges on many comparatively different neighbouring communities.

Vatnajökull National Park is a government body regulated by a ministerially appointed board. The national park is divided into four regions, each with a ministerially appointed regional committee which has the role of ensuring consultation with local authorities and local residents in the relevant areas, and creating a forum for local residents and stakeholders to express their views. Members of the regional committee are nominated by the relevant municipalities, tourism organisations, outdoor pursuit organisations and environmental protection organisations.

According to temporary provisions in the Vatnajökull National Park Act no. 60/2007, the provisions for the structure of the board were to be reviewed not later than 1 January 2013. In accordance with that, the Minister for the Environment and Natural Resources appointed a working group which examined the matter and submitted a report to the Minister on 27 August 2013 on which was based a bill for amendments to the Vatnajökull National Park Act (record no. 1101 of the 145th parliamentary session), which was passed as Act no. 101/2016.

The working group examined the views of the main parties involved, regarding how successful existing arrangements for the board of Vatnajökull National Park had been, and whether changes were deemed necessary to them. The answers included that there was general satisfaction with the power-sharing arrangements of the national park board. However, it was considered necessary to clarify the division of responsibility between various parties that are members of the Vatnajökull National Park board, and in that context the new Act introduced new provisions for the managing director of the national park and his/her role, see Article 8b and 8c of Act no. 60/2007 with subsequent

amendments. After the entry into force of Act no. 101/2016, the managing director is appointed by the Minister for a period of five years at once, according to recommendations from the national park board. The managing director is responsible for day-to-day operation of the national park under the authority of the board, the budget and accounting, and is responsible for human resources management.

2.4 VATNAJÖKULL NATIONAL PARK IN A HISTORICAL CONTEXT AND NATURE CONSERVATION LAW IN ICELAND

In the spring of 1928, Parliament approved the protection of Þingvellir in the Þingvellir National Park Act no. 59/1928, to take effect at the beginning of 1930, one thousand years after the Icelandic parliament *Althingi* was established. This marked a milestone in recognising the conservation value of public lands and taking measures to preserve cultural and natural heritage in them.

After Þingvellir, the next national park created was at Skaftafell; it was founded in 1967 on the basis of the then current Nature Conservation Act no. 48/1956. A national park was established in Jökulsárgljúfur in 1973, on the basis of Nature Conservation Act no. 47/1971. Skaftafell National park and Jökulsárgljúfur National Park became part of Vatnajökull National Park when it was founded in 2008. Snæfellsnes National Park, in western Iceland, was founded in 2001 on the basis of Nature Conservation Act no. 44/1999.

When Vatnajökull National Park was founded in 2008, a special Act was passed about it, Act no. 60/2007. The principal reason was that during the preparatory process, strong wishes had been expressed by the municipalities concerned, for direct participation in the operation of the national park, exceeding that which was envisaged in the existing nature conservation law; see comments on the bill on Vatnajökull National Park (record no. 439 of the 133rd parliamentary session.) Requests like this for power-sharing in the national park board were the foremost reason calling for special measures pertaining to the park, but the vastness of the territory and the size of its operations were also factors.

The Nature Conservation Act no. 48/1956 was the first general nature protection law passed in Iceland, but special conservation measures had been previously passed to conserve specific wildlife and manage hunting and utilisation, which may also be seen as conservation provisions. The

Nature Conservation Act has been reviewed several times and rewritten over time. In comments on the Bill for a new Nature Conservation Act which became law as Act no. 47/1971, emphasis was placed on the founding of a national park as the conservation measure most likely to succeed. This is an indication of the change that had occurred in attitudes towards a national park.

The Nature Conservation Act was reviewed in 1996 and Parliament approved Act no. 93/1996. The law was revised again in 1999 and Act no. 44/1999 was passed. A thorough revision of the Nature Conservation Act led to the provisions in Act no. 60/2013 with effect from 15 November 2015. Section VIII of the Act deals with protected areas and Article 47 of it is about national parks.

According to Article 1 of Act no. 60/2013, the objective of the Nature Conservation Act is to “protect for the future the diversity of Icelandic nature, including the biosphere and the geological diversity of the landscape. It must ensure as far as possible the evolution of Icelandic nature in compliance with its [nature’s] own laws, and protect that which is unique or historically important, and also promote the recovery of disrupted ecosystems and improve the resilience of Icelandic ecosystems to natural disasters and global change.” Furthermore, the provisions aim at the protection and sustainable exploitation of resources and other natural qualities; they must promote interaction between humans and the environment in a manner that will not cause harm to life or land, or pollution of sea, freshwater or air; and they are to facilitate the public’s access to and knowledge of the country’s nature and the cultural heritage associated with it and enhance knowledge and education about the environment. It is also the objective of the Act to guarantee the right of the public to travel around the country and enjoy nature, thus contributing to public outdoor experience in harmony with nature, to the advantage of the people for health and well-being.

The foundation of Vatnajökull National Park in 2008 undeniably marked a turning point for nature conservation in Iceland. The ideology on which the foundation of the national park, its organisation and operations are based was new in the Icelandic context. Links between nature conservation and regional development became greater and more obvious than they had been before, and the management structure of the park, in which local people have leading roles, was modern. Also, stakeholders such as outdoor recreation and conservation organisations were assigned more

important places than had previously been known in the management and operation of Icelandic national parks and conservation areas.

2.5 MANAGEMENT IMPLICATIONS OF THE VATNAJÖKULL NATIONAL PARK ACT

The Vatnajökull National Park Act no. 60/2007 is a piece of special legislation, and as such takes precedence over more general legislation such as the Nature Conservation Act no. 60/2013.

The management plan has special status under the Vatnajökull National Park Act: local authorities are bound by the contents of the management plan when drawing up planning policy on areas within the national park, but at the same time special permission from the national park is not required for developments allowed for in the management plan, see paragraph 1 and 2, Article 13 of Act no. 60/2007.

The Vatnajökull National Park Act, the Vatnajökull National Park Regulations and the Vatnajökull National Park Management Plan are the basis on which decisions about developments within the park are made. Where these do not apply, provisions in the Nature Conservation Act come into play, see paragraph 4, Article 13 of Act no. 60/2007.

2.6. PROTECTED AREA CATEGORISATION IN THE NATIONAL PARK

A new Nature Conservation Act, no. 60/2013, came into force on 15 November 2015. Section VIII of it is about the categorisation of protected areas. There, the categorisation system of the International Union for Conservation of Nature (IUCN) is enacted into Icelandic law.

These international criteria for the classification of areas within the national park, and the operations within them, have been followed from the beginning. This ensured that the policy targets and the methods used to achieve them were both based on experience and also had the advantage of international recognition as tried and tested methods to achieve objectives. The application of international criteria and methods also gives Vatnajökull National Park a position in the context of international conservation.

Developments in recent years have aimed at strengthening co-operation on nature conservation between government and local communities and enhancing the influence of the latter group, as it is certain that lasting results in this area must be

based on the interaction of nature and rural development in harmony with the residents.

Protected areas are among the fundamental elements of nature conservation, be it international policy in these matters or the policy of individual states. The protected area concept in its wider meaning is a synonym for different areas that are protected for different reasons and are managed in different ways. However, the IUCN definition of a protected area is narrower, with the intention that it is always clear what requirements the protected area must meet in order to be classified in the IUCN categorisation system. The definition is: *A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.*

Detailed explanations accompany the definitions in the IUCN publication *Guidelines for Applying Protected Area Management Categories*, in which it says, among other things, that a clearly defined space may mean air, land, inland water, marine and/or coastal areas, but that the boundaries must be clearly and unambiguously demarcated. The protected area shall be recognised as such and this should be confirmed in a decisive manner, for example by registering in an international database of protected areas. A binding commitment to long-term protection shall be in place, for example by legislation, partnership in an international convention or a declaration by a non-governmental organisation. Emphasis is given to the fact that the area's management is supported by law, international agreements or other equivalent agreements, and includes measures to protect the qualities - natural or other - that provided the reason to protect the area. These measures may include doing nothing if that is considered the right way to fulfil the objective.

Nature conservation in protected areas always involves protecting the ecosystem of the area and populations of species that are viable there with or without support. Conservation may also apply to maintenance of domestic or cultivated species that have developed distinctive localised properties. Nature conservation is always aimed at protecting the natural biodiversity, and can also revolve around protecting natural formations, landscape characteristics and features of the environment and nature in a wider sense.

Ecosystem services are various activities that take place in the protected area to the benefit of its ecosystem and which do not contravene the

nature conservation objectives. Examples of this include flood defences, soil erosion control and defences against the spread of disease and, in human communities, may involve support for activities that have spiritual and non-material benefits.

The protection of *cultural values* is conditional on it not contravening the nature conservation objectives, or diminishing its results. Utilisation of natural resources in a way that sustains and conserves them fits readily with views on conserving cultural values in protected areas.

2.6.1 Six IUCN categories of protected area

In the IUCN guidelines on the organisation and operation of protected areas, the areas are organised into six categories with regard to their main management objectives. These main objectives reflect different emphases. In some places aspects of scientific research is at the forefront; elsewhere the principal point is sustainable utilisation of a natural ecosystem for the benefit of a specific community.

The six categories of protected areas were introduced into Icelandic law by the Nature Conservation Act no. 60/2013 and by the Changes to the Nature Conservation Act no. 109/2015.

Specific objectives are common to all six categories. The intention is always to protect and conserve biodiversity, and the protection always aims to support other localised safeguards that may be in force. As an example, a protection area may have a leading role in bird protection in a particular area, even though the general objectives of its protection are broader. Protection shall support maintenance of diverse land types, and maintain habitats and ecosystems in the area. The protected area must be large enough to make the long-term objectives attainable, or there must be the option of extending the area for this purpose. The established protection objectives may not be compromised, and a protected area must be managed in accordance with provisions in an approved management plan, and governance shall be characterised by fairness and transparency.

2.6.2 Three international protection categories of Vatnajökull National Park – strict nature reserve, national park and protected area with sustainable use of natural resources

Vatnajökull National Park is divided into areas that are in categories Ia, II and VI according to the IUCN guidelines. The Nature Conservation Act no.

60/2013 has incorporated these three categories into Icelandic law as *nátturuvé* (Ia: strict nature reserve), *þjóðgarður* (II: national park) and *verndarsvæði með sjálfbærri nýtingu náttúruauðlinda* (VI: protected area with sustainable use of natural resources).

Most of the park is classified in protected area category II – national park – which focuses mainly on protecting ecosystems and managing outdoor recreation.

The Esjufjöll mountains and the surrounding area, where specific rules apply (cf. Annex 1 of the Vatnajökull National Park Regulations no. 608/2008 and as defined by map coordinates in Annex 4 of Regulations no. 755/2009), are classified in category Ia, i.e. an area which is strictly protected because of its scientific importance.

The Hoffell and Heinaberg areas and Hafrafell are classified in category VI, where traditional land use is permitted under the Vatnajökull National Park Regulations no. 608/2008 with subsequent amendments. Here the emphasis is on sustainable land use of natural ecosystems in connection with agriculture and tourism.

Part of the western region, known as Skælingar, between Eldgjá and the Skaftá river, is classified in protected area category VI. This area is an important upland grazing area for the farmers of Skaftártunga. Traditional land use is permitted under Vatnajökull National Park Regulations no. 764/2011, and the associated Annex 3. The emphasis here is on sustainable land use of natural ecosystems in connection with farming and tourism.

Land use in these areas is described in Section 7.

The main objectives of the above mentioned three IUCN-defined protection categories are described below.

The objectives, guidelines, land use provisions and organisation of Vatnajökull National Park take into account the emphases inherent in Categories Ia, II and VI, and they are included in this version of the management plan accordingly.

It is assumed that in the future, areas within the Vatnajökull National Park may fall into other IUCN categories, as the total area of the national park increases and the diversity of land areas within it increases. Decisions should be made on a case-by-case basis on classifying the additional areas into protected area categories, and whether conservation priorities in existing areas need to be altered to accommodate such new areas.

The IUCN definitions of the three protected area categories that are used for Vatnajökull National Park are as follows:

Category Ia: Strict Nature Reserve

Areas in Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservational values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.

Primary objective

To conserve regionally, nationally or globally outstanding ecosystems, species (occurrences or aggregations) and/or geodiversity features: these attributes will have been formed mostly or entirely by non-human forces and will be degraded or destroyed when subject to all but very light human impact.

Other objectives

To preserve ecosystems, species and geodiversity features in a state as undisturbed by recent human activity as possible;

To secure examples of the natural environment for scientific studies, environmental monitoring and education, including baseline areas from which all avoidable access is excluded;

To minimize disturbance through careful planning and implementation of research and other approved activities;

To conserve cultural and spiritual values associated with nature.

Category II: National Park

Category II protected areas are large natural or near-natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational and visitor opportunities.

Primary objective

To protect natural biodiversity along with its underlying ecological structure and supporting environmental processes, and to promote education and recreation.

Other objectives

To manage the area in order to perpetuate, in as natural state as possible, representative examples of physiographic regions, biotic communities,

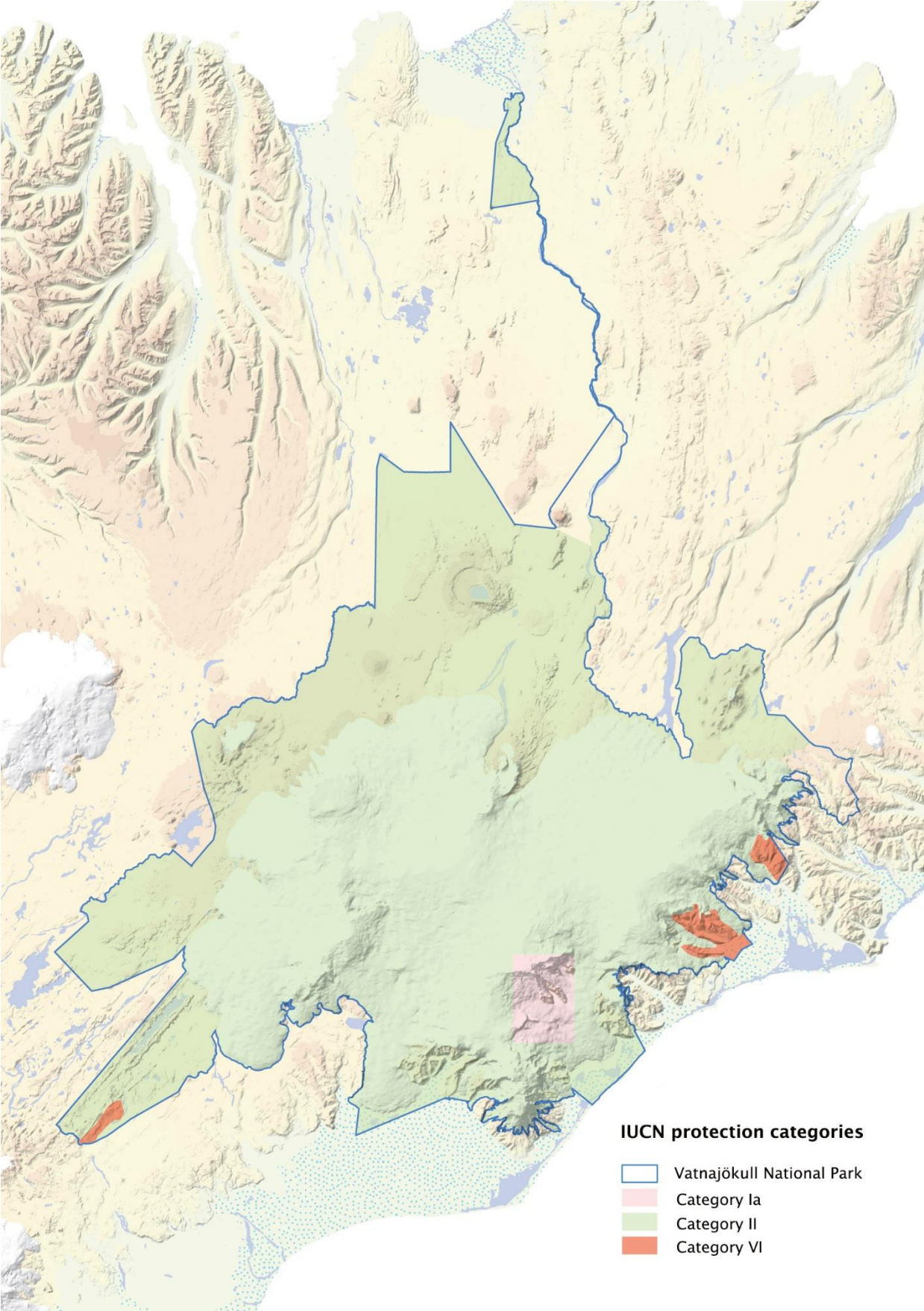


Figure 2.1 The IUCN protection categories within Vatnajökull National Park.

genetic resources and unimpaired natural processes;

To maintain viable and ecologically functional populations and assemblages of native species at densities sufficient to conserve integrity and resilience in the long term;

To contribute in particular to conservation of wide-ranging species, regional ecological processes and migration routes;

To manage visitor use for inspirational, educational, cultural and recreational purposes at a level which will not cause significant biological or ecological degradation to the natural resources;

To take into account the needs of indigenous people and local communities, including subsistence resource use, in so far as these will not adversely affect the primary management objective;

To contribute to local economies through tourism.

Category VI: Protected area with sustainable use of natural resources

Category VI protected areas conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is one of the main aims for the area.

Primary objective

To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.

Other objectives

To promote sustainable use of natural resources, considering ecological, economic and social dimensions;

To promote social and economic benefits to local communities where relevant;

To facilitate inter-generational security for local communities' livelihoods – therefore ensuring that such livelihoods are sustainable;

To integrate other cultural approaches, belief systems and world-views within a range of social and economic approaches to nature conservation;

To contribute to developing and/or maintaining a more balanced relationship between humans and the rest of nature;

To contribute to sustainable development at national, regional and local level (in the last case mainly to local communities and/or indigenous peoples depending upon the protected natural resources);

To facilitate scientific research and environmental monitoring, mainly related to the conservation and the sustainable use of natural resources;

To collaborate in the delivery of benefits to people, mostly local communities, living in or near to the designated protected area;

To facilitate recreation and appropriate small-scale tourism.

2.7 LOCAL PLANNING AND PERMITS

2.7.1 Relationship with local authority planning policy

When Vatnajökull National Park was founded, the Planning and Building Act no. 73/1997 was in force.

There were important links between this Act and the Vatnajökull National Park Act with respect to the obligation to ensure democratic participation by the public and local authorities in the formulation of the planning policy and the National Park management plan.

A similar objective is stated in the current Planning Act no. 123/2010 (see Article 1d), whose aim is to ensure public consultation in planning, and that the public be given the opportunity to influence official decisions in such planning. The term public refers to one or more legal entities, their associations, companies or groups, see item 4, Article 2.

In order to address its aims for nature conservation, the Vatnajökull National Park management plan defines a general policy for the park as a whole, with specific provisions for individual areas. There are also framework clauses to deal with infrastructure, and stipulations on a variety of procedural details to ensure that the development of the national park and related structures conform with the principles of conservation and sustainable use. The Vatnajökull National Park management plan embodies government policy and is approved by the Minister.

Under the Vatnajökull National Park Act, local authorities are bound by the provisions of the management plan when making planning decisions relating to areas within the national park. The management plan thus sets limits for the local

planning authorities; it should, nevertheless, be stressed that the plan itself has been created in collaboration with the relevant local authorities and numerous other stakeholders within and outside the relevant local authorities.

For the purpose of simplification and in order to avoid unnecessary repetition it is assumed that planning-related issues that have been accepted as elements of the national park's management plan will be incorporated into the relevant local community's municipal and/or local plan and elaborated further there in accordance with statutory consultation with the public and relevant stakeholders. Standard planning procedures will then come into play, including democratic consultation with the public and the relevant stakeholders. Other conservation objectives in the plan which are not planning-related will be developed by the park's management team within the management plan itself or implementation schedules based on the plan, as necessary.

2.7.2 Planning processes – cooperation and collaboration between local authorities and Vatnajökull National Park

Parliament approved parliamentary resolution no. 19/145 on National Planning Strategy for 2015–2026 on 16 March 2016, replacing the planning policy for the central highlands which was repealed with advertisement no. 335/2016.

The National Planning Strategy is based on Article 10 of the Planning Act no. 123/2010. It includes official plans for transport, regional affairs, conservation, energy efficiency and other issues related to land use. The Minister for the Environment and Natural Resources shall submit to Parliament a proposal for a parliamentary resolution regarding a national planning strategy for a 12 year period within two years of a parliamentary election, thus seeking to ensure continuity in the issue, combined with an opportunity for elected representatives to bring about change.

The 2015–2026 National Planning Strategy is in four main sections. The first of them is about policy for planning development in the central highlands of Iceland. Its main objective is to preserve the nature and landscape of the central highlands because of its conservation value and its importance for outdoor activities, and that development of infrastructure in the central highlands takes into account its unique position. The central highlands portion of the National Planning Strategy is divided into six subsections: wilderness and natural quality, tourism in harmony

with nature and the environment, transport in harmony with nature and the environment, sustainable utilisation of energy resources, secure communications in harmony with nature and the environment and planning developments with regard to nature.

Under paragraph 3 of Article 3 of the Planning Act no. 123/2010, local authorities are responsible for regional, municipal and local development plans. According to paragraph 2, Article 38 of the Act, the developer or landowner may request a local authority to make a proposal for a local plan or amendment of a local plan at the expense of the applicant. Based on this, the Vatnajökull National Park board will make planning proposals for individual areas within the national park and submit them to the relevant local authority for processing.

The promotion, consultation, advertisement and approval of such local plans are governed by Article 40 and 41 of the Planning Act. When making a local plan, it shall be based on the policy of the regional plan and implemented for the relevant area or tract of land.

Should a proposal not be consistent with the municipal plan, the local authority will prepare a proposed amendment to the municipal plan, in collaboration with Vatnajökull National Park. The revision to the municipal plan is advertised before or in parallel with the local planning proposal. At the end of the period of advertisement, the local authority may approve an amendment to the municipal plan and the local plan at the same time.

Since the local plans are based on the municipal plans, which are in compliance with the national park's management plan, the aforementioned procedure satisfies the provisions in the Vatnajökull National Park Act.

All planning processes are required to take into account the protected area categorisation and the conservation value of the area being planned, and the provisions of the Cultural Heritage Act no. 80/2012.

Under paragraph 1 of Article 13 of Vatnajökull National Park Act no. 60/2007, local authorities are bound by the content of the Vatnajökull National Park management plan when preparing planning proposals for land areas inside the national park. Under paragraph 2 of the same Article, there is no requirement for special permission for developments provided for in the management plan. However, such developments may be subject to construction or building permits issued by the local authority concerned, and the relevant

national park warden must always be consulted before construction commences.

The local authority considers all local planning applications and proposals for amendment of the municipal plan as appropriate and publicises them for public consultation in accordance with the provisions of the Planning Act. A recommendation from the Vatnajökull National Park board shall be in place prior to advertising any planning application involving land within the national park.

The local authority reviews its position following the submission of comments from the public and makes a final decision on the planning application in conformity with Article 9 of the Strategic Environmental Assessment Act no. 105/2006.

The local authority's final approval of a municipal planning proposal is made in conformity with the Planning Act. Should a local authority make changes to a previously advertised planning application, the recommendation of the Vatnajökull National Park management shall also be available during the final approval process.

2.7.3 Issue of development and building permits and monitoring by park wardens

All construction and development projects within Vatnajökull National Park shall be in compliance with a municipal plan authorised on the basis of the policy laid out in the management plan. Granting of development and building permits shall be in compliance with a local plan which has been approved by the local authority and the Vatnajökull National Park board.

If the local authority issues a permit for any individual development application in the absence of an approved local plan under item 1 of the temporary provisions of the Planning Act no. 123/2010, it shall, subject to the recommendation of the National Planning Agency, be ensured that the development in question is allowed for in the management plan, or that the board of Vatnajökull National Park has approved the project.

Building Officers grant construction permits, as applicable following consideration by a building committee and/or municipal council. Building Officers monitor the implementation of construction projects which are subject to permits as provided in the Man-made Structures Act no. 160/2010.

Municipal councils issue development permits in accord with their municipal plans, for major projects which may have an impact on the environment and alter its character, such as

changes to landscape through addition or removal of material, and other projects which are subject to the Environmental Impact Assessment Act no. 106/2000.

A development permit is not required for projects which are subject to a construction permit under the Man-Made Structures Act.

Where construction projects are envisaged and no local plan is available, the local authority may grant a construction permit after public consultation has taken place, if the construction is in accordance with the municipal plan regarding land use, population developments and population density. In addition, the local authority must seek the opinion of the appropriate parties before taking a decision on the issue of a development permit.

The local authority monitors development projects to ensure that they comply with the permit issued.

While a development project is in progress, the relevant park warden monitors compliance with the provisions of the Vatnajökull National Park Act and Regulations, together with the stipulations of the management plan. The developer shall notify the park warden of the prospective development before work commences, and provide him/her with a schedule for the works.

All those who pass through or stay in the national park are obliged to comply with the provisions of the management plan, as appropriate. In other respects, the provisions of the Nature Conservation Act apply to projects in Vatnajökull National Park. During any development programme within the national park, care shall be taken not to disturb the nature of the area beyond what is permitted by the terms of the development permit and specifications, as for example the landscape, biosphere, geological formations or cultural relics of the area.

The board of Vatnajökull National Park may issue procedural rules to provide further guidance as regards the implementation and monitoring of development projects in the national park.

2.7.4 Permits in relation to public lands within the Vatnajökull National Park

Following the amendments made to the Vatnajökull National Park Act, by the Changes to Vatnajökull National Park Act no. 101/2016, the provisions of the National Park Act take precedence over those in the Act on Public Lands no. 58/1998. Consequently, public land legislation has no meaning for applications for facilities or constructions within the national park.

Almost all land within Vatnajökull National Park is public land under the Act on Public Lands and Determination of Boundaries between Private, Public and Highland Pasture Lands no. 58/1998. Under the Act the Icelandic State owns the land and all land rights and peripheral rights on any public lands which are not subject to private property rights.

Under paragraphs 1 and 2 of Article 3 of Act no. 58/1988, no one may make personal use of public land without permission from the relevant local authority and compliance with requirements; this includes the construction of buildings, disturbing the ground, utilisation of peripheral resources, or utilisation of water or geothermal rights, harnessing wind energy, mining/quarrying and other mineral extractions, except where otherwise provided for in law. The permission of the relevant local authority is required for other categories of land use and land rights within public lands; and if the use is permitted for a period greater than one year, the Prime Minister's approval is also required.

Where people have enjoyed customary grazing or other concomitant rights over highland pasture within public lands, they retain those rights in accord with the law. The same applies to any other provable rights within public lands.

From the entry into force of the Vatnajökull National Park's first management, the local authorities concerned were bound by its content and did not issue permits based on the Act on Public Lands.

2.8 ACTIVITIES IN VATNAJÖKULL NATIONAL PARK – PERMITS AND TERMINATIONS

Among the changes made to the Vatnajökull National Park Act by the approval of Act no. 101/2016 was the addition of a new chapter: Section IV.A Activities in Vatnajökull National Park, which contains two Articles, nos. 15a and 15b.

15a prohibits the operation of business-related activities in the national park unless an agreement has been made with Vatnajökull National Park. A memorandum with the Bill for amendments to the Vatnajökull National Park Act (Record 1101 of the 145th Parliamentary session) declares that growing interest among parties in the tourism sector, regarding setting up facilities in the national park, have been the reason for in the legal provisions. It is pointed out that it is necessary to establish robust arrangements for the allocation of facilities in the national park, as conservation objectives

may make it necessary to limit the number of parties who receive facilities within its boundaries. As soon as such restrictions are applied, facilities within the national park are acknowledged as scarce resources that cannot be provided to all who seek them. It is important that the allocation of facilities in Vatnajökull National Park is conducted in accordance with general views on the allocation of scarce resources of quality and, for example, care is taken to publically advertise what is available and ensure that decision making is objective and in accordance with predefined stipulations.

15b of the Vatnajökull National Park Act provides for licensing. It states that a licence must be granted by a national park warden for organised events calling for facilities, manpower or the use of equipment in the national park, such as filming, art events and research. The national park may set conditions for the issuing of licences.

Furthermore, national park wardens may temporarily close defined areas within the national park if this is deemed necessary because of events or projects that have been authorised. Under such circumstances, a national park warden must fully consult with tourism representatives who might be planning to travel in the area. In a memorandum (Record no. 1101 of the 145th parliamentary session) it is said to be believed that it will rarely be necessary to take such drastic actions as closure of areas for the above reasons, but experience has shown that there is a need for such measures. It is important that when the closure is required, the need for it must be weighed and evaluated based on its impact on the parties concerned, and it should be ensured that it is applied to as limited an area as possible.

The Minister may make further provisions for licensing in regulations.

National park wardens must advertise decisions about the closure of an area in Section B of *Lögbirtingablaðið* (the Official Gazette), on the website of Vatnajökull National Park and in newspapers.

In paragraph 3 of Article 15b, it states that the provisions for licensing in Act no. 60/2007 will take precedence over the provisions of the Act on Public Lands no. 58/1998. This means that it is always Vatnajökull National Park which carries out licensing for activities within the boundaries of the national park.

3 Description of the National Park

This chapter contains a general description of Vatnajökull National Park, including its countryside, nature and community, along with a section about its significance, administration, and partners.

3.1 THE NATIONAL PARK TERRITORY

3.1.1 Boundaries, size and location

Vatnajökull National Park encompasses the whole of the Vatnajökull ice cap and a large ice-free area which the ice cap influences. This includes the areas that used to be Jökulsárgljúfur National Park and Skaftafell National Park. The Jökulsárgljúfur area is non-contiguous with the main national park, but is connected to it by the river Jökulsá á Fjöllum. Vatnajökull National Park now covers 13,950 km², including 7,800 km² of glacier in 2016.

The national park has been extended four times since it was first established in 2008, and it may be further extended in the future.

The national park is divided into four administrative regions, named after the cardinal compass points: north, south, east and west.

3.1.2 Land ownership in the national park

Land within the national park is owned by the state (public land), local authorities and private individuals. Agreements exist between the state and private landowners whose property is in a protected area. These agreements include provisions for the rights of landowners to traditional land use within the national park. The management plan takes into account agreements between landowners and the state.

Some areas of the park which were regarded as privately owned, and for which agreements had been made, have been ruled to be public lands (*þjóðlendur*) by the Committee for the Interior (*Óbyggðanefnd*). Almost all land within the boundaries of Vatnajökull National park is now public land, for which all doubts about ownership have been resolved.

3.1.3 Archaeological and other cultural heritage sites in the national park

Protection of culturally important sites is one of the principal objectives of Vatnajökull National Park, see item 1, Article 2 of the Vatnajökull

National Park Act no. 60/2007. The Cultural Heritage Agency (*Minjastofnun Íslands*) is responsible for decision-making regarding archaeological sites, irrespective of who owns the land (see the Cultural Heritage Act no. 80/2012), issues permits for archaeological research and supervises them, in addition to advising on conservation and promoting the cultural significance of the heritage sites for which it is responsible. The Cultural Heritage Agency can also rescue archaeological remains if they are believed to be at risk.

Permission to conduct archaeological research in Vatnajökull National Park is also contingent upon permission from the relevant national park warden, see paragraph 1, Article 15b of the Vatnajökull National Park Act no. 60/2007. There the national park warden fulfils a role equivalent to that of a landowner or resident on private property.

3.1.4 Protected areas under the aegis of Vatnajökull National Park

A number of protected areas on the periphery of Vatnajökull National Park have been under the aegis of the national park since its formation, but are not part of it. Hence they are not included in this management plan in detail. Operation and supervision of these areas by Vatnajökull National Park is based on an agreement with the Environment Agency which is valid for one year at a time.

The protected areas for which Vatnajökull National Park has contractual oversight are:

- **Dettifoss, Selfoss, Hafragilsfoss and surroundings east of Jökulsá: protected as a natural monument as published in Section B of Stjórnartíðindi [Gazette] no. 457/1996.**
- **Herðubreiðarlindir: nature reserve as published in Section B of Stjórnartíðindi [Gazette]no. 272/1974.**
- **Hvannalindir: nature reserve as published in Section B of Stjórnartíðindi [Gazette] no. 32/1973.**
- **Kringilsárranafriðland: nature reserve since 1975 as published in Section B of Stjórnartíðindi [Gazette] no. 181/2003.**
- **Lónsöræfi: nature reserve as published in Section B of Stjórnartíðindi [Gazette] no. 31/1977.**

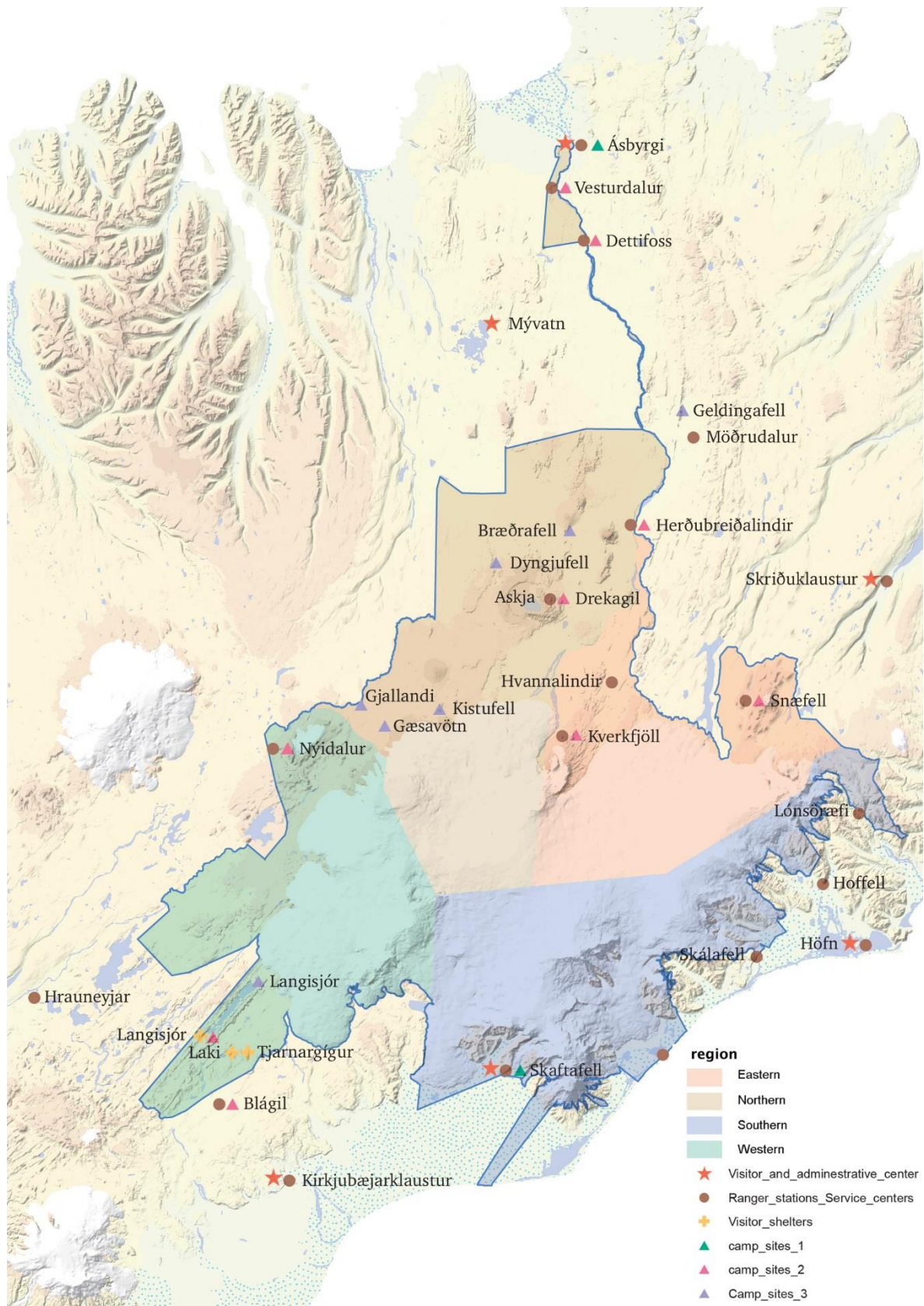


Figure 2.2. The four administrative regions of Vatnajökull National Park and its main service areas.

3.2 NATURE AND COMMUNITY

3.2.1 Landscape

The landscape of the national park has been formed by a combination of glacial and volcanic activity. It is characterised by lavas, geothermal activity, hyaloclastite ridges, table mountains, moraines, and outwash plains; the ice cap towers above it all.

Landscape in the national park can be divided into a few main types (figure 3.4). Outside the ice cap is a plateau from which rise individual mountains, many of them glacially eroded. To the north and south are flood plains, while heathland lies to the southwest and northeast. Hyaloclastite ridges are conspicuous in the west, and to the north are canyons and low ridges.

In addition to these large-scale landscape features are smaller features produced by volcanic activity, erosion and deposition by glaciers and glacial water, and by geothermal activity. All these produce a varied ecological environment, reflected in the diversity of plant and bird life.

North of Vatnajökull is a volcanic wilderness with a variety of volcanoes, hyaloclastite formations, lava flows, black glacial sands and pale pumice fields. Öskjuvatn, a deep crater lake in Mt. Askja, is one of Iceland's most beautiful mountain lakes. North of the ice cap are many signs of catastrophic floods in the river Jökulsá á Fjöllum, all the way from the Kverkfjöll mountains in the south, to the Jökulsárgljúfur canyon and the Jökulsá estuary in Öxarfjörður in the north.

The Jökulsárgljúfur canyon is rich in contrasts: scrub and flowers, crystal-clear springs against a background of the muddy-brown river Jökulsá in rugged ravines, and a unique series of waterfalls: Hafragilsfoss, Dettifoss and Selfoss.

At the Kverkfjöll mountains, glaciers, geothermal activity and a range of volcanic features can be seen together. North of the mountains is Krepputunga, a young volcanic landscape dominated by lavas that were erupted after the last glaciation. Further east are the surging glaciers Brúarjökull and Eyjabakkajökull, and the central volcano Snæfell, the highest Icelandic mountain outside the ice caps, towers majestically over the Snæfellsöræfi wilderness. Advancing glaciers have pushed up great stacks of moraine and earth over many centuries.

At the margins of the ice cap in the Southeast of Iceland are rhyolite screes and plutonic intrusions,

and a range of glacial landforms: moraines, proglacial lakes, kettle holes, and eskers. Lush vegetation and tall birch woods on the hills and valleys contrast with the black glacial sands and the white ice cap.

The landscape west of the ice cap is characterised by barren land, hyaloclastite ridges which were erupted under Pleistocene glaciers, long eruptive fissures from the Holocene, pumice sands, and some lavas carpeted in fringe moss. Hyaloclastite ridges Grænifjallgarður, Tungnaárfjöll and Fögrufjöll enclose Langisjór lake, the largest lake in the national park.

Within the national park is the Laki crater row on a 25 km long eruptive fissure formed in the catastrophic Skaftá Fires eruption in 1783–4, and the eastern section of Eldgjá, which erupted in AD 934–38, and in addition the uppermost section of the lava field of the Skaftá Fires. Southeast of the Fögrufjöll mountains the Skaftá river spreads out onto glacial sands, and in glacial bursts it floods into the Skaftá lava field and Fögrufjöll.

Southeast of the Fögrufjöll mountains, Skaftá river migrates around the sand plain and flows into the Skaftá lava field and the Fögrufjöll mountain area when it floods. Close to Vatnajökull rises the central volcano Tungnafellsjökull, with multicoloured rhyolite formations and high-temperature geothermal areas. At Vonarskarð is a very colourful geothermal area; Vonarskarð is also the north-south watershed.

3.2.2 Vatnajökull

Vatnajökull is the heart of Vatnajökull National Park, and covers about one-twelfth of Iceland (whose total area is about 103,000 km²). It is the largest glacier in Europe, about 8,100 km² in area and generally 400–600 m thick, up to a maximum of about 950 m. To the west, north and east, it descends to a 700–900 m high plateau, while to the south the tongues of ice extend to the lowlands. Deposited by glacial rivers, sand plains at the foot of the ice cap testify to the glacier's erosive power.

The largest outlet glaciers are: Síðujökull, Tungnaárjökull and Köldukvíslarjökull to the west; Dyngjujökull and Brúarjökull to the north; and Breiðamerkurjökull and Skeiðarárjökull to the south. These glaciers have all surged forward every few decades.

A number of nunataks protrude from the ice sheet. The largest of them is Esjufjöll in Breiðamerkurjökull, where vegetation communities have developed in isolation from

humans and livestock. Some of the country's largest glacial rivers flow from Vatnajökull: Tungnaá and Köldukvísl west into Þjórsá; Skjálfafljót and Jökulsá á Fjöllum to the north; Jökulsá á Brú and Jökulsá í Fljótsdal to the northeast; and Jökulsá í Lóni, Hornafjarðarfljót, Jökulsá á Breiðamerkursandi, Skeiðará (which flows along the edge of the glacier and into Gígjukvísl), Núpsvötn, Hverfisfljót and Skaftá to the south. The ice cap thus influences the main river systems all the way to their estuaries and the sea, from Þjórsá all the way to the east, and north to Skjálfafljót.

In the western and northwestern parts of Vatnajökull the meltwater soaks into permeable ground and flows as groundwater which can issue as spring water at some distance from the glacier. Precipitation on the southern side of Vatnajökull is higher than anywhere else in Iceland except Mýrdalsjökull, and the runoff to the sea is more rapid. The water reserve held in Vatnajökull is such that it would take Iceland's most voluminous river, Ölfusá, about 200 years to drain it. Glacier tongues commonly block the drainage, so that water collects in ice-dammed lakes (*lón*) which empty during glacial floods; the best known are Grænalón at Skeiðarárjökull and Vatnsdalalón at Heinabergsjökull.

Under the ice cap lie geothermal areas and many active volcanoes. Subglacial eruptions have caused glacier outburst floods (*jökulhlaup*) which have threatened vegetation and human habitation all the way to the coast. Meltwater collects under the ice in the Grímsvötn caldera, and below the Skaftárkatlar cauldrons, to burst out as glacial floods every few years. Long before Iceland was settled, catastrophic floods flowed north from Vatnajökull and carved out Jökulsárgljúfur and Ásbyrgi.

Underneath Vatnajökull lie hidden mountains, valleys, and plateaus; there are active central volcanoes with calderas, table mountains, hyaloclastite ridges and troughs. At its lowest point the base of the ice cap is 300 m below sea level; at its highest it is 2000 m above sea level. The elevation of the land below the ice cap is such that, if the glacier vanished completely, present climatic conditions would only allow small glaciers to form on about five of the highest peaks. The ice sheet is, however, about 380 m thick and rises to such a high altitude that its accumulation areas are sufficiently large to maintain the ice cap; it is at a sustainable height. The ice dome originated, however, in a colder climate than the current one, although it is not a remnant of glacier from the last

ice age. Formed in a cold period about three to five thousand years ago, it reached its largest extent in the late 19th century.

Vatnajökull is a temperate glacier; the ice is close to freezing point and not frozen to the ground, unlike the polar glaciers. It responds rapidly to climate change. At the time of the settlement of Iceland around 900 AD, the outlet glaciers are believed to have been 10–15 km shorter than they were at the end of the Little Ice Age, at the end of the 19th century. The glacier retreated slowly during the first two decades of the 20th century, then rapidly until the climate cooled in the mid-1960s. In the early 1990s the climate warmed again and since then the glacier has shrunk rapidly. Hence the marginal landscape has changed; plants have colonised land, new nunataks have emerged from the ice, and new habitats have formed. Proglacial lakes have formed; the best known of these is Jökulsárlón on Breiðamerkursandur, which began to form in the warm spell in the 20th century when the snout of Breiðamerkurjökull retreated from the deep trench which it had dug when advancing in the cold period between the 13th century and the end of the 19th century. Glacial outwash from Breiðamerkurjökull settles in the lagoon and only a small part of it is carried by Jökulsá river to the coast. Sedimentation has therefore been less than sea erosion, and the coastline has retreated.

In the warming climate of the last 15 years, Vatnajökull has thinned by about 1 m every year, averaged out over the whole surface. The firn limit, or snowline, has risen 200–400 m and the accumulation area of the outlet glaciers is only half what is needed to keep them at current levels.

The ice cap has shrunk rapidly and, if warming continues as expected, may lose a quarter of its volume by the middle of the century – and almost vanish before the end of the next century, leaving only small glaciers on the highest peaks. Runoff from the glacier would peak after the middle of the century and after a hundred years would be similar to what it is now; then it would decrease rapidly. Ahead would be the most rapid changes in the environment since Iceland was settled. Rivers would vanish, channels migrate, and lakes appear where glacier snouts had previously dug hollows. Changes in the ice cap may be expected to have an impact on hydrology, vegetation, land use, transport, hydropower production, uplift of the land, and even volcanic activity. After the disappearance of the glaciers, the runoff into the rivers would equal the precipitation on land.

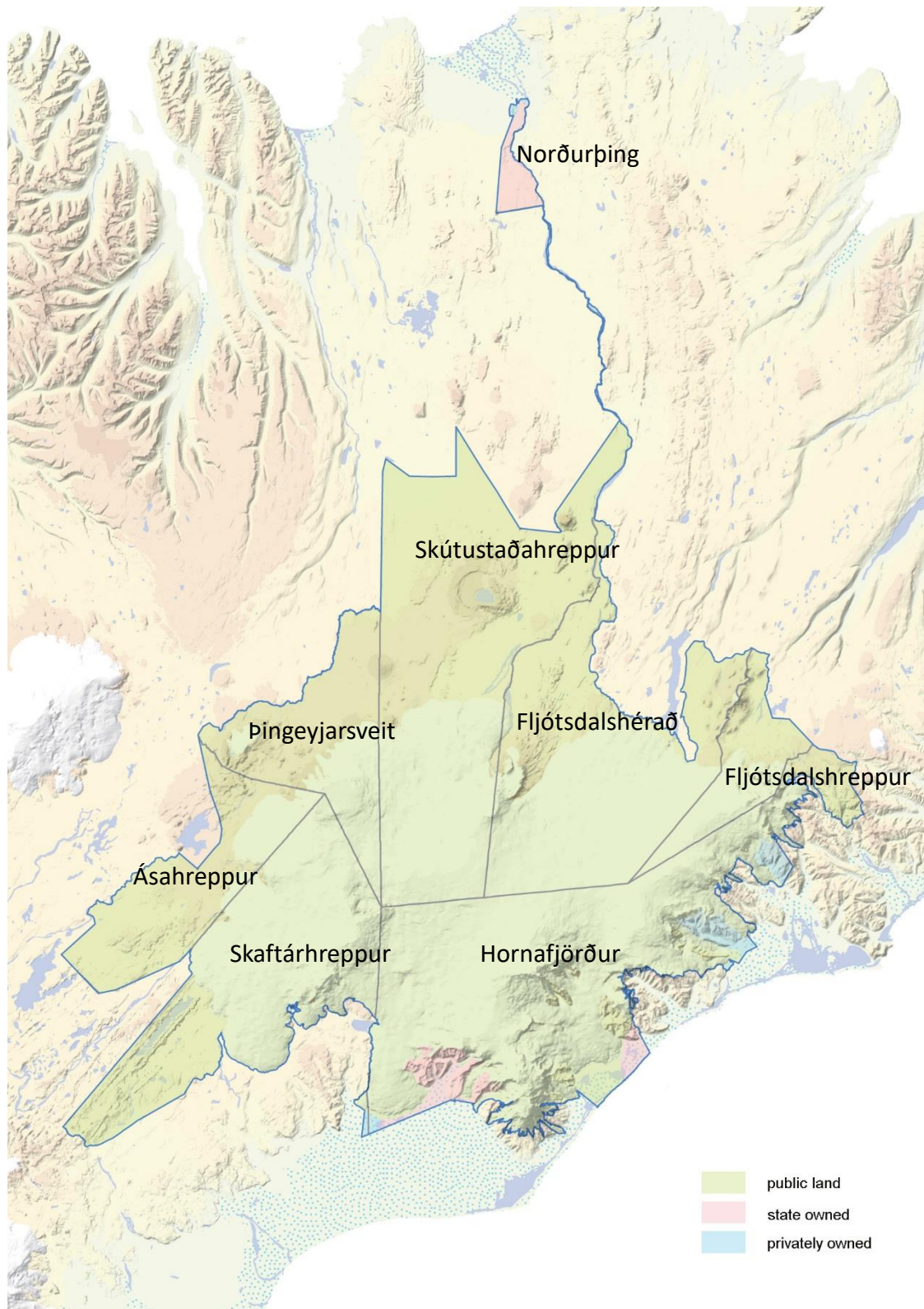


Figure 3.1. Land ownership within Vatnajökull National Park and division of the park area between municipalities.

3.2.3 Geological diversity, volcanic and geothermal activity

Vatnajökull National Park has such geological variety that it could be called a geological park. Inside the national park are active volcanoes, calderas, crater rows, lava flows, lava shields,

formations formed by the interaction of volcanic activity and glaciers, hyaloclastite ridges, table mountains, canyons eroded by glacier outburst floods, glacial sands, and the Vatnajökull glacier itself.

In the south-eastern part of the park are extinct central volcanoes with plutonic intrusions and colourful rhyolite formations. Over millions of years continental drift has moved them away from the volcanic belt which lies across central Iceland.

Iceland is divided by a volcanic belt which separates two tectonic plates which drift away from each other because of the upflow of magma. North and south of Iceland the plate boundaries lie along ridges on the ocean floor, stretching for thousands of kilometres north and south from Iceland. Iceland rises above the ocean because the volcanic activity is unusually high. This can be explained by Iceland lying on a "hotspot", i.e. a point where a mantle plume rises from deep within the earth. The centre of the mantle plume is said to be below the north-western part of Vatnajökull.

The geological history of Iceland has been shaped by the slow drift of the plate boundaries towards the west, over the mantle plume. This movement has also caused the volcanic belts to shift eastwards every few million years.

The accretion of Iceland, which is still ongoing, began in the latter part of the Tertiary. The Tertiary is a name given to a period of Earth history that began around 65 million years ago (the same time that the dinosaurs died out) and ended around 2.6 million years ago at the start of the most recent ice age; this period is now divided into the Palaeogene and Neogene, but Tertiary remains as a useful geological term. The oldest rock, found at the surface in Iceland, is about 16 million years old. The bedrock of Iceland can be divided into three main formations, depending on its age and how extensive the glaciers were when it was formed: the Tertiary formation from before the Ice Age; the Plio-Pleistocene formation from the first part of the Ice Age; and the Upper Pleistocene formation from the latter half of the Ice Age.

Lavas and other geological features formed after the Ice Age glaciers melted comprise the Holocene formation. The lava fields and most of the lava shields in the Óðaðahraun lava, the lava west of Vatnajökull, and the Skaftá lava are all Holocene formations, which means that the ice-age glaciers did not erode their surfaces.

Rock formations from all four of the time periods of Icelandic geology can be found in Vatnajökull National Park (figure 3.5). In the western and

northern sections the Upper-Pleistocene and Holocene formations are most prominent; in the easternmost area the Plio-Pleistocene formation is found; and in the south are both Tertiary and Plio-Pleistocene rocks. The rock in the southeast part of the park is oldest, 8–10 million years, while the youngest (erupted in 2004) is found in the southwest corner of the Grímsvötn caldera. The youngest rock outside of the ice cap is the Holuhraun lava, erupted in 2014–2015, and the next youngest is the 1961 lava at Mt. Askja. Unconsolidated deposits on top of the bedrock date from the Holocene period. They are composed of loose volcanic material such as pumice and scoria, lacustrine and fluvial deposits, glacial sands and soil.

A number of volcanic systems lie wholly or partly within the national park (figure 3.6). They have associated fissure swarms and one or more central volcanoes. Of the ten central volcanoes within the national park, seven lie underneath Vatnajökull: Bárðarbunga, Grímsvötn, Þórðarhyrna, Hamarinn, Kverkfjöll, Esjufjöll and Öraefajökull.

Most of the central volcanoes contain both basic and acid rocks, and some have a caldera and high-temperature geothermal area. Three central volcanoes lie east of the volcanic zone: Öraefajökull, Esjufjöll and Snæfell. Fissure swarms extend from the central volcanoes within the volcanic zone, the largest from Bárðarbunga. The Eldgjá fissure swarm, which extends for 60 km towards the northeast from the central volcano Katla in the middle of Mýrdalsjökull ice cap, reaches into the western region of the national park before vanishing beneath the gravel and sand deposited by the river Skaftá. Mt. Askja in the Dyngjufjöll mountains, which lies north of the ice cap, is one of the most magnificent volcanic centres in the country.

The western part of Vatnajökull is the most volcanically active area in the country; Grímsvötn is the most active, while Bárðarbunga, Kverkfjöll and Askja have also erupted recently. Subglacial eruptions are more common under Vatnajökull than anywhere else.

A subglacial eruption can pile up either pillow lavas or tephra. Tephra can in time be altered to palagonite and it is probable that the mountain which formed in the 1996 Gjálp eruption has already taken on the form of a typical hyaloclastite ridge. If an eruption breaks through the ice and continues for long enough, lava flows will cap the formation and produce a table mountain. During the Ice Age a great variety of hyaloclastite ridges, pillow lava formations, and table mountains were

formed during glacial stages, while shield volcanoes and lava fields were erupted during

interglacial periods.

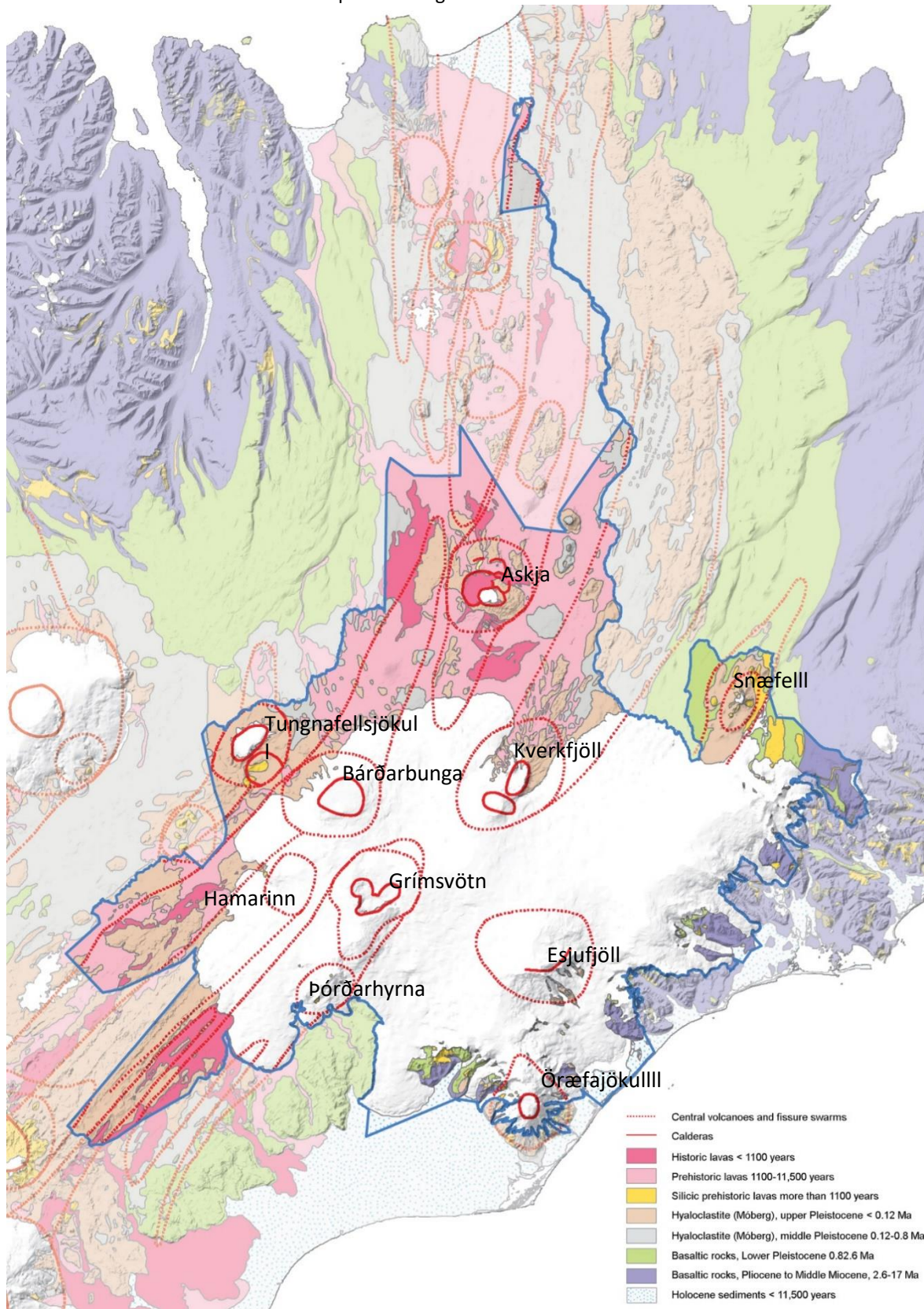


Figure 3.2. Volcanic systems, central volcanoes and calderas within Vatnajökull National Park

A subglacial eruption melts ice and causes flooding which can be catastrophic. About 80 eruptions

have occurred under Vatnajökull in the last 800 years, with tephra falls and glacier outburst floods

which often caused damage in inhabited areas. Volcanic activity under Vatnajökull is cyclical, with 60–80 years of frequent eruptions, followed by a similar time period with low activity. A new active period is believed to have begun in the 1990s.

In some central volcanoes there is constant geothermal activity which melts the ice. One of the biggest geothermal areas in Iceland is in the Grímsvötn caldera, and below the cauldrons at Skaftárkatlar is great geothermal activity; cauldrons just east of Mt. Pálsfjall indicate geothermal activity. Geothermal activity is also present on the western edge of Bárðarbunga. At the margins of the ice cap there are high-temperature fields at Kverkfjöll and Vonarskarð. At Grímsvötn and in the Skaftárkatlar cauldrons, meltwater collects in lakes, and floods out every few years. Geothermal activity is considerable at Mt. Askja.

3.2.4 Biota

The barren highlands north of Vatnajökull are the driest region in Iceland (< 400 mm/year), whilst the southwest, south and east margins of the ice cap are the wettest areas of the country (\geq 3000 mm/year). Vegetation and hydrology within the national park reflect this great variation in precipitation and in the water-retention of the bedrock and the ground.

North of the ice cap are extensive Holocene lavas and glacial sands where vascular plants are rare. *Stereocaulon* lichen thrives in the Krepputunga and Ódáðahraun lava fields. On the hyaloclastite ridges, and the lava and pumice fields in the southwest of the national park where precipitation is highest, mosses dominate, particularly fringe mosses, forming up to 90% of all the vegetation. Three types of habitat are common, due to the volcanic activity and damp climate; these are rare in other parts of the highlands: *breiskjuhraunavist*, named after the lichen which grows on the lava fields; *melagambrovist*, named after the moss which is common; and *sandvikravist*, which is typical for the sand and tephra fields.

Patches of flourishing vegetation at Herðubreiðarlindir, Jökulsárgljúfur and on the southern slopes of Vatnajökull contrast sharply with the barren lands: they boast a rich flora of vascular plants, including shrubs and flowers. At Eyjabakkar is one of the largest wetland areas in the highlands. South of the ice cap are tall birch woods in valleys and on slopes, especially at Skaftafell. In the birch woods on the southeast margin of Vatnajökull are unusual lichenised fungi

with rare lichen types; rare species of vascular plants can also be found.

The wildlife is in keeping with the vegetation: animal life is very limited in the barren lands north and west of the ice cap. In Snæfellsöræfi, i.e. the highlands from Jökulsá á Brú (Hálslón) to the east of the river Jökulsá í Fljótsdal, on the northeast edge of the national park, is a large nesting ground for the pink-footed goose (*Anser brachyrhynchus*); and Eyjabakkar is one of the species' most important moulting areas. South of Vatnajökull birdlife is rich, and about 75 species of bird have bred there. Skeiðarársandur and Breiðamerkursandur are important nesting areas for the great skua (*Stercorarius skua*), grey phalarope (*Phalaropus fulicarius*), and barnacle goose (*Branta leucopsis*).

Carabus problematicus, the largest beetle found in Iceland, lives at the foot of the mountainous area on the south margin of the national park.

Reindeer (*Rangifer tarandus*) generally have their summer pastures both inside the national park and outside, and many of them spend the winter in the lowlands at the southeast edge of the national park. Rivers and lakes contain local char and trout populations, some of which were isolated at the end of the Ice Age.

3.2.5 Culture and history

Diverse heritage features can be found in Vatnajökull National Park and the surrounding area, and there are many stories related to life and farming, battling with hardship, the forces of nature and supernatural beings, travel and various historical events. In Jökulsárgljúfur and south of the ice cap are abandoned farms and other heritage features, some connected to agriculture and even to seafaring. There are also old routes between communities across difficult territory, via unbridged rivers and over glaciers.

The feeling of proximity to nature varies in the communities around the national park. This is reflected in their culture and their attitude towards human interactions, good or bad, with the land. South of the ice cap, life was shaped by the presence of the glacier. There, people learned to live with the rushing glacial rivers and constantly changing outlet glaciers. North of the ice cap, the highlands had a mysterious aura: an inhospitable area when people feared outlaws and supernatural beings. Closer to the inhabited areas, however, the river Jökulsá á Fjöllum was the dominating feature, as it was a major obstacle to travellers, and could flood fields and erode land.

In earlier centuries, travel routes lay through the highlands north, east and west of the ice cap; examples are Vatnajökulsvegur hinn forni (the Old Vatnajökull Way), Biskupsleið (the Bishops' Way), and Bárðargata. Travellers also crossed the eastern part of the ice cap. Traces of these routes include cairns, cable-ferries, fords, and ferry places, as well as huts used in the autumn sheep round-up. Some of these have been restored for use as cabins by hikers.

At Herðubreiðarlindir and Hvannalindir are traces of the outlaws who lived there. Various place-names are connected to local stories and tales. It should be noted that the names of places and landmarks that are connected to customs, habits, folklore or beliefs are considered to be national heritage and are protected as such, even though they display no visible signs of human actions. Cataloguing and mapping of heritage features in the region is of variable quality; some are in danger from land changes or tourist traffic, and in some places they are being overcome by vegetation.

3.2.6 Land use

Traditional use of the land is permitted for some landowners in a few areas within the national park. Sheep grazing is allowed in parts of Jökulsárgljúfur, highland pastures in the north, west and east, and limited areas south of the ice cap. It is most common adjacent to inhabited area south and west of the ice cap, and least common in the highland pastures to the north.

There is very little game shooting in the north and west of the national park, but some wildfowling takes place in the north, south and east. There is some angling in the southern region. Reindeer are hunted in the eastern region (but not in the Krepputunga area), the Heinaberg and Hoffell areas, and the Lónsöræfi conservation area.

Tourism is increasing in the communities around the national park, based on proximity to the magnificent nature of Vatnajökull and its vicinity. Tourist services are most developed south of the Vatnajökull glacier. Countless opportunities exist for tourist services based on the interaction between people and nature, and the cultural landscape of the park and the surrounding communities.

3.3 UNIQUENESS OF THE NATIONAL PARK

The nature and cultural heritage of Vatnajökull National Park are unique in the world. The nature is shaped by the frequent volcanic activity along

the Mid-Atlantic Ridge, and a climate which lies between warm and cold currents in the ocean and the air. Iceland was formed by volcanic activity and is topped by Vatnajökull, the largest ice cap in Europe.

The thousand-year history of life and culture at the foot of the glacier is one of a kind, as records and heritage features bear witness. For centuries it was the battleground for man's fight against natural disasters, volcanic eruptions, ash falls, glacial floods, mini ice ages and glaciers which surged over vegetated land. This experience of a nation's co-existence with glaciers was recorded, and that marked the genesis of understanding the origin and movement of glaciers.

The land could also be generous. The ecosystem is varied, particularly plant and birdlife, and there are hay meadows in the lowlands of the south. One of the largest wetlands in the highlands is the area of flood-meadows at Eyjabakkar, registered as a Ramsar area in 2013, which is the moulting area of pink-footed geese which nest in thousands in the wilderness areas around Mt. Snæfell. Nearby is the summer pasture for a large portion of the Icelandic reindeer population.

Skeiðarársandur and Breiðamerkursandur on the southern edge of the national park are the most important nesting areas for the great skua and red phalarope.

A unique birch forest is at Bæjarstaðaskógur. Moss is nowhere else as prominent in the vegetation of Iceland as it is in the southwest part of the national park. Fringe moss mixed with *Stereocaulon* lichen in the Skaftáreldahraun forms the *breiskjuhraunavist* habitat which is very rare in Iceland, and may not exist anywhere else in the world. North of the ice cap are wide expanses of lava where *Stereocaulon* lichen is almost the only vegetation. More than nine tenths of the national park is, however, glacier or barren land which has little or no vegetation.

In Vatnajökull National Park it is easy to see how land is created by volcanic activity along plate margins, and above a hotspot which brings volcanic material from deep within the earth. Signs of volcanic upheaval that had a profound effect on environmental conditions and human society can be seen widely. The 1362 eruption in Örfajökull was one of the biggest after the settlement of Iceland; it laid waste a thriving community in Litla-Hérað. The park includes the Laki craters from 1783-1784, the source of the Skaftá Fires lava, the second-biggest lava flow on earth in historic times. That eruption caused the Haze Famine, the

greatest natural disaster in Iceland since settlement times, which affected the global climate. Within the park is also Eldgjá, which erupted in 934-38, producing the largest basaltic flood eruption in history; also Mt. Askja in Dyngjufjöll, one of the best known volcanoes in the world, which destroyed communities in the northeast in a major eruption in 1875, precipitating mass emigration to North America. The lake Öskjuvatn formed at that time, as did the eruption crater Víti.

Subglacial volcanic activity is nowhere as frequent as it is under Vatnajökull. Nowhere else are hyaloclastite formations as diverse as in and around Vatnajökull National Park. The hyaloclastite ridges between Skaftá and Tungnaá on the western edge of the national park are the longest on the Mid-Atlantic Ridge. In Óðaðahraun there are many majestic table mountains and the beautiful shape of Mt. Herðubreið, Iceland's national mountain, stands proudest.

Nowhere else are more subglacial geothermal areas than there are under Vatnajökull; nowhere else are glacier outburst floods as common as they are from the subglacial lakes at Grímsvötn, Skaftárkatlar, and Kverkfjöll. Skeiðarársandur, the largest glacial sand plain on the edge of a present-day glacier, has largely been built up by glacier outburst floods from Grímsvötn. Jökulsárgljúfur and Ásbyrgi were eroded by the largest catastrophic floods on earth since the end of the last ice age. In the Jökulsá canyon is the country's greatest waterfall, Dettifoss.

Erosion of the land, no less than accretion, is very rapid in Vatnajökull National Park. Erosion is by glacier, water, and wind, and the transport of sediment is by ice and glacial water. This can be seen in the troughs below Breiðamerkurjökull and Skeiðarárjökull, the moraines which are often built up by advancing glaciers, glacial sands and lake sediments. The huge terminal moraines at Kringilsárrani are features of the greatest known advance by any modern glacier. The glacial sand plains are analogous to the land in front of the North American and European ice sheets from the last glaciations. The Icelandic terms *sandur* (sand plains) and *jökulhlaup* (glacier outburst flood) have gained currency in international geoscience.

3.3.1 Unique opportunities for research

In the volcanic zone in Vatnajökull conditions are good, and in many ways exceptional, for researching lava, craters, hyaloclastite ridges, pillow lava piles, and table mountains. Öskjuvatn lake lies in one of the youngest calderas in the

world (formed after the 1875 eruption) and in Grímsvötn there are unique opportunities for studying the interaction of ice and volcanic activity. The geothermal areas at Grímsvötn, Kverkfjöll and Skaftárkatlar are believed to be important for understanding the nature of geothermal activity and the unusual biology of subglacial lakes. Research on the sand plains at the margins of Vatnajökull sheds light on the formation of such sands in glacial periods elsewhere in the world. With the retreat of the glaciers new areas of land are exposed. In the national park a unique opportunity now arises to study the colonisation by plants and animals of nunataks and areas which are emerging from the beneath the glacier. The impact of climate change on the biota must also be researched.

Vatnajökull is a yardstick for global climate changes in the middle of the North Atlantic Ocean. Research into its ice cap and the surrounding area, volcanic features, moraines and sediments can reveal the climate changes of the last glaciations, the post-glacial period, and since the island was settled.

By protecting the nature inside Vatnajökull National Park, it can be made available in the future, as an example of a pristine area where the environment evolves naturally.

Vatnajökull can contribute even more than this. Research into the ice cap itself is key to understanding the nature of glaciers, which will assist in understanding previous glaciers – and those of the future. In geology the present is the key to the future as well as the past. That is why major studies are underway of changes in Vatnajökull and connections with weather, ice movement, hydrology, surging of glaciers, glacier outburst floods and runoff to glacial rivers.

Among other things, the research aims to gain understanding and knowledge which will make it possible to evaluate changes in the glaciers and their runoff, for given forecasts of climate change in coming years. Studies of calving of the Breiðamerkurjökull glacier into Jökulsárlón describe processes which are increasingly encountered in outlet glaciers in Greenland and Antarctica. Vatnajökull shows features which are being seen more frequently in polar glaciers in Greenland and Antarctica with rising temperatures. Nowhere else is it as easy to confirm remote sensing results from developments in satellite instrumentation than by comparison with measurements made in Vatnajökull. The new methods can then be applied to the world's less accessible glacial areas.

3.3.2 Enjoyment and understanding

Visitors are attracted to Vatnajökull by the nature and the community. Everyone wants to learn about the coexistence of nature and man adjacent to some of the most active volcanoes on earth and the largest ice cap in Europe, and to discover how land and society are created and shaped. Tourists sense the energy in the awe-inspiring Jökulsárgljúfur canyon, within which is the biggest waterfall in the country, Dettifoss. They seek enrichment in the solitude of Tungnaáröræfi and Ódáðahraun with the greatest range of hyaloclastite formations on earth; walk on the Skaftá Fires lava, the biggest lava which has flowed in historical times; and are captivated by the contrasts of Skaftafell, at the foot of the highest mountain in Iceland. Some want to hunt game, or pick berries and mushrooms.

Some of the best preserved wildernesses in Iceland lie within Vatnajökull National Park: the ice dome itself, Tungnaáröræfi, Trölladyngja, Dyngjufjöll and Ódáðahraun. On the crest of the ice cap all that can be seen is the sky, and nowhere else has such pure beauty.

3.4 ADMINISTRATION

Vatnajökull National Park is a government agency under the aegis of the Ministry for the Environment and Natural Resources. The Vatnajökull National Park Act no. 60/2007 and Regulations no. 608/2008 make provisions for its administrative status and the duties of the board of directors: see mainly Section II of the Vatnajökull National Park Act.

The national park comprises four administrative regions which are run independently; their boundaries are defined in Appendix 2 of Regulations no. 755/2009 about the national park. The goal is to coordinate the activities of operational regions to form a strong unit.

The following parties are responsible for the central administration, policy making, strategic decisions and daily operations: the Minister for the Environment and Natural Resources, the board of Vatnajökull National Park, the four regional committees and the park's managing director.

3.4.1 Minister for the Environment and Natural Resources

The Minister for the Environment and Natural Resources has overall responsibility for the national park and appoints its board of directors and the regional committees for four years at a

time. The minister also issues regulations making detailed provisions regarding the establishment of the national park, its boundaries, the tasks and activities of the board and regional committees, the management plan and procedures for its preparation and confirmation, the legal consequences of the management plan, operations within the national park and authorisations by the park, protection and protection levels, and the location of the principal administration centres.

The Minister is responsible at governmental level for decisions, by the board or staff of the national park, which are taken based on the law and which are subject to appeal to the Minister for the Environment and Natural Resources, see Article 9 of Act no. 60/2007.

3.4.2 Board of Directors: board members, alternate board members, observers and scope.

The minister appoints the board for four years at a time and which comprises seven members: the four chairs of the regional committees, one member nominated by environmental conservation associations, and a chair and deputy chair who are directly appointed by the minister – one of whom has professional knowledge of national park field matters. Alternates are similarly appointed.

Two observers have the right to sit on the board: one is nominated by outdoor activity associations and the other by tourism stakeholders.

The board of the Vatnajökull National Park supervises nature conservation in the park. According to Article 6 of Act no. 60/2007 its main tasks are:

- **Policy making in matters pertaining to the national park, in accordance with the Vatnajökull National Park Act no. 60/2007**
- **Overseeing of proposals for the Management Plan and Regulations for the national park**
- **Approval of the budget for running the national park, allocation of funding to the park regions and approval of a financial plan for each region**
- **Coordination of operations in the park regions**
- **Supervision of the implementation of national park rules and the Management Plan**

- **Collaboration with government bodies, local councils and stake holders regarding national park matters**
- **Making recommendations to the Minister for the appointment of a managing director**
- **Overseeing business policy, including shaping conditions under which entities may conduct business in the national park, and agreements regarding this**
- **Providing the managing director and park wardens with job descriptions**

3.4.3 Regional Committees, appointment and role

The Minister for the Environment and Natural Resources appoints a regional committee for each operational area, for a term of four years. Each regional committee comprises six members; three are nominated by the local authorities, one by tourism stakeholders, one by outdoor activity associations, and one by local environmental associations. The same entities nominate alternates in the same way.

The regional committee elects a chair and deputy chair from among the local authority nominations. The chair of each regional committee also sits on the board of directors.

The regional committees coordinate between the local authorities, landowners and other stakeholders in the area. They are, each in their own area, the contact point for the board of directors, local people and other stakeholders in the administrative area of the park. The regional committees thus ensure the important input from local people towards the support and running of the national park. For example, the regional committees oversee proposals for inclusion in the Management Plan that are relevant to their region, in collaboration with the Environment Agency, Icelandic Institute of Natural History, other government bodies, local authorities, landowners and other stakeholders in the region.

The regional committees make proposals to the board on appointment of park wardens, each in their own region. They advise the board and wardens about park matters, including assisting with making the administrative plan for their own area, working within the budget constraints which the board outlines each time. The wardens attend the regional committee meetings.

The minister can issue regulations making further provision for the work and workings of the Vatnajökull National Park regional committees.

3.4.4 Managing Director

The managing director is appointed by the Minister, for five years at a time, according to recommendations made by the Board of Directors of Vatnajökull National Park.

The managing director is responsible for the day-to-day running of the national park on behalf of the Board of Directors and according to a job description provide by the board. The managing director administers the finances, is responsible for the financial report and making sure that the national park operates according to the law and government recommendations. The managing director is also in charge of managing human resources.

3.4.5 Park wardens

The park wardens are appointed following recommendations by the regional committees, and at least one park warden works in each administrative region, with two in regions where there are two main operational headquarters, such as at Ásbyrgi and Mývatn in the northern region and Höfn and Skaftafell in the southern region. Their immediate superior is the managing director of the national park.

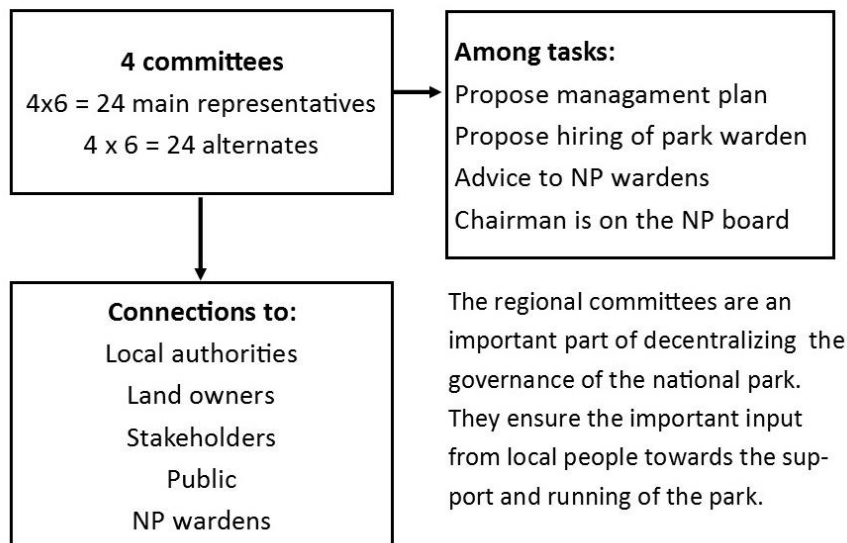
The park wardens are in charge of day-to-day running, staffing and local management, in collaboration with the managing director and according to the job description provided by the board of the national park. They are responsible to the managing director for the finances and accounting, and advise him/her, making proposals about operational plans for the regions based on the budget set by the board.

They assist the regional committees in preparing proposals for the management plan. They also implement the approved management plan, within the budget allocations of each operational section.

The wardens hire staff for the national park, each in their own administrative area. The wardens are responsible for ensuring that the regional operations fulfil legal requirements regarding the environment, safety and health at work, and fire safety.

Wardens issue permits where they are required. They monitor compliance with laws and regulations, and the provisions of the management plan. They work with the police and other monitoring bodies when necessary. They are authorised to temporarily close areas to traffic, when there is a risk of damage to land or vegetation, or because of an event or project. They

Regional committees of VNP



The regional committees are an important part of decentralizing the governance of the national park. They ensure the important input from local people towards the support and running of the park.

can also take steps to prevent consequences in cases of natural disasters or other unexpected situations, and such steps may go further than authorised in the Management Plan.

The park warden can expel from the park anyone who violates its rules under provisions of the Vatnajökull National Park Act and Regulations.

Wardens supervise education about the national park and conservation, each in their own region and taking account of the whole park. They ensure that the service role of the national park is fulfilled and cooperate with government agencies, local authorities, landowners and other stakeholders. The wardens attend meetings of the regional committees.

3.4.6 Environment Agency

The Vatnajökull National Park Act prescribes the role of the Environment Agency and its involvement in the national park, see Article 11 of Act no. 60/2007. This differs from that in other national parks and conservation areas which are directly supervised by the Environment Agency.

The Environment Agency is not directly involved in the governing or running of Vatnajökull National Park but assists and gives professional advice to the board and regional committees. The expectation is that such assistance will be provided under a collaboration agreement.

3.5 PARTNERS

Vatnajökull National Park relies heavily on good communications with the many people that enjoy

its benefits. This requires a mutual understanding of the needs of the various groups who spend time in the park. It is important to explain clearly the purpose and work of the national park, to educate people about how they can influence improvements so that they can see the significance of their contributions. Effective and positive cooperation results in progress and enhances the value of the national park. This benefits everyone.

The Vatnajökull National Park Act reflects the need for cooperation in many ways, for example in Article 4, on the appointment of the board of directors, where it provides for a diverse membership.

The Vatnajökull National Park legislation also provides for cooperation between the board, the regional committees, landowners, local authorities, stake holders, the Environment Agency, the Icelandic Institute of Natural History, and other relevant government agencies, in preparing the Management Plan.

Many others have a vested interest in the success of the national park. For example, those who live nearby, businesses, service providers and visitors to the national park, scientists who study the nature of the national park and the communities around it, scientific, monitoring and administrative bodies, schools, other national parks, and outdoor activity and nature conservation groups. These are all regarded as stakeholders. Stakeholders are those who have a direct part in the management or running of the national park, are dependent on how it is run, benefit from its successful operation, or are simply interested in its affairs and want it to meet its objectives.

One of the guiding principles of the national park is to seek input from the stakeholders and engage in constructive cooperation with them. It is also one of the objectives of the national park to define who are stakeholders and what their interests and expectations are. It is necessary to define whose cooperation should be regularly sought, and in what manner. In this way a collaboration plan is implemented which defines how the national park intends to build up connections and cooperation with its leading partners. Such a plan makes it easier for the management and staff to prioritise projects and adopt procedures which are likely to yield constant improvement in the workings of the national park.

4 Roles, guiding principles and future vision

Everyone involved in the management and day-to-day operations of Vatnajökull National Park has an important role to play. This chapter deals with the functions of the management and staff of the national park; the park's vision for the future and the objectives put in place to realise that vision; and the basic principles that form the guidelines for making decisions relating to the operation of the national park.

The legal authority for and duties of the Vatnajökull National Park's management and staff are defined in the statutes and regulations relating to the national park, and is addressed in chapter 3.4, Administration.

This chapter presents an overview of the roles of Vatnajökull National Park's management and staff. Many other parties also have an economic interest in the successful operation of the national park, but it is not possible to provide for the role of them all in the management plan. Nevertheless, it is possible to describe how the national park intends to seek to cooperate with these parties as far as their important contributions are concerned.

4.1 PARK FOR THE PEOPLE

The role of Vatnajökull National Park is manifold. It is a sanctuary for nature, where nature can evolve following its own natural laws and in pursuit of its own values.

Visitors to the park can connect with nature and their essential roots, restoring bonds that have ruptured in urban society. The park provides spiritual refreshment and rest; here it is enough to sense, there is no need to understand. The national park provides inspiration and its artistic value is beyond question.

The national park also, however, provides a unique resource for the understanding of geological and biological processes, also of the history of humankind and how natural disasters and global climatic changes have affected a country that stands at the meeting-point of warm and cold oceanic and atmospheric currents.

The value of the national park for science, study and education in the widest sense is immense, and the park is an important centre for information, interpretation and research. Interpretation, usually interpretation of nature, as used in the Management Plan, usually refers to reciprocal

communication – most often under the open sky – with the aim of enjoying nature and gaining an understanding of it. The ultimate goal of nature interpretation is respect and affection for the area concerned and for Nature in general.

The Vatnajökull glacier attracts international research into the effects of those climate changes which may take place in coming decades at a faster rate than at any time since the last ice age.

The practical value of Vatnajökull National Park is undisputed for Icelandic society, which strives to preserve, protect and present the national park in the worldwide context, for the benefit of its own people and the people all nations, for both present and future generations.

4.2 PEOPLE OF THE PARK

The role of management and staff of Vatnajökull National Park is to encourage collaboration in the protection and sustainable exploitation of the resources of Vatnajökull National Park with a view to enhancing the prosperity and enjoyment of individuals and communities, now and for the future.

The role of management and staff is to protect, maintain and develop those resources, and to inform, encourage and enable people to enjoy a wide range of outdoor activities – always with sustainability as our guiding light.

Management and staff strive to enable others to take advantage of the opportunities the national park has to offer for creativity and the maintenance of regional development within the national park's surrounding areas and, at the same time, work to increase awareness that environmentally responsible economic growth will be of benefit to all.

4.3 GUIDING PRINCIPLES

It is important that decisions about management of the park, its inner operations and responses to situations or incidents there are always in accordance with the policy that has been established to enforce the objectives that were expressed when the park was founded, and which include nature and cultural conservation in the widest meaning, as well as a commitment to make the national park accessible to the public.

The guiding principles include a brief summary of a few points that it is important to always keep in

mind when making decisions on Vatnajökull National Park issues. The list is not exhaustive.

4.3.1 Nature conservation and sustainability are the basis for all decisions

In decision-making about national park matters and in work for the benefit of the park, the following should always be considered:

- **nature conservation is the main objective in establishing and operating Vatnajökull National Park**
- **sustainability is the basis on which the natural resources of Vatnajökull National park are preserved**

Staff and management of the national park are committed to keeping nature conservation and sustainability in mind in their daily work. Nature and the environment of the national park must never be damaged or compromised, and efforts should be made to improve the national park in the long term.

In the performance of difficult tasks, the guiding principles of nature conservation and sustainability lead the way.

To this end, and to help to evaluate progress over time the national park will for instance:

- **work systematically and continuously to enhance environmental work, and to be a leader in that field**
- **endeavour to monitor specific environmental factors, making systematic use of the findings as a yardstick for sustainability**
- **set benchmarks and yardsticks for outcomes in protecting and developing the area**
- **apply research findings and monitoring results to the management of the national park, recognising that good management is grounded in a knowledge of nature and an organisation in harmony with, and informed by, the environment**

4.3.2 Co-operation is the path to progressive development and swift results

In decision-making and tasks management and staff shall always keep in mind that:

- **many different parties are connected to and have a stake in the activities of Vatnajökull National Park**
- **the contribution and participation of local people in the development and**

operation of Vatnajökull National Park is of particular importance

- **connections with the scientific community, scholars and organisations working in these fields are an important basis for robust research and easy access to and dissemination of knowledge**
- **the participation and contribution of visitors enhances the quality of the experience and ensures systematic development for the benefit of all**

By specifically seeking contributions from identified stakeholders and working with them in a systematic way, the national park and its partners will achieve more. Collaboration can result in increased value and greater professionalism, and create new opportunities and greater benefit.

To this end, the national park will:

- **publicise decisions and provide information about the unique position and work of the park**
- **create a forum for collaboration and the encouragement of initiatives and participation of others**
- **ensure consistency between the national park's policies and those of the local communities in the area**

4.3.3 Respect is a prerequisite for success and pleasure

In decision-making and work practices, management and staff take into consideration that:

- **respect for nature, culture and relics is a key factor in operations**
- **respect for differing economic interests and opinions can enhance the quality of our work and bring improved benefits and enjoyment for the participants in the development of Vatnajökull National Park**
- **respect and consideration are extremely important between and within different levels of public administration**

Management and staff of Vatnajökull National Park respect different opinions and attitudes, and encourage dialogue and reasoned debate so that the views of all concerned are aired. In this way it is possible to weigh and evaluate different opinions, reach viable conclusions and make compromises where appropriate. Fairness is

closely related to respect, and management and staff exercise it in their work.

Management and staff of the national park will:

- **display fairness and respect towards guests of the national park and other people that they interact with during their work, irrespective of their status or the reason for the interaction**
- **display respect for Vatnajökull National Park's nature and its property**

4.3.4 Quality is both a draw for visitors and a paradigm for administration and operation

In decision-making and work practices the national park takes into consideration that quality must be realised and safeguarded. This applies to both the quality of the natural environment itself and the quality of the work of the national park.

It is necessary to define quality, criteria and desired outcomes of national park operations in advance, and the objectives in these matters must be clear to all parties. Vatnajökull National Park must not lose sight of what constitute the qualities of the park, or what it is that defines its unique position.

It must be ensured that a visit to the park is a unique experience. This is achieved by protecting and building on the qualities and uniqueness of the national park. This is the way to increase competitiveness and maximise benefits.

The national park will show this in action by:

- **working systematically towards meeting paradigms and achieving defined outcomes**
- **emphasising skills and professionalism in the operation and services provided in Vatnajökull National Park, both within the national park itself and in collaboration with service providers in the area**
- **emphasising quality and visitor experience over quantity (e.g. visitor numbers)**
- **exercising care in relation to all organisation and inner structure, utilising systematic and effective methods of policy formation, planning and implementation**
- **always basing decisions on the very best available information**

4.4 FUTURE VISION

The future vision describes the outcomes we expect to achieve, and details the hopes and aspirations for the operation and influence of Vatnajökull National Park. The future vision looks twenty years into the future and identifies some key factors of our vision for the circumstances and achievements of Vatnajökull National Park in 2040.

This future vision is important to all; management, staff, associates and local inhabitants, visitors and others.

The Vatnajökull National Park board will strive to direct their activities in such a way that the situation of Vatnajökull National Park will in 2040 be as outlined here:

- **Vatnajökull National Park is a national treasure.**
- **The staff, local inhabitants and general public are aware of Vatnajökull National Park's uniqueness and quality, which are sources of opportunity and creativity – an attraction and an incentive for excellence.**
- **Respect for and conservation of nature, culture and heritage are of highest importance; sustainability is the guiding principle within which we utilise and enjoy these values.**
- **The park's solid infrastructure, professional high standards, good partnership and clear frames of reference have underpinned excellent outcomes for its work.**
- **The outcomes of Vatnajökull National Park's operations and management rely also on solid research, its interpretation and effective communication.**
- **The national park is a sought-after area for research.**
- **Vatnajökull National Park is an important cornerstone of job creation and has contributed to the increased prosperity of the area and the nation as a whole.**
- **Diversity in nature, culture and service is the hallmark of Vatnajökull National Park.**

4.4.1 To protect, maintain and develop

Vatnajökull National Park is a national treasure, a unique wonder of nature on a national and international scale. We have succeeded in conserving and maintaining the park's particular quality and unique position by:

- **having sustainability as a guiding principle in the management and utilisation of the park's resources; ensuring harmony and balance between conservation and utilisation of Vatnajökull National Park's resources; and respecting the needs and aspirations of diverse groups**
- **building on solid research, and continuously monitoring the state of the park's natural features and natural diversity for changes, thus providing the basis for long-term planning and decisions on the park's affairs**
- **respecting natural processes and allowing the ecosystem and the land to evolve in harmony with its own laws**
- **applying an eco-friendly approach to any interventions deemed necessary by the national park authorities**
- **monitoring the effect of land use on ecosystems, biodiversity and individual species**
- **achieving systematic development of the park's infrastructure and standards, with successful co-operation and participation of partners and other stakeholders**
- **providing excellent, focused educational resources, and communicating information to increase understanding of the quality and uniqueness of Vatnajökull National Park, thus securing care and respect for the environment and culture of the area**
- **work based on a clear and active environmental policy that emphasises our own work practices as forming good models for others, while at the same time outlining the benefits for collaborative partners in meeting the park's quality standards**
- **skilful and well-trained staff who understand the park's unique position and the needs and aspirations of collaborative partners and visitors**
- **managed access to the area and its individual parts in order to spread the load of wear and tear**
- **focused use and wide-ranged communication of information about the park's assets**

4.4.3 To create

The quality and unique position of Vatnajökull National Park have become a source of opportunities and creativity, and form both an attraction and a spur for excellence. The national park has supported business already present in the area, created new and diverse jobs and is itself a vigorous workplace. It is, consequently, a cornerstone for job creation and has contributed to the increased prosperity of the area and the nation as a whole.

Vatnajökull National Park is one of the Icelandic tourist industry's flagship attractions. Businesses and service providers seek to locate themselves in the area and to link their activities with those of the park. The park's existence has created new educational and employment opportunities and brought about improvements to people's quality of life in its surrounding areas. Vatnajökull National Park has thus brought multiple benefits, socially, economically and environmentally. We have achieved this by:

4.4.2 To experience

Visiting and staying at Vatnajökull National Park is a unique experience. Guests of the national park gain a strong feeling for the unique position and qualities of Vatnajökull National Park and sense that it has taken the attention and coordinated effort of many parties to underline the unique character of the national park and its environment. We have achieved this with:

- **good collaboration and participation with the main stakeholders in developing services, maintaining the park's assets and developing innovation in its work**
- **good organisation and focused development of facilities for visitors, scientists, students, staff and others, and catering for all their differing needs**
- **drawing attention to the unique position and qualities of Vatnajökull National Park**
- **encouraging the efforts of others to make use of the unique position and qualities of the park, to promote settlement and employment opportunities, to further artistic creativity and to communicate and nurture the culture of the area**
- **establishing a sustainable tourist industry**
- **implementing clear quality paradigms for the service provided in the national park**

in effective collaboration with service providers, visitors and others

- **engaging local residents in their environment, working effectively with local communities and authorities, thus endeavouring to secure consistency with these parties in relation to policy formation and implementation with regard to the national park**
- **delivering focused and powerful information and marketing messages based on the unique position of the park and its individual parts**

5 Objectives and means

The main statutory objectives in the establishment and operation of Vatnajökull National Park are the following, according to Article 2 of the Vatnajökull National Park Act no. 60/2007, with subsequent amendments:

- 1. to protect the nature of the area, such as landscape, biosphere, geological features and cultural heritage**
- 2. to give the public the opportunity to experience and enjoy the nature and history of the area**
- 3. to promote research in the area, inform about it and encourage public understanding of the quality and uniqueness of the area**
- 4. to seek to support local communities and businesses, including by encouraging sustainable utilisation of the area**

5.1 PROTECTION

The nature of the area, i.e. the landscape, biosphere, geological formations and cultural heritage, are protected.

This objective involves a commitment by management, staff and others involved in policy making for the national park and those who work there or pass through the park, to acquire the views on which protection of the area are based, and act on them so that no actions are taken that might spoil the natural conditions in the national park, or interfere with its natural evolution.

Cultural heritage in the national park is also protected. Heritage sites may not be destroyed or damaged.

For reasons of protection, the Vatnajökull National Park board is entitled and obliged to take steps and measures to ensure protection of the natural and cultural heritage in Vatnajökull National Park, and no actions or activities within the national park may work against these objectives regarding protecting the quality of the park.

5.1.1 Landscape and geological formations

Preservation of entire landscape units and the geological heritage in Vatnajökull National Park will be based on an assessment using recognised methods. The assessment may need to include landscape units in areas outside the boundaries of

the national park, including taking into account possible future expansion of the park.

The landscape, landscape units, geological formations and geological diversity of the area will be mapped, and an overall assessment made of the conservational value of the landscape and geology of the area. This information will be made available to the public.

The preservation of geological formations must be supported by a variety of measures, such as planning arrangements and by using education and information. Many of these formations, which attract great numbers of visitors, are extremely sensitive to human traffic. Thus it is important to assess the impact of human traffic on important geological formations in the park and impose specific protective measures where needed.

5.1.2 Construction and cultivation with regard for the landscape, geological formations and vegetation

In the open and vulnerable landscape of the national park, even small constructions may have a major impact on the appearance of the land. It is important that new buildings should harmonise well with the landscape, its geological formations and vegetation; care needs to be exercised over siting and choice of building materials, planting etc. This applies also where maintenance or improvements are carried out on existing buildings.

Construction areas will be kept to a minimum, and new building will be sited where it is expected to have the least possible impact on the appearance of the landscape. All construction, including houses, signage and bridges will be in harmony with the landscape. Their appearance will be coordinated bearing in mind the special character of the areas.

When planting, for instance to provide shelter or combat erosion, only natural local vegetation will be used.

Policy will be formulated on the consideration of environmental issues in relation to the siting, construction and finish of buildings, on choice of materials and design.

5.1.3 Protecting biodiversity, ecosystems and species

In the national park there are areas of diverse, sensitive and unique vegetation that have great significance for conservation in the larger context. The park contains also the habitats of rare species

which it is important to identify, especially those on the list of endangered species. It is vital to monitor the distribution and breeding of species populations for which Icelanders bear international responsibility. In mapping such species and their habitats, measures must be in place to control human access and other stress factors which can endanger these species' development.

The natural development of vegetation and distribution of species will be monitored in consultation with appropriate specialist agencies. Population distribution will be studied, and location of the habitats of rare organisms will be documented and plotted, especially for those on the list of endangered species. The information acquired will be used to manage access and stress factors in sensitive areas of the park.

5.1.4 Protecting the natural development of the biosphere and biodiversity

The area's active geography and geological diversity provide the conditions for different habitats and ongoing development of the biosphere.

Among the main threats to biological diversity are invasive species. Plant species such as the Nootka lupin (*Lupinus nootkatensis*) can threaten the biological diversity and totally change the appearance of large areas of landscape. In the same way, mink (*Mustela vison*) can bring havoc to the nesting grounds of ducks and other wetland birds.

It is crucial to eliminate such invasive alien species from the park's biosphere in order that its ecosystem may develop naturally.

The park management will endeavour to ensure that the natural processes of ecosystems will not be disrupted by human activity, such as for example construction projects or the release of smolts into rivers and lakes.

Where decisions are made that may affect the natural development processes of the biosphere, a precautionary principle will be employed and all relevant data collected.

Support will be given to research into the effect of global warming on land formation and the natural development of new terrains. Information will be collected on the distribution and means of proliferation of invasive species and the conditions of the biosphere within the park which they may threaten. On the basis of that information, action directed towards the eradication or limitation of such species will be prioritised. Systematic

elimination of mink and control of fox population distribution will be undertaken in collaboration with local communities where this is permitted.

5.1.5 Protecting the biosphere of wetlands

Lakes and wetlands are important habitats that form a big attraction for visitors. Lakes, rivers and streams have significant value for outdoor recreation on account of their beauty and diversity of biosphere, as well as providing opportunities for fishing, boating and bathing.

The biospheres of many wetlands within Vatnajökull National Park have not been subjects of much study, and even less is known about the impact of visitors on the area. Knowledge of the biospheres of lakes and wetlands, water systems, groundwater and flow paths, is a prerequisite for applying tenable protection measures.

Endeavours will be made to increase knowledge about the biospheres of lakes and wetlands in Vatnajökull National Park, and to manage access with that in mind, especially in those places and at those times when the biospheres are at their most vulnerable.

The national park's emergency plan specifies the appropriate response to pollution accidents in both wetland and other areas.

5.1.6 Protecting vegetation and soil, and restoring disrupted ecosystems

Erosion of vegetation and soil has widely resulted in land degradation within the boundaries of the park. It is urgent that erosion be halted wherever possible and that ecological restoration is encouraged where the landscape has been damaged.

Ecological restoration of disrupted ecosystems will be encouraged in areas where the national park authorities, in collaboration with professional bodies, determine this to be necessary. Interference with natural processes will be kept to a minimum. Such measures will aim to support local vegetation and thus encourage the preservation of biodiversity.

5.1.7 Conserving cultural heritage

The national park's unique character is due not least to its cultural heritage and the history of interaction between humans and its dramatic natural surroundings. Its history provides diverse opportunities for interpretation, education and recreation, as well as the value it carries for the cultural heritage of the nation as a whole.

The park's tangible cultural heritage sites are preserved or conserved by law and will be protected in collaboration with the Cultural Heritage Agency. Measures will be taken to prevent damage to them from visitor traffic or construction.

Special attention will be paid to strengthening collaboration with local inhabitants concerning education and cultural events connected with the history of the park and surrounding areas.

The park's unique character and the opportunities it creates will form a basis for promotions and education about the area.

5.2 PUBLIC ACCESS AND OPERATIONS IN THE NATIONAL PARK - GUIDELINES

Public access is an important prerequisite for spending public funds on establishing and running a national park, indeed the public is allowed to travel in Vatnajökull national Park and dwell there for lawful reasons, according to paragraph1, Article 15 of the Vatnajökull National Park Act no. 60/2007. The activities of the national park occur for public benefit and to allow the public to experience and enjoy the nature and history of the area. Management and staff of Vatnajökull National Park take this into account when formulating policy for national park operations and access to the park, and ensure the policy is implemented.

The concept of the "public" is used here in the widest sense and in practice includes all visitors to the national park, irrespective of who they are or the reason for their visit.

5.2.1 Infrastructure, staff, facilities and personnel policy

The national park is not able to fulfil its role regarding the public and government without infrastructure and staff. A targeted policy for developing the infrastructure and human resources is thus a very important part of park policy. The national park's personnel policy aims to ensure that the national park has skilled staff to carry out tasks that need to be undertaken, and make sure that the facilities and housing options for staff make it possible for them to do their work and enjoy their leisure time.

The national park's working environment and its challenges are complex and multifaceted, and can change rapidly. Management and staff recognise this and adopt a systematic approach to respond to changes and implement improvements to

operations. Targeted information sharing, efficient communication routes and defined responsibility are important elements of national park management and employee relations.

The national park respects statutory and collective pay agreements and employee rights. Emphasis is placed on systematic use of equipment, procedures and other ways making it possible for employees to carry out their work in the best and most efficient way. The national park supports its staff in improving their work-related knowledge and skills, and encourages professionalism and ambition at work.

5.2.2 Environmental matters and environmental influence of park activities

All the park's working facilities must meet the requirements of environmental laws, including licensing, drainage, waste disposal and storage of materials, and any other environmental considerations. This applies to property owned by the park or rented by it. In addition, management and staff take great pains to attend to environmental matters as well as they are able.

Management and staff seek ways to cooperate with their partners to attend to environmental matters in the best and most effective manner and fulfil their obligations. Management and staff always give environmental considerations important weight in decision-making about Vatnajökull National Park issues.

Vatnajökull National Park wishes to lead by example and work systematically towards minimising any negative environmental impact from the daily operation of the park and from activities linked to it. To that end purchasing policy within the park will be as environmentally friendly as possible and policy will be formulated to this end. Systematic efforts will be made to minimise the environmental impact of journeys made on behalf of Vatnajökull National Park.

5.2.3 Traffic and pollution

It is Vatnajökull National Park policy to reduce private car traffic and encourage travel by public transport and by environmentally friendly means.

Development of traffic infrastructure and other facilities within the national park takes into account the needs of public transport and encourages the use of vehicles powered by environmentally friendly fuel sources, such as electric cars. Improvements will also be made to facilities for those travelling by bicycle or on foot.

Overall, the policy shall be that all traffic within the national park and the development of traffic infrastructure shall have as little environmental impact as possible.

5.2.4 Preventing pollution

It is important to take measures to ensure that groundwater and surface water do not become polluted by traffic, constructions or national park operations.

Handling of hazardous substances, and the planning of septic tanks and drainage systems, must be in compliance with legal requirements and other regulations that may apply. The national park commits itself to lead by example in these matters, complying to the fullest extent with rules about pollution prevention in all of its operations, and having the most stringent requirements allowed by law for other parties who travel in the park or operate within it, that they shall cause as little pollution as possible.

Vatnajökull National Park authorities may halt polluting activities within the national park, see sentence 2, paragraph 3, article 18, Act no. 60/2007, and can expel from the national park visitors who pollute the environment, see paragraph 4, Article 18, Act no. 60/2007 and Article 9 of Regulations no. 608/2008.

5.2.5 Handling and disposing of waste

The national park commits itself to making arrangements for handling and disposing of waste in a way that always reflect a respect for the national park's environment, and that complies with statutory regulations.

Waste will be sorted at all visitor areas under the supervision of the national park. Appropriate coordinated labelling will be used in each area.

The national park requires that contractors and service providers that work within the national park comply with regulations about the handling and disposal of waste.

Visitors will receive guidance on handling and disposing of waste, including the instruction that it is forbidden to bury or burn waste within the national park.

5.2.6 Temporary licensing

Parties contemplating organising occasional events within the national park or temporary projects requiring facilities, manpower or handling of equipment in the national park, such as film-making, art events, social gatherings or research,

are required to seek permission from a national park warden, see paragraph 1, Article 15b, Act no. 60/2007. Regulations make further provisions for licensing.

A national park warden may set conditions for such licensing and collect a licensing fee intended to cover the cost of licensing, supervising and monitoring activities for which a licence is required, see paragraph 2, Article 21, Act no. 60/2007.

Requirements for a licence for certain events within the national park are in the interests of the national park and are devised to prevent activities contradictory to environmental policy. Research activities will usually be permitted in the national park if their execution is compatible with environmental policy.

Vatnajökull National Park registers all licence applications, according to Article 15b of Act no. 660/2007, and all licences are issued in accordance with this Article.

5.3 SERVICE, TRANSPORT, RESEARCH, EDUCATION AND INFORMATION

Services in Vatnajökull National Park are discussed in Section V of Act no. 60/2007. The national park shall provide services and information at the park's designated workplaces and can also operate information and service centres where the public is offered education about nature conservation in the national park and services as required and determined by the board of the national park.

The board of the national park further decides the positioning of and operating arrangements for service centres, and formulates policy for this, which should be published in the management plan.

The board and staff of the national park shall promote research in the area, inform people about it and promote public awareness of the unique qualities of Vatnajökull National Park. This objective is closely connected to accessibility, and is intended to make the work of scientists and researchers easier, and also to inform and educate about the national park, thus making it possible for visitors to experience their visit to the national park as enjoyable and informative.

5.3.1 Service areas and service facilities

It is important that services be provided to guests of the national park at well-chosen places and that the park service network is organised with respect

to this. The service network includes the national park's main workplaces and information and service centres.

Specified service areas will be located within the park, providing services as far as possible all year round. The main workplaces of the national park, at Ásbyrgi, Mývatn, Skríðuklaustur, Höfn, Skaftafell and Kirkjubæjarklaustur, are hubs for the services that Vatnajökull National Park provides for its guests, as well as being information and service centres.

All service units should be in keeping with the overall co-ordinated appearance of national park service facilities. This always applies, for example when making decisions about the layout, arrangement and positioning of signposts and notices, and of course when larger and more permanent constructions are involved. Such service units should meet the needs of park guests, but also impinge as little as possible on guests' experience of an untouched natural environment.

The locations of the main workplaces, information and service centres, and other services where appropriate, shall be described on the website of Vatnajökull National Park and in information material published, as convenient, to inform national park guests about the services, information and guiding that is available to them in the national park.

5.3.2 Transport system and signs

The transport system within the national park has a multifaceted role in addition to its main purpose of making it possible for guests and staff to move easily around the park. The arrangement and location of transport infrastructure manages visitors' movements, and this is important when it comes to managing traffic pressure, and also when the objective is to provide guests with the opportunity of a varied experience of the national park.

Care needs to be exercised in the construction of transport facilities such as roads, footpaths and bridges, which must be sited in such a way that their impact on the environment and the guests' experience of it is minimised, yet at the same time with the objective that their location is useful in terms of meeting the expectations and needs of those travelling in the national park.

Varied, useful and well-signed routes and clearly defined vehicular areas such as car parks will discourage off-road driving.

Care shall be taken in preparing signs, which should be clear and readily understood. It should be remembered that drivers of motorised vehicles in the national park are of many nationalities and many do not understand Icelandic. This also applies to those travelling on foot or by bicycle.

In their efforts to protect the fragile nature, the national park relies on the good conduct and responsible behaviour of guests. It is assumed that the vast majority of park guests are perfectly willing to follow rules and will do this without being asked. But to make possible for guests to do this, they must be informed about traffic regulations in the national park, and the reasons for them.

5.3.3 Access for all

It is the aim of the national park to provide assured access for all visitors to the principal areas of the park and to all services intended for the general public within the national park.

This will be achieved by:

- **making it possible for different groups of people with disabilities, such as those who are physically handicapped, blind, visually impaired or with hearing difficulties, to enjoy services provided by the national park**
- **ensuring access for all to the main natural treasures of the national park, for example by creating accessible footpaths wherever possible**
- **making available appropriate equipment for people with disabilities to use for travel around the park where easy access is not guaranteed, for environmental reasons or because of the lie of the land**
- **providing information about the park, and information about park access and services, in such a way that it can be used by all groups of disabled people**

5.3.4 Safety procedures

The responsibilities of park authorities, staff and service providers for the safety of visitors are in line with legal requirements, and encompass many factors, such as driving on roads within the park, safety on footpaths, safety of structures, natural hazards, the competence of guides in adverse conditions, the dissemination of information and notifications.

Safety procedures address the aforementioned factors. The rules and instructions specified in the

safety procedures will be accessible and clearly communicated to the park's visitors.

5.3.5 Research and research permits

Previous research on the geographical area now within Vatnajökull National Park, and the legacy of knowledge accumulated by local inhabitants form an important basis for education and communication about the natural and cultural heritage of the national park. But much remains to be studied, and the dynamic nature of the national park, along with the cultural heritage that can be found in the park – cultural remains, history and stories – will be the subject of future research.

Research calling for facilities, personnel or the use of equipment in the national park requires a permit, see paragraph 1, Article 15b of Act no. 60/2007. Further provisions for granting research permits will be made in Regulations, but such permits will normally be granted, provided that they are compatible with the national park's environmental conservation policy, as research is included in the conservation objectives of the park and immeasurable opportunities for research are in the national park.

It is important that the park authorities have oversight over all research in the national park, at any given time. This will make it easier to assist scientists and scholars, and it is also important that conclusions from research can be used to the benefit of the national park, as far as possible and where needed. The granting and management of research permits will thus support the research and educational objectives of the national park.

5.3.6 Collaboration and good relationships with schools, local inhabitants and the scientific community

It is national park policy to welcome students, local inhabitants, scientists and scholars who want to utilise its resources for research and education. The park intends, furthermore, to be proactive in collaborating with such groups.

The national park will endeavour to facilitate the work of scientists and scholars in the national park, and the associated educational work and knowledge sharing. The park will strive for good relationships with scientists, scholars and others who seek to learn from the national park or share information and knowledge about the park and what it contains.

5.3.7 Information sharing, education and nature interpretation

The national park works hard to share information about the national park, its nature and activities, with guests and stakeholders. This work takes place in the park's service centres, performed by park wardens and rangers, in published material of various kinds and on the park's website. Informational material issued by the national park shall always be of a high standard and care must be taken that it is compatible with park policy and conservation objectives. It is important that the staff involved in preparing publications, sharing information and nature interpretation have sufficient training and knowledge in this field, and the national park will encourage and support this.

Nature interpretation focuses on the perception of natural phenomena and the emotional response that they arouse. Efforts are made to explain meanings, relationships and connections by direct experience and perception rather than by the communication of facts. The objective of informing by nature interpretation is to increase understanding of nature and enhance respect for nature and its value. The vast landscapes of Vatnajökull National Park, the geological formations and biosphere, will become even more interesting and important to guests if they are given the opportunity to be guided in nature interpretation in a manner suited to the local features of the national park.

The national park board will develop and implement a policy for knowledge sharing and education that is based on the objectives of the national park and its policy.

5.3.8 Park visitors and environmental work – collaboration and information sharing

The enjoyment and positive experience of visitors and others who spend time in the national park depend among other things on the success of the park's environmental work. Particular focus is on orderliness, safety and service. Visitors' participation and consensus towards making a good national park even better form the prerequisite for achieving good results and providing a positive experience. Thus, cooperation and collaboration with guests will be sought in this field.

Information on the environmental work of the national park and encouragement of visitors' participation will be presented, in a co-ordinated and prominent form, at all main visitor destinations in the park.

5.3.9 Guidelines and rules on hunting, fishing, egg collecting and mushroom picking

Good co-operation, clear rules and efficient publicity are crucial if hunting and herb or seed collecting are to take place in harmony with the natural environment.

The park will formulate and publicise clear rules on hunting, fishing, and picking of berries, herbs or mushrooms, in consultation with stakeholders and rights and property owners in the area.

5.4 EMPLOYMENT POLICY, COMMUNITIES AND ECONOMIC DEVELOPMENT IN THE AREAS ADJACENT TO THE PARK

It is one of the main objectives of the operation of Vatnajökull National Park to strengthen the communities and economic activities in the vicinity of the national park, by encouraging sustainable utilisation of the area's qualities. This objective has been part of the policy of the national park from the very beginning and is clearly stated in legislation pertaining to the park.

No business-related activities may take place within Vatnajökull National Park unless a contract for the operation has been made with the national park. The activity must comply with the conservation objectives of the national park, and be ruled by the general provisions in Section IV of Act no. 60/2007. Provisions for monitoring conservation objectives, procedure and contract-making are included in Regulations.

The board of the national park should supervise the national park's employment policy, see item 8, Article 6 of Act no. 60/2007 in which conditions for business activities within the national park are set out, with provisions for agreements in this regard. Refer to the unemployment policy and Regulations for further information.

Vatnajökull National Park keeps a register of all contracts that are made for business activities within the national park, and publishes a list of parties on their website, giving their names and activities.

5.4.1 Promoting sustainable use of land and natural resources

The park's land and natural resources provide the basis for a variety of creative uses, such as traditional farming, hunting, fishing and tourism.

The national park will ensure that all exploitation of land resources will be undertaken in a sustainable manner, reinforcing this with appropriate operating procedures, instruction, education and interpretation. The park will

monitor the effects of land use on the geological heritage and the biosphere.

5.4.2 Targeted cooperation with stakeholders - international work

It is to the national park's benefit that different interests are well understood, and that there is good cooperation with stakeholders. Such cooperation is encouraging and often leads to new ideas and projects.

Close cooperation with national parks of other countries can also be very useful and creative.

Identification of partners, domestic and foreign, at the outset, and systematic cooperation with them is the key to success.

The national park will perform stakeholder analysis, and define its partners based on this. A plan will be made for targeted collaboration and cooperation with these parties.

5.4.3 Working with communities in surrounding areas – employment policy

The local inhabitants and other individuals and bodies possess a huge body of knowledge about the qualities and unique position of the national park. The park wishes to strengthen and make use of this wealth of knowledge for the benefit of nature conservation, sustainable industry and artistic creativity.

Vatnajökull National Park will formulate employment policy with the aim of harnessing the initiatives of enthusiastic local people and others to create facilities that support these aims. This employment policy will include specifications of the extent to which the park's resources may be exploited for commercial purposes.

The national park will seek to work together with local people to share performance of the park's regular operations, for example as park rangers, having ensured that those involved meet the qualifications for such work.

5.4.4 Clear standards for quality and collaboration with service providers and private enterprises

It is a characteristic of successfully operated national parks that their development has encouraged population and business activity in the parks and their surrounding areas. The priorities of the parks' activities can create conditions where commercial operators, whether new or pre-existing, see their continuing location and activities

within the park as a growing asset. Some national parks have created special trademarks for manufacturers or service providers in their areas, which may be used for marketing purposes provided certain requirements are met. Settlement in conservation and surrounding areas can in this way be encouraged without in any way compromising the demands of conservation.

Compulsory rules and quality standards will be set for service, manufacturing or other operations taking place within the park. These rules will be clear and provide an incentive for responsible companies to work in partnership with the park.

Those working partners of the national park who comply with the rules and fulfil the park's requirements as to quality and sustainability will receive the park's formal confirmation, and be publicised on the park's website.

Part of such endorsement might involve the granting of permission to use the park's trademark or logo for services carried out or merchandise produced in the national park. Policy will be formulated on the park's logo and trademark and their use.

5.4.5 Sustainable tourism within the park and surrounding communities

In partnership with tourism businesses and the local population, the national park wishes, to encourage the development of an internationally recognised tourist industry that is sustainable and which reflects respect for the nature and cultural heritage which it is the responsibility of the park to preserve. International certification may also endow the area's tourist industry with special status and give it considerable competitive advantage.

The park will seek to obtain international certification under the European Charter for Sustainable Tourism in Protected Areas (ECST).

5.4.6 Educational tourism with an emphasis on nature study

While its landscape, geology and diversity of geological formations are the main attractions of the national park, it is also home to enclaves of flourishing vegetation, thermophile bacterial communities in geothermal areas, and animal populations. This natural world is a source of opportunity for, amongst other things, tourist industry in the park's neighbouring settlements.

Emphasis will be placed on educational tourism focusing on nature observation.

These operational objectives will be elaborated further in an action plan that will define individual projects and the manner of and responsibility for their implementation.

6 Assessment of conservation value

Assessing the conservation value of areas within the national park is one of the basic prerequisites for decisions on land use, zonal division (the classification of areas into conservation categories) and planning. When assessing the conservation value of an area, particular account is taken of its natural conditions and cultural heritage, and whether the area can be classified as wilderness under item 19, Article 5 of the Nature Conservation Act no. 60/2013.

Guiding principles, future vision, objectives, stipulations for land use and individual conservation measures are all based on an assessment of conservation value.

6.1 ASSESSING CONSERVATION VALUE OF THE NATURAL HERITAGE

The process of assessing the conservation value of the national park's natural heritage is based on a large body of existing knowledge about it, together with such requirements relating to nature conservation as are laid down in relevant laws, international agreements and Icelandic government policy, including methods for assessing the conservation value of the natural heritage as presented in the 2004–2008 Nature Conservation Plan. That methodology is based on the Icelandic legal framework on conservation, Iceland's undertakings in the international arena, internationally recognised standards and conservation criteria, and Icelandic government policy. The following factors are taken into consideration:

- a natural heritage that is rare, diverse, continuous, integral and undisturbed
- rare or endangered species and areas that are particularly rich in variety of species
- preservation of robust populations of flora and fauna and of natural development processes
- areas sensitive to degradation
- the international nature conservation value of areas and whether Iceland bears specific responsibility under international agreements to which it is signatory
- scientific, sociological, economic and cultural value of areas
- characteristics of areas with regard to the respective region's natural features

- visual value of areas

Furthermore, consideration is given to:

- plant and bird red lists, including the revision of the plant red list proposed in recommendations for the Nature Conservation Plan of 2009–2013
- regulations no. 583/2000 on foreign plant species
- section X of the Nature Conservation Act no. 60/2013 The following formations and ecosystems are specially protected and any disturbance of them should be avoided as far as possible:
 - craters, pseudocraters and lava fields
 - lakes and ponds, 1,000 m² and larger
 - wetlands and marshes, 3 hectares and larger
 - waterfalls
 - geysers and other hot springs together with geyserite sheets 100 m² and larger
 - salt marshes and mud-flats
- Article 1–4 of the Nature Conservation Act no. 60/2013, setting out the objectives of the Act, the protection objectives and scope
- methods and criteria of the Icelandic Institute of Natural History in compiling the Nature Conservation Register; see Section VI of the Nature Conservation Act no. 60/2013
- conservation value of hydro power plant areas north of the glaciers as recorded in a 2000 report by the Icelandic Institute of Natural History
- conservation value of highland habitat types recorded in the 2009 Icelandic Institute of Natural History report on highland habitats
- measurement of the conservation value of 18 high-temperature areas as recorded in the 2009 report on high-temperature areas by the Icelandic Institute of Natural History
- conservation of geological heritage in Iceland as per a 2002 report by the Icelandic Institute of Natural History
- advertisement in Stjórnartíðindi/Legal Gazette B no. 120/1974 for a conservation order on dropstones

- **item 19, Article 5 of the Nature Conservation Act no. 60/2013 on untouched wilderness.**

It is also necessary to examine whether the area:

- **is host to species of responsibility, i.e. bird species for which Icelanders bear international responsibility, being species where 30% or more of the breeding population breed in Iceland**
- **is host to species listed in the Berne Convention**
- **possesses other natural features with defined special value or the area has been specifically declared a conservation area e.g. under the Ramsar Convention**
- **is a water protection area**

6.2 ASSESSING CONSERVATION VALUES OF THE CULTURAL HERITAGE

All cultural heritage sites as defined in the Cultural Heritage Act no. 80/2012 are protected. Cultural heritage sites may not be disturbed in any way. The process of assessing the conservation value of the national park's cultural heritage is based principally on the following information sources and legal/treaty obligations:

- **archaeological cataloguing in the park's individual local communities, including information about the location of archaeological remains, the distinctive features and cultural historical value of archaeological remains for the particular district or region, the importance attached to preserving particular archaeological remains, and risk assessment**
- **the Cultural Heritage Agency schedule of protected sites. All archaeological artefacts must be protected. These are items more than 100 years old that have been used by men or which bear evidence of human intervention and that have been found in or on the earth or glacier or sea**
- **the Cultural Heritage Act no. 80/2012**
- **the European Convention on Protection of the Archaeological Heritage, London 1969**
- **UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris 1972**

7 Land use

This chapter explains which areas of the national park are bound by special protection orders, or other restrictions on land use, that local authorities are obliged to consider in their development plan. It also states the policy and conditions applying to infrastructure and services in the national park. All construction and development projects within the national park are dealt with in the development plan (municipal and local) and require building and development permits as appropriate. Such projects and constructions are covered by this management plan and organised in collaboration with and permission from Vatnajökull National Park. See chapter 2.4 for more on planning permission.

In compliance with Planning Regulations no. 90/2013, a local development plan is implemented for every construction/development project within the national park. Local plans are drawn to various scales, depending on the project type. A smaller scale is suitable for a plan relating to the network of footpaths, and a larger scale plan would be used for areas where buildings are proposed.

Relevant specialist agencies should be consulted about all construction work e.g. regarding nature conservation and historic remains.

Provisions for land use are based, amongst other things, on the conservation value as discussed in chapter 6.

The national park publishes descriptive plans for areas and places where land use provisions apply, but these are not part of the approved management plan.

Descriptive plans show the main elements of land use. They can be found on the Vatnajökull National Park website.

7.1 PROTECTED AREAS AT MULTIPLE LOCATIONS

The following area types occur in more than one part of the national park; the same objectives and stipulations apply wherever the basis for protection exists.

7.1.1 Margins of the outlet glaciers

Basis for protection

Many landforms at outlet glacier margins testify to glacial/fluvioglacial erosion and deposition, glacier surging, or retreat and advance of the glaciers due to climate changes. Amongst the features are moraines, glacial sands, kettles holes, eskers,

roches moutonnées and glacial striations. Some outlet glaciers and their adjacent areas are completely, or to a large degree, within Vatnajökull National Park.

Glacial features at the margins of outlet glaciers are particularly sensitive to disturbance because the ground is unconsolidated and often contains areas of ice and mud.

There are unique moraine ridges near Rjúpnabrekkujökull, possibly containing glacier ice, and Brúarjökull has surged forwards as much as any known modern glacier in the world.

Objectives

To protect features which illustrate the history of erosion and deposition by glaciers, their retreat and advance, roches moutonnées, glacial striations, eskers, moraines, glacial sands, kettle holes, old glacial river beds, and shorelines of glacial lakes.

Stipulations

It is forbidden to spoil the appearance of, or cause damage to, sensitive glacial features in areas marginal to outlet glaciers e.g. by building roads, paths or other constructions.

Access by motor vehicles on to glaciers during the summer is allowed only at the following places and by routes which may vary, depending on circumstances:

- from Svarthöfði on to Köldukvíslarjökull
- at Jökulheimar on to Tungnaárjökull
- from Gæsavötn on to Dyngjujökull
- west of Kistufell, from Gæsavatnaleið on to Dyngjujökull
- from Háalda, south of Mt. Snæfell, on to Brúarjökull
- from Jöklasel on to Skálafellsjökull
- from Breiðamerkursandur on to Breiðamerkurjökull at Mávabyggðarönd, east of Breiðarlón

7.1.2 Nunataks

Basis for protection

Nunataks occur at several places in Vatnajökull; Esjufjöll is the largest. Nunataks which have recently emerged from the ice are, essentially, new land. They offer interesting research opportunities, for example in the study of land colonisation by plants, small creatures, and birds. The nunataks are vulnerable to disturbance and encroachment. It would be interesting to give special protection status to newly emerged, or about to emerge, nunataks, on the basis that they have not been influenced by exposure to humans. This applies to

inaccessible nunataks which are not likely to become attractive tourist destinations, for example.

Vöttur is a nunatak in Skeiðarárjökull which recently emerged from the ice and access is restricted, for the aforesaid reason.

Esjufjöll, Mávabyggðir, Kárasker and Bræðrasker were already protected before they became part of Vatnajökull National Park. The nunataks are not frequently visited because access to them is difficult. At Esjufjöll there is a mountain-hut belonging to the Iceland Glaciological Society, used mainly for research purposes.

The demarcation of Esjufjöll is included in the Vatnajökull National Park Regulations.

Objectives

Nunataks should primarily be areas for researching how ecosystems evolve when free of human influence.

Stipulations

Any disturbance, or other change, to the ground is prohibited.

It is prohibited to harm or disturb wildlife, damage or curtail plant life, alter vegetation e.g. by sowing or planting, or pollute water.

Motorised vehicles are banned on the nunataks but permitted on the surrounding glaciers.

Unless otherwise stated, people are allowed on nunataks, with the proviso that they do no damage to nature or land.

Access to the nunatak Vöttur is prohibited except with the permission of the national park authorities, for scientific research.

Overnight stays are generally prohibited on the nunataks but permitted on the surrounding glaciers.

One mountain hut is authorised on Esjufjöll, below Lyngbrekkutindur, for scientific research by the Iceland Glaciological Society; no other building is permitted. The Glaciological Society is permitted to rent accommodation in the hut to tourists.

Camping is permitted in Esjufjöll on barren land in the immediate vicinity of the Glaciological Society hut, unless a national park warden specifies any other area, together with map coordinates. Visitors shall acquire information about the area from the national park warden for the southern region, and avoid damaging vegetation.

The national park authorities may limit access to specific nunataks in the interests of scientific research.

7.1.3 Lava caves

Basis for protection

This applies not to a specified area but to individual lava caves, e.g. in the Ódáðahraun lava field, with fragile formations such as dropstones, lava straws etc. which are protected by advertisement in Section B of *Stjórnartíðindi* (Legal Gazette) no. 120/1974. The coordinates of most caves are readily accessible, and so the most fragile ones should be protected.

Objectives

To ensure the preservation of special, in some cases almost unique, and very fragile lava formations such as dropstones and lava straws etc.

Stipulations

Fragile lava caves are closed to the public and access to them is subject to rules set by the national park and is subject to permission from the national park wardens.

7.1.4 Pseudocraters

Basis for protection

Pseudocraters form when molten lava flows into shallow water or wetland. The water beneath the layer of lava boils, and when the steam pressure exceeds the strength of the lava it breaks through explosively in a pseudocrater eruption. Pseudocraters differ from true volcanic craters in that they have no magma conduits or "root", and are grouped in clusters, rather than the line of craters that forms along a fissure.

Pseudocraters are protected natural monuments under Article 61 of the Nature Conservation Act no. 60/2013. They are a rare phenomenon outside Iceland.

A number of clusters of pseudocraters are found in the western region of the national park: in the Skaftá lava field; north of Blængur (Sappar), northeast of Skerhóll, at Stakfell, between the Grjótá and Skaftá rivers and at Hrossatungur (just outside the national park).

Objective

To ensure the conservation of unique geological formations.

Stipulations

Travel through the areas is restricted to walkers, on marked paths. Winter driving is prohibited in and around clusters of pseudocraters.

7.1.5 Areas where non-native plant species are spreading

Basis for protection

Non-native plant species such as the Nootka lupin (*Lupinus nootkatensis*), the black cottonwood (*Populus trichocarpa*), and a few willows and conifers, grow in some localities within Vatnajökull National Park. Some of these species are particularly invasive and can compromise the native vegetation and/or natural changes in vegetation. Nootka lupin is one such species. Lupin fields within the national park have spread rapidly; from 1982 to 2000 the lupin field at Bæjarstaðarskógur at Skaftafell grew from 0.5 ha to 32 ha. It is important to control the spread of lupins and other species which could disrupt the natural development of vegetation and the biodiversity within the park, and remove them from the flora if possible.

Objectives

To preserve the native flora and maintain biodiversity within Vatnajökull National Park.

Stipulations

Non-native species which could compromise the native vegetation and/or biodiversity will be controlled, and eradicated from the flora where possible.

The occurrence and extent of non-native species within the national park will be mapped and the information used to decide which species should be eradicated and which should be controlled. Local action plans will then be made, laying out the action to be taken in each area.

7.1.6 Reindeer calving areas

Basis for protection

Female reindeer (*Rangifer tarandus*) need privacy while giving birth, and disturbances or visitors can increase the incidence of calf mortality. Reindeer calve widely in the western wildernesses of the eastern and southern regions of the park. It is difficult to indicate a particular calving area because the location depends to some degree on prevailing conditions. The calving area is normally free from intrusion because calving takes place before the main tourist season begins, but when summer arrives early there may be visitors in the area during calving season. Low-flying aircraft during the calving period could cause disturbances.

Objectives

That female reindeer can select suitable places for calving, away from human interruptions.

Stipulations

Visitors will be directed away from the calving areas during calving season (15 May to 10 June).

National park wardens are authorised to limit visitor traffic during calving season, where appropriate.

Collaboration with the aviation authority is expected, regarding limiting low-altitude flying of aircraft over Snæfellsöræfi; see *Flugmálahandbók* (Aeronautical Information Publication).

7.1.7 Breeding and moulting grounds of the pink-footed goose

Basis for protection

The pink-footed goose is a responsibility species in Iceland, which means that maintenance of the population is largely dependent on its habitat in Iceland. Part of the population breeds in the national park, including in Snæfellsöræfi and in vegetated parts of Brúaröræfi. Important moulting areas are also in the national park, including at Eyjabakkar. Low-flying aircraft could disturb the behaviour of the pink-footed goose in the breeding and/or moulting seasons.

Objectives

Humans should not disturb the breeding grounds of the pink-footed goose.

Stipulations

National park wardens are authorised to limit all access to the main breeding and moulting grounds of the pink-footed goose.

Collaboration with the aviation authority is expected, regarding limiting low altitude flying of aircraft over Snæfellsöræfi; see *Flugmálahandbók* (Aeronautical Information Publication).

7.1.8 Spring and pond areas

Basis for protection

Spring-fed lakes in the Late Pleistocene formations of Iceland are unique and very interesting for reasons of their extent, nature and physical properties, resulting from the young, very porous basalt that is their environment and principal controlling factor. Similar water systems are unlikely to exist elsewhere in Europe, thus they have great significance in an international context.

There are several vulnerable vegetated areas by springs north of the Vatnajökull ice cap e.g. Herðubreið Nature Reserve (outside the national park), Svartá river, Svartárbotnar, Gæsavötn, Suðurárbotnar, Hvannalindir, Kreppulindir, Kreppuhagar eystri, Kreppuhagar vestari and some springs on the western edge of the national park. Continuously vegetated areas are common and

biodiversity is greater than elsewhere in the highlands. These verdant areas are popular visitor destinations and this may place a strain on vegetation.

The areas are important habitats for the pink-footed goose and other species, and it is the highest breeding ground for geese in Iceland. Pink-footed goose is a species for which Iceland bears global responsibility. Visitor traffic during the breeding season of the pink-footed goose could disturb egg-laying, and removal of eggs could reduce the size of the population.

Objectives

To protect vulnerable highland vegetation and prevent soil erosion in the spring areas on the edge of Ódáðahraun.

To preserve the habitat of the pink-footed goose and other creatures in the spring areas.

Stipulations

All traffic into the spring areas will be managed by marked trails, designated camping areas and clear signage.

The national park warden is authorised to close campsites or trails where land and/or vegetation are at risk due to excess traffic.

7.1.9 New natural features/formations

Basis for protection

Nature in Vatnajökull National Park is dynamic and constantly changing. New natural phenomena form and others change their appearance and behaviour. For example, new features may form due to erosion, melting of a glacier or a volcanic eruption; alterations to the biosphere may occur in response to climate change or habitat changes. Some phenomena form over a long time, but others form quickly and without warning. In such cases, the formal process of changing the management plan could prove too slow to guarantee protection of the relevant phenomena. For this reason, park wardens have the authority to temporarily close designated park areas to traffic if an area of land or aspect of the biosphere is threatened, see paragraph 6, Article 15 of the Vatnajökull National Park Act, no. 60/2007.

Park wardens are also authorised to take necessary steps in response to natural disasters or unexpected situations, see paragraph 3, Article 18 of the Vatnajökull National Park Act, no. 60/2007.

It is normal for new natural features to arouse the curiosity of park visitors, but they can pose a risk, e.g. newly erupted lava or a new high-temperature geothermal area. It is essential that the national

park is able to respond rapidly in such situations, to protect the relevant phenomenon, to address public interest and ensure safety. Specific new natural features or areas are further defined on the Vatnajökull National Park website. General information about the phenomena shall be made available there, as well as its accessibility, necessary safety precautions and other relevant details.

Objectives

A systematic approach will be taken to the protection of new formations in the national park, the provision of information about them and safety matters concerning access to them.

Stipulations

All concerned parties must respect recommendations made by national park wardens and follow instructions and restrictions posted at the site and/or on the national park's website in collaboration with the regional board, specialists, organisations, government officials and stakeholders, as appropriate.

Descriptions of new areas, and their provisions, shall be incorporated in the management plan at the first opportunity, provided that the process of formation has ended.

7.2 PROTECTED AREAS WITHIN THE NORTHERN REGION

7.2.1 Askja

Basis for protection

The Askja volcanic system includes the Dyngjufjöll central volcano with the Askja caldera and at least two other calderas, one of which is Öskjuvatn lake. There is a high temperature geothermal field at Mt. Askja and, in a report evaluating conservation values of high temperature areas, the Icelandic Institute of Natural History recommends that Mt. Askja be given maximum protection. The report describes the area as follows: "A well-formed central volcano with a large caldera. In a major eruption in 1875 a small caldera and the Öskjuvatn lake formed. Pale fields of pumice from the eruption add colour to an otherwise dark grey and brown landscape. The eruption also produced ignimbrite, a rare rock-type in Iceland". The protection level is set high because of the geology, landscape, leisure, educational and economic value. Mt. Askja previously had protected status as a natural monument, and under the Vatnajökull National Park Act special rules apply to it. Askja is the most popular tourist destination in the highlands north of Vatnajökull. The large number

of visitors makes it necessary to limit the number of hikers who are permitted to pitch tents.

The boundaries of the area are defined in the Vatnajökull National Park Regulations.

Objectives

To control visitor traffic, protect Mt. Askja and prevent damage to geological formations with a high conservation value. Furthermore, that the wilderness experience offered by Askja and its surroundings shall be preserved, private vehicle traffic in the area shall be reduced and environmentally friendly means of transport shall be supported.

Stipulations

Camping during the summer is prohibited within 3 km of Öskjuvatn lake and of marked roads or hiking paths. Tents should be pitched so that they are least visible.

Driving on snow-covered or frozen ground is prohibited under Vatnajökull National Park Regulations no. 755/2009, within the area stated therein.

National park wardens can close individual areas or hiking routes within the region if necessary to prevent damage by visitor traffic.

7.2.2 Rauðhólar and Hljóðaklettur crater row in Jökulsárgljúfur

Basis for protection

Rauðhólar and Hljóðaklettur are part of a 6-km-long crater row which erupted 8000–9000 years ago. In their original form most of the craters were similar to Rauðhólar, but during floods the river Jökulsá swept loose material away from most of them, leaving only the interiors. The best known are Hljóðaklettur, although similar examples of volcanic plugs can be seen on both sides of the river. It is possible to see how the magma has cooled in the eruption vent, forming contorted columnar jointing which is rarely seen anywhere in the world.

Part of the eruptive fissure lies east of the canyon, outside the national park. The craters and plugs are easily damaged by heavy visitor traffic. It is thus necessary to carefully manage visitor traffic in this area and restrict access and traffic when the natural environment is most vulnerable. It is expected that the new road to Dettifoss will lead to a great increase in traffic, and the new local plans provide for a car park at Langavatnshöfði, to serve day visitors. A new hiking trail will be made, to a viewpoint above Hljóðaklettur and down to the cliffs.

Objectives

To protect Rauðhólar and Hljóðaklettur, manage visitor traffic and prevent damage to the geology.

Stipulations

Traffic through Rauðhólar and Hljóðaklettur is restricted to walkers, on marked paths; it is permissible to abolish the paths up to the highest scoria craters at Rauðhólar.

7.2.3 Ástjörn in Jökulsárgljúfur

Basis for protection

Ástjörn lake is an important habitat for the horned grebe (*Podiceps auritus*), an endangered species, and is also the breeding ground for other waterfowl. The three-spined stickleback (*Gasterosteus aculeatus*), main food source for the horned grebe, is common in Ástjörn.

Several factors could influence the breeding success of the horned grebe. Foremost is the mink, followed by high visitor traffic which could disturb the grebe as well as other nesting birds at the lake. A summer children's camp is run at Ástjörn so there is frequent visitor traffic on and around the lake at that season. Visitor traffic is higher than in most of the other wetland areas of the national park. The horned grebe is particularly vulnerable to water level changes.

Objectives

To ensure the protection of the horned grebe and its habitat at Ástjörn.

Stipulations

The breeding season of the horned grebe is defined as 20 May to 1 July.

During the breeding season of the horned grebe boat traffic is limited to the leased property by Ástjörn, which will be signposted, and boats must remain at least 20 m from the bank (when outside the boat anchorage) when on the lake during that time. The national park warden may grant exceptions.

During the breeding season of the horned grebe foot traffic is only permitted on marked paths and within the leased property at Ástjörn. Exceptions require permission from the park warden.

It is prohibited to alter the water level in the lake by construction work.

Mink is to be exterminated. The regional mink controller should coordinate with the park warden.

7.2.4 Human landscape in Svínadalur

Basis for protection

At Kelduhverfi there are many beautiful cultural remains. They are considered particularly important because they record the history of Icelandic life from settlement times to the 19th century. Svínadalur, an old croft near Jökulsárgljúfur, was occupied until 1946. Some very interesting archaeological features are well preserved inside a walled field, and elsewhere on the Svínadalur property are remains reflecting life by Jökulsá river.

The landscape of the area and individual rock formations were used by the farm. Stone enclosures were built in front of small caves and big rocks, where livestock could be kept or lambs weaned. Just east of Svínadalur was a corn mill and a heathen grave has been found west of the walled field. Two old abandoned farms lie south of Svínadalur: Fornasel and Viðrasel (which are jointly known as Fornasel).

Place names in the area are numerous and connected to farming and travelling within the area. All these cultural traces have great research, conservation, and education value and contribute to the importance of the national park.

Objectives

To protect and conserve the human landscape and selected cultural traces at, and around, Svínadalur farm.

Stipulations

It is prohibited to disturb the human landscape and cultural remains.

7.2.5 Woods at Ásbyrgi

Basis for protection

Ásbyrgi and the northern part of Jökulsárgljúfur are characterised by fairly continuous birchwoods. By the beginning of the 20th century the woods in Ásbyrgi had been severely affected by grazing and tree felling, but in 1930 re-establishment of the forest began. Lush vascular plants are typical on the floor of the birchwoods at Ásbyrgi, and one protected plant species grows there (herb Paris or Paris quadrifolia).

Dead and decaying trees host a wide range of fungi which live off rotting wood and add to the biodiversity of the region.

Around 1950 some 60,000 conifers were planted in the area, many of which are now quite tall and even beginning to self-seed. It is known that in mixed forests, conifers overshadow birch trees and it is important to prevent this from happening at Ásbyrgi. It is also important to make sure that the woods, or individual trees within them, do not

hide the cliff-face and block the view of the geological features at Ásbyrgi. The Iceland Forest Service should be consulted about proposed work at Ásbyrgi.

Objectives

To conserve biodiversity in the birchwoods.

To protect and strengthen the birchwoods by preventing any further spread of conifers.

To encourage the establishment of more rowan (*Sorbus*) trees.

To maintain the view of the cliffs at Ásbyrgi, and other important viewpoints.

To maintain good access along chosen trails inside the forest.

Stipulations

Selected trails inside the forest will be kept open by necessary thinning of the trees but otherwise thinning will be kept to an absolute minimum. Native trees will be encouraged to grow in the spaces left by felling non-native trees such as conifers. Self-seeded conifers and other non-native trees in and around the birchwoods are to be removed.

7.2.6 Soil conservation at Grjótháls and Hestatorfur

Basis for protection

Soil in Jökulsárgljúfur is generally quite thick and coarse-grained. Eroded volcanic material from the surrounding area is blown into Jökulsárgljúfur, and collects there. Erosion is rapid at Grjótháls and fairly high at Hestatorfur. The Soil Conservation Service and the national park authorities have worked together since 1998 on annual soil conservation projects. In 2004 the soil conservation programme was reviewed and it was concluded that results inside the national park were excellent and that the programme should continue and be extended in scale in order to control erosion.

Objectives

To safeguard biodiversity in the area.

To halt soil erosion in the vicinity of Jökulsárgljúfur by using soil conservation methods which take into account the importance of the natural features in the area.

Stipulations

Soil erosion which threatens the natural vegetation in the area is to be halted.

7.3 PROTECTED AREAS WITHIN THE EASTERN REGION

7.3.1 Kverkfjöll high-temperature geothermal area

Basis for protection

In the Kverkfjöll mountains there are geological formations which should, by international standards, be granted maximum protection e.g. pillow lava ridges, areas with boiling pools, and hot springs in glaciers. The geothermal area in Kverkfjöll (at Hveradalur, Hveragil, and under the glacier) illustrates uniquely the interplay of ice and volcanic activity. Thermophilic micro-organisms there could provide an insight into the origin of life on earth.

Objectives

To protect important geological formations.

Stipulations

Visitor traffic will be organised so that it does not damage fragile geological formations.

The national park warden is authorised to control and limit traffic in the area. Driving on the glacier is prohibited at Kverkfjöll under the provisions and restrictions of Regulations 608/2008.

7.3.2 Mt. Snæfell slopes, the surrounding peaks, and the area to the southwest towards Jökulkvísl

Basis for protection

The area contains vegetation which is beautiful and lends character to the area but which is very sensitive, tolerating no trampling. Damage to mosses remains visible for a long time and can also lead to run-off and associated damage to vegetation. The moss-covered areas are mostly discontinuous so it is possible to plan routes around them.

Objectives

To protect fragile nature and vegetation.

Stipulations

Shooting is restricted in part of the area, see provisions in the Vatnajökull National Park Regulations regarding hunting and egg-gathering.

Routes are to take account of the sensitive vegetation which tolerates little traffic.

Hiking trails are to be carefully located; cyclists and horse-riders are to be directed away from the vegetation.

The national park warden is authorised to control and limit traffic in this area if necessary for conservation purposes.

7.3.3 Eyjabakkar – Ramsar wetland

Basis for protection

The Eyjabakkar area is one of the biggest and most diverse wetlands in the central highlands of Iceland, unusually well vegetated and at about 650 m above sea level. The area is unique and the landscape is spectacular. Habitat types there are varied and rich in species, with many ponds, marshes, and various rare plants.

Such marshes are a rarity in Iceland. They are important grazing lands for reindeer, pink-footed geese, and whooper swans (*Cygnus cygnus*). The area is also an important moulting area for pink-footed geese; more of them have moult at Eyjabakkar than anywhere else in the world.

At Eyjafell there are some unique end moraines. The area contains fragile moss patches which are discontinuous so it should be possible to route visitors around them.

The Eyjabakkar area, because of its uniqueness, meets the requirements for an internationally important wetland under the Ramsar Convention. A 26,450 ha area at Eyjabakkar has therefore been added to the Ramsar Convention register.

Objectives

To preserve the unique qualities of Eyjabakkar as an internationally important wetland.

To preserve other unique qualities of the area, such as landscape, geological formations and ecosystems.

Stipulations

Shooting is restricted; see articles in the Regulations regarding hunting and egg-gathering.

The national park warden is authorised to limit traffic during nesting and moulting seasons to protect birdlife from disturbances. Hiking, cycling, and riding paths should allow for the fact that moss tolerates no traffic. Care is to be taken when marking hiking paths, and cyclists and horse-riders are to be routed around the vegetation.

7.3.4 Area east of Kverkjökull, south of Kreppuhagar

Basis for protection

Many sensitive natural sites are in this area, and it cannot tolerate a lot of traffic. There are many and varied geological formations, and at Kreppuhagar

there are oases which are sensitive due to their high altitude.

At Hveragil there are fragile siliceous precipitations on rocks along the stream banks. There are also additional geological features and vegetation that are vulnerable to trampling.

It is necessary to monitor visitor traffic in this area and ensure that it does not become too great, giving consideration to the area's tolerance limit. Current hiking trails must be changed to protect vulnerable areas and improve visitor safety.

Objectives

To protect sensitive natural heritage sites, geological features and oases. Tolerance limits for the area need to be studied, and its conservation value recorded and defined.

Stipulations

Planning provisions exist for a car park at Hveragil. Visitor traffic around the area will be managed, and access to sensitive places can be expected to be restricted to prevent disturbance of geological features and vegetation.

National park wardens are authorised to prevent access to the most vulnerable areas if there is a risk of damage.

7.3.5 Hvannalindir, protected national heritage

Basis for protection

At Hvannalindir there are important protected national heritage features, ruined dwellings once inhabited by outlaws, at the edge of Lindahraun lava field. The ruins were discovered in 1880 by author Jón Stefánsson and three other men from the Þingeyri district. Kristján Eldjárn studied the ruins in 1941. It is believed that outlaws Fjalla-Eyvindur and his partner Halla stayed at Hvannalindir in 1767, and for a few years afterwards, until they moved to Eyvindarver by the river Þjórsá.

The immediate vicinity of the outlaws' ruins at Hvannalindir has suffered in recent years. Trampling has considerably damaged vegetation in the surroundings of the ruins, and damage to the stone-built walls may be attributed to excessive pressure on them. The cultural heritage must be protected from damage. Improvements need to be made visitor access, so that visitors do not cause damage to the cultural heritage site or its surroundings.

Objectives

That the heritage site is preserved in its current condition. The public is given the opportunity to visit the ruins and learn about the outlaws.

Stipulations

Visitor traffic in the area shall be managed by clearly marked pathways, platforms at vulnerable places and clear information boards. All such constructions shall be plain and well-suited to their environment.

The Cultural Heritage Agency of Iceland oversees the protection of cultural heritage sites and decisions about construction work in the vicinity of the ruins shall be made in consultation with the Agency.

7.3.6 Krepputungusporður and Kreppulindir

Basis for protection

The northernmost part of Krepputunga is a very unique area where there is sensitive vegetation, birdlife (pink-footed goose breeding area), signs of cataclysmic flooding and ancient river courses.

The Kreppulindir area is beautiful and a unique oasis with a vulnerable ecosystem and geological features in vegetated canyons surrounded by cliff faces. The spring area has little tolerance for trampling and requires monitoring.

Objectives

That the area is preserved in its present condition, and that its appearance is not changed by visitor traffic. The tolerance limits for the area must be studied, and its conservation value recorded and defined.

Stipulations

Camping is not permitted at Kreppulindir.

National park wardens can close access to the area if there is reason to do this.

7.4 PROTECTED AREAS WITHIN THE SOUTHERN REGION

7.4.1 Columnar jointed basalt at Heinaberg

Basis for protection

Columnar jointed basalt is common in the Heinaberg area. Heinar is the name given to some prominent columnar jointed basalt crags, and there are others at Miðfell. With increased traffic in the area it is anticipated that more people will visit the columnar jointed basalt. People sometimes climb on the columns; this can damage the rock and injure the vegetation.

Objectives

To protect the columnar jointed basalt formations, and the vegetation, in the Heinaberg area.

Stipulations

Traffic on the columnar jointed basalt will be controlled using targeted methods aimed at preserving vulnerable geological formations and vegetation. The protection methods will be explained to visitors on information boards.

7.4.2 Human landscape at Skaftafell and Heinaberg

Basis for protection

Changes in the glaciers and the glacial rivers have influenced where people lived. Glaciers advanced over grazing land and glacial rivers flooded and destroyed fields and meadows. The remains of farms in Skaftafell and Heinaberg show how people coexisted with the frequently inhospitable nature.

Objectives

To protect and maintain the human landscape and selected cultural remains at Skaftafell and in the Heinaberg area.

To give the public the opportunity to learn about the history of the area.

Stipulations

It is forbidden to damage the human landscape or those cultural remains which have been professionally assessed as most important.

The old domestic hydro-electric generator house (dating from the 1920s) at Skaftafell will be maintained, the old pasture fields at Sel, Hæðir and Bölti will be grazed or mowed, and trees will be removed from stone walls at Gömlutún, Oddasker and west of Magnúsarfoss.

Archaeological features must not be damaged.

7.4.3 Svartifoss waterfall at Skaftafell

Basis for protection

The nature around the Svartifoss falls has deteriorated due to large numbers of hikers. Increase in the number of visitors is expected to cause further damage, not least to the vegetation. Action must be taken to safeguard the sensitive surroundings of the waterfall; visitor management is also required and platforms with good views of the waterfall are needed. Such constructions are problematical, as it is also important not to diminish the positive experience of visiting Svartifoss.

Objectives

To protect the surroundings of Svartifoss from increasing visitor numbers.

To re-establish and protect the vegetation in the slopes by the waterfall.

To enable people to enjoy the view of the waterfall.

To ensure the safety of visitors.

Stipulations

Access is restricted to walking paths and the planned viewing platforms.

All constructions near the waterfall should be completely reversible.

The visual impact of constructions should be minimised and emphasis placed on preserving the existing appearance of the area.

7.4.4 Reclamation of wetlands at Skaftafellsheiði (south of Skerhóll)

Basis for protection

Extensive ditches were dug in the western part of Skaftafellsheiði heath in the mid-20th century, in order to drain the land and supply water to a hydroelectric plant at Hæðir. Conditions on the heath, where soil is thick and precipitation is high, mean that some ditches continue to deepen and widen.

Objectives

To prevent further widening of the ditches, particularly near the hiking routes at Skerhóll, and to reclaim wetlands by filling ditches where possible.

Stipulations

Further soil erosion is to be halted by targeted measures, causing minimum disruption.

7.4.5 Lambhagi at Skaftafell

Basis for protection

Lambhagi is surrounded by stone walls which are amongst the oldest cultural remains at Skaftafell.

Conifers and poplars were planted at Lambhagi in Skaftafell around 1950. There is now a small grove with a few conifers which are amongst the tallest in the country and one tall poplar. The European common twayblade orchid (*Listera ovata*) has been found in the wood; it is a protected species on the endangered list.

Objectives

To conserve the natural vegetation at Lambhagi.

To prevent the spread of non-native species of trees at Skaftafell by, for example, felling the poplar there and removing any new saplings.

To conserve the stone walls which surround Lambhagi. They are classed as cultural remains and are protected by law.

Stipulations

Visitor traffic at Lambhagi is to be managed to minimise impact on vegetation and archaeological features by providing good information and clear signage.

The spread of poplar trees will be prevented by removing saplings and shoots, and by chopping down trees if other methods are not enough. Trees/shrubs growing in the stone walls will be removed.

7.4.6 Birchwoods – Bæjarstaðarskógur, woods on the west of Skaftafellsheiði, and wooded areas around Mt. Hoffellsfjall

Basis for protection

The birch trees in Bæjarstaðarskógur woods at Skaftafell are taller than those in any other wood in Iceland, and grow straight with a pale trunk. The woods at Skaftafell have recovered well since utilisation, mostly for charcoal production, declined greatly in the second half of the 19th century and finally ended. There is woodland near Hoffellsjökull, in magnificent landscape created by outlet glaciers. Vegetation in the old birchwoods is unique, and they are the habitats of rare vascular plants and species of lichen. Lichens live on trees and fallen tree trunks; the draft Nature Conservation Plan 2009-2013 states that most of the rare lichens which grow in the east and south of Iceland can be found in these woods. One protected vascular plant, the European common twayblade orchid, can be found in the birchwoods at Skaftafell. Minimum thinning of the forest is proposed because rotten and dead trees host many species of fungi which depend on rotting wood for nutrition, enhancing the biodiversity of the area.

Objectives

To safeguard biodiversity in the birchwoods, to conserve the birchwoods and prevent the spread of non-native trees.

Stipulations

The birchwoods should generally not be thinned, but allowed to evolve naturally.

Path maintenance and laying of new paths should cause minimum disturbance.

7.4.7 Conservation of the natural vegetation in Morsárdalur

Basis for protection

When Skaftafell was made a national park, one of the conditions was that grazing would be phased out in the area. There have been no sheep in the area since 1980. Until early summer 2009 the Skeiðará river prevented sheep entering Morsárdalur valley from Skeiðarársandur because the river closed off the mouth of the valley. Since the Skeiðará river changed its course the valley has been open to sheep, and sheep that are allowed to graze on Skeiðarársandur sometimes wander into Morsárdalur, so fencing may be necessary.

At round-up time, the vast majority of the sheep which graze on Skeiðarársandur appear south of the ring road, so a fence may not be needed. It is possible that effectively controlled limited grazing could assist with the elimination of the lupin. Under Regulations no. 583/2000, all cultivation of non-native species of plants is forbidden in protected areas.

The grazing-free policy was designed to allow the vegetation to develop naturally. This plan has not been totally successful because in recent years the Nootka lupin has become invasive and spread above the Bæjarstaðarskógur woods and on the gravel plains in front of them, where it hinders the growth of other plants.

Objectives

To protect the natural vegetation, and its development, in Morsárdalur and the Skaftafell mountains.

Collaboration will be sought with the Soil Conservation Service of Iceland and the Icelandic Institute of Natural History, to make a plan to prevent any further spread of the lupin in Morsárdalur, and to eradicate it.

Stipulations

Sheep are not to be grazed in Morsárdalur, except under careful control so as to eradicate the lupin. The mouth of the valley may be fenced off, if needed, to ensure that no sheep graze in the area.

7.4.8 Heitulækir

Basis for protection

In the outer portion of the Morsárdalur valley are warm springs called Heitulækir. Green and brown algae grow in the springs, and around them is thermophilic vegetation e.g. self-heal (*Prunella vulgaris*) and various orchids. One of the warm springs has been dammed and it is a popular bathing spot. The effects of tourism have already led to deterioration of the area, and it is important to ensure that there is no further damage.

To prevent damage to sensitive vegetation it is necessary to monitor the area and control visitor traffic in it.

Objectives

To protect the unique ecosystem in and around the Heitulækir hot springs.

To prevent damage to vulnerable vegetation, and to monitor the area.

Stipulations

The path to Heitulækir will be repaired to have as little visual impact as possible. The national park warden is authorised to temporarily close access to Heitulækir, if needed.

7.5 PROTECTED AREAS WITHIN THE WESTERN REGION

7.5.1 Area north of Kambar (between Kambar and the Skaftá river)

Basis for protection

The area is remote and little-visited. It includes sensitive mosses, tundra formations, ponds and ditches which are important habitats for ducks, swans and geese, and also the great northern diver.

Objectives

That the appearance and peacefulness of the area should not be reduced by visitor traffic. That mosses, wetlands and fauna should not be disturbed.

Stipulations

Traffic through the area is restricted to walkers, on marked routes. Winter driving is prohibited.

7.5.2 Langisjór and Fögrufjöll

Basis for protection

Langisjór and Fögrufjöll are counted by many among Iceland's most beautiful places, with splendid mountain scenery and a peaceful environment. The Fögrufjöll mountains are a popular walking area, with sensitive mossy vegetation. Langisjór lake is popular for boating and angling.

Objectives

That the peacefulness of the area not be diminished by visitor traffic. That neither vegetation nor the ecosystems of lakes and rivers be disrupted.

Stipulations

Fögrufjöll are open only to walkers, both summer and winter. A national park warden may, in

consultation with the regional committee, issue rules on engine size and traffic for motor boats on Langisjór, if deemed appropriate.

7.5.3 The Laki crater row area

Basis for protection

The Laki crater row lies on a 25-km-long eruptive fissure which formed during the "Skaftá Fires" eruption in 1783-84. The conservation value of the geological features at Laki lies in the landscape as a whole. Three types of crater can be found there: scoria cone, spatter cone, and eruptive crater. Rootless cones can also be found, in greatly varying sizes and shapes. The craters are easily damaged by visitors, including hikers. Blængur, Varmárfell and Galti are probably all parts of the same hyaloclastite ridge. There are fragile lichens and mosses in the area, rare species of lichen and the *breiskjuhraunavist* habitat type.

Objectives

The scoria cones and the vegetation are not to be disturbed. The appearance of the area is not to be negatively impacted by visitor traffic. Visitors shall be clearly informed about traffic restrictions.

Stipulations

Walking is only permitted on the marked trails. Horse riding is prohibited in the Laki area except with permission from a national park warden. Winter driving shall be as close as possible to the road, and is prohibited on the slopes of the craters.

7.5.4 Vonarskarð

Basis for protection

The Vonarskarð pass between Vatnajökull and Tungnafellsjökull lies 900-1300 m above sea-level. It is a high-temperature geothermal field, with four geothermal areas. It includes a carbonated spring area with high protection status, where rare vascular plants and mosses grow. A report by the Icelandic Institute of Natural History rates the conservation value highly because the area contains varied and undisturbed geology, as well as rare and diverse geothermal features. The vegetation is unusually complete and undisturbed. The area is quite fragile and even limited traffic could cause permanent damage.

Objectives

To protect the unique geological features and vegetation.

Vonarskarð is to be a hiking area, free from disturbance by motorised vehicles.

Stipulations

The area is protected as a wilderness area, in Category 1b. Motorised traffic through Vonarskarð is prohibited between Svarthöfði and Gjóstuklif except on frozen, snow-covered ground and following normal rules about winter driving. Winter driving is, however, always prohibited on and around the geothermal area at Snapadalur.

Horse traffic in Vonarskarð is subject to the permission of the national park warden in the western region.

Cycling is prohibited in Vonarskarð. Visitor traffic of hikers arriving by three main access routes in Snapadalur – by Mjóháls from Nýjidalur, by Gjóstuklif from the north and by Kolufell in the south – shall be monitored carefully. Access to the geothermal area will be controlled, using quotas based on visitor safety, protection of the geology, tolerance limits for the area and visitor safety.

It is not permitted to stay overnight in Vonarskarð.

7.6 WILDERNESS AREAS IN THE VATNAJÖKULL NATIONAL PARK

Wilderness is increasingly valued as a rarity by the world's city dwellers. The national park emphasises the importance of wilderness areas and their protection. Certain areas have therefore been defined as "Vatnajökull National Park wilderness". These are areas which are larger than the minimum required to be defined legally as "wilderness" under the Nature Conservation Act no. 60/2013; to be defined as such, an area must be at least 25 km² in size, and it shall be possible to enjoy the solitude and nature without disturbance from man-made structures or the traffic of motorised vehicles, at a distance of at least 5 km from buildings or other signs of technology, such as electricity lines, power stations, hydro-electric reservoirs and main roads.

Although wilderness areas should carry as few signs of human activities as possible, they can contain hiking huts, huts used when rounding up livestock, telecommunication aerials, cultural remains, and roads for only occasional, very limited, seasonal use.

The largest wilderness area in the national park is the ice cap itself. The limits of this wilderness do not always coincide with the edge of the ice; at some points there are man-made structures which lie so close to the ice cap that areas of the glacier do not comply with the definition of a wilderness. In the same way areas outside the ice cap can be classed as wilderness because they are sufficiently distant from constructions, and the adjacent ice

cap provides enough total area to comply with the requirements.

The main areas are listed below. Where another wilderness area is contiguous with the ice cap the edge of the ice is the boundary between the wilderness areas.

The intention is that there should be no encroachment on the wilderness areas listed below.

7.6.1 General stipulations for wilderness areas

In wilderness areas all constructions and signage will be kept to a minimum; they will be simple, plain, and unobtrusive. Visitors will be provided with necessary safety information, for example, with warning signs. Education will take place primarily on the edges of the wilderness.

The management of the national park can temporarily limit winter driving in specific areas of the wilderness if necessary. Normal rules about winter driving apply unless otherwise stated.

7.6.2 Vatnajökull ice cap

Basis for protection

The Vatnajökull wilderness is vast and magnificent. In addition to the ice sheets with their mounds, hollows and cauldrons, in the ice cap there are mountains and nunataks such as Esjufjöll, Mávabyggðir, Pálsfjall and Grímsfjall. Travel on the ice cap is only for the well-prepared traveller with experience of glaciers because crevasses, hidden hollows, and other dangers are widespread. The ice cap is the largest wilderness within Vatnajökull National Park and is part of all four administration regions. The ice cap is the scene for diverse outdoor pursuits and tourist services, for example hiking and skiing trips, snowmobiling and jeep safaris.

Stipulations

Motorised traffic is prohibited on Hvannadalshnjúkur, on parts of Óræfajökull, and at Kverkfjöll, within the limits defined in the Vatnajökull National Park Regulations.

7.6.3 Trölladyngja

Basis for protection

The area is bounded by Gæsavatnaleið and Dyngjufjallaleið, and includes Trölladyngja, part of Hrímalda and the surrounding lava fields. The area is poorly vegetated and dry so traffic is very restricted in summer and winter. The terrain is difficult to cross.

7.6.4 Flæður and Vaðalda

Basis for protection

The area covers most of Flæður and Vaðalda, and extends to Krepputunga, east of the river Jökulsá á Fjöllum. North of Dyngjufjökull lies a sand and lava plain called Flæður, as well as the newly erupted Holuhraun lava which flowed from a new row of craters north of Dyngjufjökull.

Vaðalda is an Upper Pleistocene lava shield next to the river Jökulsá. The river Svartá í Jökulsá emerges from the southern side of Vaðalda, where the eastern end of the new Holuhraun lava stretches a little further west. The mountains which lie northwest of Bárðarbunga, by the northern part of Vonarskarð, are difficult to cross and rarely travelled. The Flæður area and Holuhraun lava field are constantly changing, and always demand full care and attention.

Stipulations

Signs and labelling will be kept to a minimum, and only used for purposes of nature conservation.

7.6.5 Dyngjufjöll and Askja

Basis for protection

The area comprises the Dyngjufjöll mountains and Mt. Askja. Its southern limit is road F910, and the northern limit is a road north of Dyngjufjöll (Vikrafellsleið), and the road to Vikraborgir. The wilderness area overlaps considerably with the Askja region, which is a special conservation area.

Stipulations

Winter driving is prohibited in the Askja area as defined in Vatnajökull National Park Regulations no. 608/2008.

7.6.6 Ódáðahraun

Basis for protection

The southern limit of the area is a road north of Dyngjufjöll (Vikrafellsleið) and it extends northwards, far beyond the boundary of the national park. The area has hyaloclastite mountains, shield volcanoes and lava fields, a true volcanic landscape. Much of the area is difficult terrain, due to lava, but good walking routes may be found between the areas, and the ancient Biskupaleið (Bishops' Path) passes through the north of the area.

7.6.7 Frambruni and Austurdalur

Basis for protection

The area is delimited by a road through Dyngjufjalladalur, a track alongside the west bank of Skjálfafljót river, and Dyngjufjallaleið road. It

covers part of Dyngjufjöll ytri, Frambruni, Austurdalur and the summer grazing land west of the national park. In the area are hyaloclastite mountains, lava fields, and sand plains, as well as sparsely vegetated gravel plains and heathland.

7.6.8 Kverkfjallarani and Krepputungusporður

Basis for protection

The eastern side of Kverkfjallarani, from Hveragil to Roðafell and including part of Krepputungusporður, is defined as wilderness. The eastern bank of Jökulsá á Fjöllum connects the wilderness areas at Flæður and Vaðalda. Kverkfjöll and Kverkfjallarani combine to make a magnificent landscape created by ice and fire. Roaring glacial rivers and vulnerable, well-vegetated oases, in addition to lava fields and *Stereocaulon* species lichen give character to the area. Kverkfjöll, Kverkfjallarani and Krepputunga form an area representing volcanic activity and cataclysmic flooding events. The landscape is frequently very open, and panoramic views provide a moving experience of a vast wilderness area.

It is important to study the area and record and define its value before a decision is made about how much visitor traffic the area will tolerate.

Stipulations

No constructions, including signs and trail posts, will be erected in the wilderness.

7.6.9 Kverkárrani

Basis for protection

The wilderness extends over a large portion of Kverkárrani, if small segments protruding into the area west and east of the road are disregarded. This wilderness area is contiguous with the wilderness of the Vatnajökull ice cap. The area is very remote and only accessible from the glacier. The river Kverká flows from beneath the northern tip of Brúarjökull glacier, and flows down Kverkárdalur valley, which is at about 650 m above sea level. The floor of this valley is entirely covered with gravel, and the valley sides are wind eroded and bare of vegetation. Most of Kverkárrani is high altitude plateau, at 800–900 m above sea level, and the Brúarjökull glacier descends onto it.

It is important to study the area and record and define its value before a decision is made about how much visitor traffic the area will tolerate.

Stipulations

No constructions, including signs and trail posts, will be erected in the wilderness.

7.6.10 Þjófahnjúkar – Háalda

Basis for protection

The area lies west of Eyjabakkajökull, to the west of Háalda and north of Þjófahnjúkar. It is contiguous with the wilderness of the Vatnajökull ice cap.

7.6.11 Kjós and Skaftafellsfjöll

Basis for protection

The mountainous area west of the Morsá river is known as Skaftafellsjökull. Kjós is a valley in the Skaftafellsfjöll mountains. The rocks are very colourful, with light rhyolite and dark basalt formations. The river Kjósarlækur flows along the valley and the valley is surrounded by steep, high mountains. The head of the valley, Kjósarbotn, lies in the middle of the extinct Skaftafell volcanic centre. The area is popular with hikers, but most routes in the mountains are difficult.

Stipulations

Constructions will be kept to a minimum.

Hiking trails will not be marked in the mountains.

Winter driving is prohibited.

A hikers' hut is to be constructed in the innermost part of the Morsá valley, see description of service area in section 7.8.

7.6.12 Eastern part of Lakagígar and uppermost part of Skaftá river and the Skaftá lava field

Basis for protection

The area is demarcated in the southeast by the boundary of the national park in the Skaftá lava field, and in the southwest by a line drawn from Blængur to Lyngfell and on to Eystra-Gljúfur, in the north by the Fögrufjöll mountains as far as Útfall, and from there by a line south of Skaftárfell to Skaftárjökull.

The wilderness area includes the eastern part of the Lakagígar crater row, and the uppermost part of the Skaftá lava field, adjacent to the glacier and Fögrufjöll, east of Sveinstindur. The area includes sensitive crater formations, such as pseudocraters, and vegetation of high conservation value: *breiskjuhraunavist* and *sandvikravist*.

Stipulations

No manmade structures, including signs and markers for walking routes, are to be installed in the wilderness.

7.6.13 Tungnaáröræfi, north of Tungnaá river

Basis for protection

The view in Tungnaáröræfi is panoramic. To the east can be seen Köldukvíslarjökull, Sylgjujökull and Tungnaárjökull, and there is a good view towards the Vatnajökull ice cap. Looking west, Hofsjökull and Mt. Hekla can be seen.

Unique Holocene geological formations can be found in Tungnaáröræfi, east of the Veiðivötn and Þórisvatn lakes, towards the edge of the glacier. There are scoria cones, spatter cones, explosion craters, lava flows, fissures and rock walls, such as Hágönguhraun, Heljargjá, Gámur and Gíma.

Stipulations

The national park warden can close certain hiking routes or parts of the area, if necessary, to protect geological formations from damage by visitor traffic.

7.7 ACCESS

7.7.1 Roads and park entrances

National park policy is that the road system inside the park should not become any larger. This does not, however, preclude improvements to the system intended to spread traffic-load, enhance options, or improve safety. Such changes are to be discussed by the board of directors, and cooperation sought with the appropriate local authority. Otherwise the procedure is to be combined with planning changes, as applicable.

The only roads open for general traffic within Vatnajökull National Park are those listed in the table below.

Other routes are closed to general traffic even though they may be visible on the ground or marked on maps other than one published by the national park. All roads shall be repaired in accord with the load they bear. The park warden can close roads without notice if the conditions are such that use of the road could damage nature or endanger visitors. Such closures should be in cooperation with the Icelandic Road Administration (*Vegagerðin*) and the closed section clearly marked at both ends. The aim is for all roads to be marked by roadside posts and appropriate information boards.

Decommissioned roads and tracks should be obliterated where possible.

National roads are intended for general traffic, maintained by public funding and included in the Road List (*Vegaskrá*) cf. the Roads Act no. 80/2007

with subsequent amendments, Article 8, paragraph 1.

National roads are divided into: *stofnvegir* — primary roads (including some highland roads); *tengivegir* — secondary roads; *héraðsvegir* — local access roads; and *landsvegir* — highland roads. Roads within and leading to the national park are classed as secondary roads. Highland roads include roads over heaths and mountains which do not belong to other national road categories. Maintenance of the national roads is the responsibility of the Icelandic Road Administration, see Article 5 of the Road Act.

Included in the Icelandic Road Administration's Road List are some of the roads which lie within the national park; they are classed as either secondary roads or highland roads. The Vatnajökull National Park board will work with the Icelandic Road Administration regarding classification of roads and their inclusion in the Road List.

Note: the classification of roads can change with changes to maintenance.

For information, the third column shows categories of roads, according to the classification system of the Icelandic Road and Coastal Administration (IRCA, *Vegagerðin*). Roads maintained by the IRCA are classified under the roads register, while other roads are classified by national park wardens. Road categories are three, defined as follows:

- **F1 Road/track which must be travelled slowly, passable by all traffic in summer. Major rivers and streams bridged**
- **F2 Rough road/track, passable by 4WD vehicles, very powerful passenger cars and small SUVs. Streams and smaller rivers unbridged**
- **F3 Very rough track, passable only by large and well-equipped 4WD SUVs. Rivers are unbridged**

Minimal maintenance in the following table refers to minor repairs as required.

SECONDARY ROADS

861 Ásbyrgisvegur	The road shall have a maximum speed limit to ensure the safety and pleasure of visitors to Ásbyrgi and to protect birdlife. In consultation with the Icelandic Road Administration, motor traffic may be restricted and public transport offered instead.
862 Dettifossvegur	Weight and speed restrictions shall be set to ensure the safety and pleasure of the visitor.
888 Vesturdalsvegur	The road is to be realigned in accordance with plans for Dettifossvegur 862 and a new viewing point and picnic area made at Langavatnshöfði. Traffic on the road may be controlled and restricted to benefit nature conservation, safety and the pleasure of visitors. Vehicular traffic on the existing road down to Vesturdalur is limited to overnight guests at the campsite in Vesturdalur, and drivers on special errands with permission from national park wardens.
998 Skaftafellsvegur	The road is to be slightly realigned to improve access to the visitor centre. A maximum speed limit shall apply to ensure the safety and pleasure of visitors.

HIGHLAND ROADS

F206 Lakavegur	The road is to be passable by all vehicles.	F2
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F207 Lakagígavegur	The road is to be passable by all vehicles.	F2
F208 Fjallabaksleið nyrðri,	From the turn-off to Faxasund in the west to Strangakvísl in the east.	F2
F229 Jökulheimaleið		F3
F223 Eldgjá		F1
F235 Langisjór		F2
F26 Sprengisandsleið		
F88 Öskjuleið	The road is to be maintained but not significantly improved. In the spring the road may not be opened until after the end of the incubation period of the pink-footed goose.	F2
F894 Öskjuvatnsvegur		F2
F902 Kverkfjallaleið	The road is to be maintained. Passing places are to be made.	F2
F903 Hvannalindavegur	The road is to be maintained and passing places are to be made. In spring the road may not be opened until after the end of the incubation period of the pink-footed goose.	F2
F909 Snæfellsleið	Road to be passable by small SUVs. Several passing and turning points to be made along the route (also for trailers and larger vehicles).	F2
F910 Austurleið	Rivers shall not be bridged unnecessarily. The road is to be moved farther away from the service area at Dreki to increase the space there and reduce through traffic.	F2/F3

OTHER ROADS

Road into Vonarskarð, past Gjallandi	There is to be one road instead of two and its alignment is to be reconsidered. One road will thus lead into Vonarskarð from F910. The road will end at Gjósta where there is to be a viewing point and picnic area with footpaths connecting to Vonarskarð.	F2
Road to Hnýflar north of Vonarskarð	One road instead of two is to lead from the road in Vonarskarð to Hnýflar. The road will end at a car park before reaching Hnýflar. From there a short footpath will lead to Hnýflar.	F2
Road to Hitulaug from road F910	(Only partially inside the national park)	F3
Road to Hitulaug from road junction north of Gjallandi	(Only partially inside the national park)	F3
Gæsavatnaleið via Urðarháls	The alignment of the road shall be reconsidered in relation	F3

	to topography.	
Road between Gæsavötn and the glacier.	The westernmost route to Vatnajökull.	F3
Road from Vörðukambur on Gæsavatnaleið to the glacier.	The westernmost route to the glacier from Gæsavötn.	F3
Gígölduleið from Gæsavatnaleið to F910, past Flæður.		F3
Road from Gæsavatnaleið to the glacier west of Kistufell.		F3
Dyngjufjalladalur to the F910, summer pasture road.	North of Suðuráhraun, between Stóraflesja and the southern end of the old road, the main route is to be away from Suðurá and traffic is to be restricted on the old track alongside the river.	F3
Road from F910 at the northern point of Holuhraun to Svartárbotnar and Skínandi waterfall	Two parking areas: one a short walk from Svartárbotnar, the other a short distance from Skínandi.	F3
Hveragilsleið	Traffic may be restricted under certain conditions, e.g. snow or natural disaster.	F3
Road to the ruins at Hvannalindir	Car park at the end of the road.	F2
Short stretch of road to hydrological station in Krepputunga	Car park at end of road.	
Road from 886, western Dettifoss to car park at Hafragilsfoss		
Vikrafellsleið	Route to be marked, but no improvements made. Ensured that the crater row north of Kistufell is not damaged.	F3
Road to the start of the walking route up Herðubreið.		
Geldingafellsvegur from Hraunaveituvegur to Geldingafell.	Road to be improved in conformity with category F2.	F3
Eyjakofavegur (Bergkvíslarkofavegur)	Traffic restrictions can be expected in certain circumstances e.g. when the ground is very muddy.	F3
Road from Snæfellsskáli hut to Sauðahnjúkar and on to Sauðárkofi.	The road is open only in late summer, subject to the national park warden's decision, and clearly marked closed at other seasons. It shall not be built up. The track onto Sauðahnjúkar is to be closed.	

Road between Laugarfell and Kelduá (from F910).	(On the national park boundary.)	(good-quality road)
Vesturöræfavegur	The road is only open in late summer, after consultation with park wardens, and clearly marked closed the rest of the year. The road is very wet and many parts are impassable, except for the largest of 4WDs.	
Hálsölduvegur		F2
Sauðafellsleið and Sanddalsleið to Eyjabakkafoss, from Austurleiðarvegur 910, east of Snæfell	Road to be improved in conformity with category F2.	F2
Short stretch of road up onto Sauðafell		F3
Short stretch of road, about 500m out to Snæfellsnes	Parking at the end of the road.	F2
Track to the west of Bjálfafell	Road to be improved in conformity with category F2.	F3
Track up onto eastern side of Bjálfafell	Parking and viewpoint at the end of the road.	F2
Track up onto Grjótarhnjúkur	Parking where the road ends, at telecommunications station.	F3
Road to Hoffellsjökull	(Only a small part is within the national park). To be passable by all vehicles in summer. Parking and sign at the end of the road.	F1
Road to Heinbergslón	The road is to be passable by all vehicles.	F1
Road into Heinbergsdalur valley	A car park is to be at the end of the road.	F2
Road to Heinabergsfell	The road is to be passable by all vehicles. A car park is to be at the end of the road.	F1
Road to Bólstaður via Heinar	The road is to be passable by all cars.	F1
Road to Hafrafell/Svínafellsjökull	The road is to be passable by all. A short section of the road lies within the national park.	F1
Roads in Skaftafell leading to Hæðir and Bölti, 9896 and 9897	The roads are closed to general traffic from 1 June to 30 September.	F1
The old national road on Skeiðarársandur	It is assumed that the road will be used by national park visitors in cooperation with the land owner.	F1
Road to Háalda on Skeiðarársandur	The road is to be passable by all cars in summer. A car park is to be at the end of the road.	F1

Road towards the glacier, along old Sæluvatn water course	No maintenance. The road will not appear on maps and will not be marked by the main road.	F1
Road towards the glacier, from river defence west of Skeiðará bridge	The road will be marked and maintained as for an F1 road.	(F1)
Road to hut at Sveinstindur	Marked, minimal maintenance.	F2
Road to viewing point at Vestra-Gljúfur south of Sveinstindur	Marked, minimal maintenance.	F2
Road to angling cabin by Langisjór	Minimal maintenance.	F2
Circular route around Mt. Hellnafjall, from F235		F3
Route along northern shore of Langisjór	Open 1 September to 15 March each year by permit from park wardens, maximum vehicle weight 6 tonnes. Route not to be shown on maps.	F3
Road onto Breiðbakur	Marked, minimal maintenance.	F2
Route from Breiðbakur to east of Langisjór (southern/lower route)	Marked, minimal maintenance.	F2
Route from Breiðbakur to east of Langisjór (northern/upper route)	Marked, minimal maintenance.	F2
Road to parking area at Gjátindur	Minimal maintenance.	F2
Road through Skælingar and Blautalón (connects F208 and F235)	Minimal maintenance. Special warnings in place for Blautalón road.	F2
Road from Þórisós to Jökulheimaleið F299	Marked, minimal maintenance.	F2
Track from Jökulheimar to Dór	Marked, minimal maintenance.	F2
Track from Jökulheimar to Heljargjá	Marked, minimal maintenance.	F2
Track along Heljargjá	Marked, minimal maintenance.	F2
Dead end in Heljargjá	Marked, minimal maintenance.	F2
Track from Dór up onto Gjáfjöll		F3

Track north of Gjáfjöll, along Veiðivatnahraun to Rauðhóll		F3
Track from Rauðhóll to Þórisósleið	Marked, minimal maintenance.	F2
Track from Heljargjá to Máni on Þórisósleið	Marked, minimal maintenance.	F2
Track from Þórisósleið to Botnsvatn	Marked, minimal maintenance.	F2
Road from Jökulheimar to the glacier	Marked, minimal maintenance.	F2 - impassable
Bárðargata between Jökulheimar and Svarthöfði	Those responsible for the road shall give warnings about dangerous streams/rivers on the route.	F3 - impassable
Route from Jökulheimar to Tungnaá	Marked, minimal maintenance.	F1
Road to Svarthöfði from Sprengisandsvegur by Hágöngulón		F2
Track from Svarthöfði to the glacier		F3

7.7.2 Proposed roads

A road connecting proposed mountain hut at Gjánúpstindur to existing road up Vesturdalur (if it is extended to the national park boundary).

A road into Heinaberg area from the east.

7.7.3 Main access routes

Clearly defined and marked access routes make travel in the area easier for visitors and reinforce the park's positive image. At access routes there needs to be relevant information, tailored to the conditions, nature and society at each place.

The main access routes to the national park are:

- to Jökulsárgljúfur from the north: Ásbyrgisvegur no. 861
- to Jökulsárgljúfur from the south: Dettifossvegur no. 862
- to the Northern Region highland: Arnardalsvegur no. F905 and Öskjuleið F88
- to the Northern Region highland, from east and west: Austurleið no. F910
- to Snæfellsöræfi: Via Fljótsdalur and Jökuldalur

- to Kverkfjöll from the west (Drekagil or Herðubreiðarlindir), from the north (Möðrudalur), and from the east on Austurleið (Jökuldalur or Jökuldalsheiði)
- to the Southern Region from the west: by national road no. 1. Information by the twisted fragment of bridge (memorial) east of Skeiðará bridge
- to the Southern Region from the east: By national road no. 1
- to the Southern Region via Jökulvegur no. F985
- to the Heinaberg area at main road
- to Hoffellsjökull at the main road
- to Hjallanes at the main road
- to Fláajökull at the main road
- Bárðardalur via Kiðagilsdrög
- to Nýidalur: Sprengisandsleið no. F26
- to Svarthöfði from Sprengisandsleið
- to Tungnaáröræfi from the north via Þórisós from Sprengisandsleið
- to Tungnaáröræfi and Jökulheimar from the south via Drekavatnsleið F229
- to Eldgjá and Langisjór from west and east
- Fjallabaksleið nyrðri F208
- to Lakagígar
- road to Laki (Lakavegur) no. F206

Main routes into the park are to be identifiable and clearly signposted; important visitor information is to be provided at appropriate service units (information points etc.).

Boundaries of the national park are to be specially marked. The type and size of park boundary notices depends on the type of road or other access route (hiking, cycle or bridle paths).

7.7.4 General restrictions on driving and traffic

Motorised traffic is only permitted on roads. Driving is, however, permitted off-road when the ground is frozen and covered in snow; see below for details about winter driving, relevant regulations and decisions of the national park wardens.

In exigent circumstances motorised vehicles may be driven off-road in national park territory, when the ground is not frozen and snow-covered, for tasks relating to soil conservation and land reclamation, construction, powerline constructions, roadbuilding or installation of other utilities, land surveys and agriculture, where the task in question cannot be performed by other means. Such driving shall be in consultation with a national park warden, and by permission of landowners or rights-holders, where applicable.

A similar authorisation applies to police and rescue work, but not to exercises.

On cultivated land it is permissible to drive off-road in connection with agricultural work, if this causes no damage to nature.

Special care shall be taken in off-road driving under this provision, in order to minimise risk of damage to nature. Adequate equipment for such driving shall be used. In connection with the above-mentioned tasks, ways shall be sought of transporting materials and other necessary supplies in such a way that off-road driving is not required.

A national park warden is authorised, in consultation with the Icelandic Road Administration, to restrict traffic temporarily e.g. in case of flooding, muddy conditions or nesting birds.

Maximum speed limits shall be applied to roads inside the national park, in cooperation with the Icelandic Road Administration, to ensure nature conservation, and visitors' safety and enjoyment.

Decisions about opening and closing dates for roads within the national park shall be taken in

consultation with the national park wardens and representatives of the road authority/owner. Road construction and normal park operations should be coordinated.

7.7.5 Guidelines on closure of areas/roads

A national park warden may, under Act no. 60/2007 and regulations no. 608/2008, temporarily close part of the national park, if the area or its ecosystem is are threatened and measures need to be taken. More specifically, the national park warden takes the following factors to be premises for closure:

- **an area is at risk of damage due to e.g. excessive traffic, flooding, frost damage, volcanic ashfall, off-road driving, run-off or landslides, the damage being irreversible except by protection status**
- **an ecosystem is at temporary risk, e.g. during birds' nesting period, waterbirds' moulting period, or reindeer calving period**
- **if sensitive geological features or vegetation are at risk, e.g. geothermal areas, caves with dropstones or lava needles, Holocene lava fields or moss heaths**
- **in cases of danger or emergency, e.g. natural disaster, major accidents, or other unforeseen events**

In the case of minor damage/danger, guidance may be provided by signs, cordoning off areas, etc. and notifying the closure on the park's website. If the closed area is extensive, it may be necessary to close access roads to the area in question, and this must be advertised in the Law Gazette (Stjórnartíðindi) and in the press, and the Icelandic Road and Coastal Administration (Vegagerðin, IRCA) must be notified. Collaboration with the IRCA must always be sought when it is necessary to close roads within the park.

7.7.6 Winter driving and routes to and on the glaciers

The driving of motorised vehicles off-road is not permitted in Vatnajökull National Park under Act no. 60/2007, Article 15 paragraph 4. However, it is permitted to drive motorised vehicles and snowmobiles off-road within the national park when the ground is frozen and covered with snow, provide that care is taken not to damage the area. This does not apply to Jökulsárgljúfur, Skaftafell, Hoffell or Askja areas as defined in the Vatnajökull

National Park Act no. 608/2008, see also associated Regulations no. 755/2099.

According to provisions of the Regulation, travel on Vatnajökull in motorised vehicles is permitted except on routes identified for a different purpose. Hvannadalshnjúkur is closed to all motorised vehicles at any time of the year, and areas in Örafajökull and in the Kverkfjöll mountains are similarly closed for part of the year, see Regulations no. 608/2008 and map in Appendix 1.

Travellers must familiarise themselves with restrictions which may apply to winter driving in wilderness areas and those areas under special protection orders. Provisions in the Vatnajökull National Park Act take priority over provisions under the Nature Conservation Act and associated Regulations for off-road driving. This means *inter alia* that Section V of Act no. 60/2013 about off-road driving does not apply to Vatnajökull National Park.

In summer, driving routes onto the Vatnajökull glacier are:

- from Svarthöfði on to Köldukvíslarjökull
- at Jökulheimur on to Tungnaárjökull
- from Gæsavötn onto Dyngjujökull
- west of Kistufell, from Gæsavatnaleið on to Dyngjujökull
- from Háalda, south of Mt. Snæfell, on to Brúarjökull
- from Jöklasel on to Skálafellsjökull
- on Breiðamerkursandur on to Breiðamerkurjökull at Mávabyggðarönd, east of Breiðarlón

As the margins of outlet glaciers change rapidly, and their surface varies from year to year, it is not possible to specify the precise location of access routes to the glacier, nor how long they remain passable in summer. Travellers should seek information from park rangers, the Iceland Glaciological Society or Landsbjörg (Search and Rescue). Inexperienced individuals are strongly advised not to drive onto the glacier without a guide.

Note that in late winter the upper portion of the substrate may melt in the sunshine. The ground is no longer frozen and off-road driving is not permitted.

7.7.7 Hiking trails

National park visitors are permitted to walk in the park and use skis, skates, snow-shoes and un-motorised sledges etc. Guests should follow marked trails where they exist, or comply with the

park wardens' instructions. Park wardens are authorised to close hiking trails temporarily in the interests of nature protection and visitor safety.

The main park destinations offer a variety of hiking trails and paths; most are shorter than 10 km. Longer hiking trails, connecting distant areas, are:

- **Ásbyrgi – Dettifoss**
- **Kverkfjöll (Sigurðskáli) – Hveragil**
- **Trails from Hvannalindir in Kverkfjöll**
- **Snæfellsskáli – Laugafell**
- **Snæfellsskáli – Geldingafell – Lónsöræfi**
- **Eyjabakkavað – Eyjakofi – Geldingafell**
- **Langisjór – Skælingar – Eldgjá – Hólaskjól**

New long-distance hiking trails are proposed, as stated here. The board can however define new hiking trails differently. Some trails are between the national park and adjacent areas and in such cases the appropriate landowners, local authorities and tourist organisations are to be consulted.

- **Route around the entire glacier of Vatnajökull**
- **Dettifoss – Mývatnssveit**
- **Bræðrafell – Heilagsdalur**
- **Mývatn - Suðurárbotnar (following Kráká river)**
- **Mývatn - Suðurárbotnar (through Heilagsdalur valley)**
- **Snæfellsskáli - Grágæsdalur – Kverkfjöll**
- **Kverkfjöll – Askja**
- **Askja – Jökuldalur**
- **Jökulheimar - Grænalón / Núpsstaðaskógur**
- **Núpsstaðaskógur – Skaftafell**
- **Veiðivötn - Ljósufjöll – Jökulheimar**
- **Jökulheimar – Vonarskarð**
- **Vonarskarð – Stóratunga**
- **Vonarskarð – Askja**
- **Across Tungnaáröræfi, e.g. Jökulheimar – Versalir**
- **Langisjór – Lakagígar – Skælingar – Eldgjá (footbridges or footbridge and cable ferry over Skaftá river)**
- **Lakagígar – Núpsstaðaskógur**

A continuous area of hiking trails is envisaged from Lónsöræfi to Skálafell, with some sections of the hiking trails within the national park.

7.7.8 Footpaths

Footpaths are surfaced, usually cover short distances and are in places popular with visitors. Paths must be safe, well-constructed and clearly marked – including information about their degree of difficulty. Park wardens are authorised to

temporarily close footpaths in the interests of nature protection and visitor safety.

Footpaths are marked on the trail maps at each departure point.

7.7.9 Footbridges or cable ferries

Locations are specified here where provision is made for facilitating journeys by walkers, by means of a bridge or a cable ferry in the case of major rivers, where a robust structure is necessary. Smaller-scale footbridges over brooks are viewed as an integral part of hiking routes, in the same way as route markers.

Footbridges/cable ferries are already in place at the following locations.

In the Northern Region:

- east of Eyjarás, crossing Víðralækur brook (former road bridge, now on bridlepath)
- crossing Brandslækur brook north of Hólmárfossar falls (former road bridge)
- at the northernmost part of Hólmatungur, crossing Hólmá river at Hólmárfossar falls (former road bridge)
- in Hólmatungur, crossing Melbugsa river

In the Eastern Region:

- in the Kverkfjöll mountains crossing Volga river

In the Southern Region:

- in Morsárdalur valley at Götugil canyon, crossing Morsá river
- in Morsárdalur valley at Grjóthóll, crossing Morsá river

In the Western Region:

- crossing Nyrðri-Ófæra river in Eldgjá

Footbridges/cable ferries are planned at the following locations:

In the Northern Region:

- at the mouth of the Vonarskarð pass, crossing Rjúpnabrekukvísl river

In the Eastern Region:

- in the Kverkfjöll mountains, crossing unnamed river beyond Volga river
- in the Kverkfjöll mountains, crossing Volga river (major improvements)

at Geldingafell hill crossing Blanda river (cable ferry)

- in Mariutungur, Vesturöræfi, crossing Jökulkvísl river (cable ferry)

In the Southern Region:

- in Morsárdalur valley at Morsarlón lagoon, crossing Morsá river
- in Hjallanes, crossing Kolgríma river
- west of Fláajökull glacier, crossing Hólmsá river
- in Hoffellsfjöll mountains, crossing Efstafellsgil canyon
- east of Skaftafell crossing Skaftafellsá river

In the Western Region:

- at Sveinstindur, crossing Skaftá river (cable ferry or bridge)
- at Skælingar between Hólaskjól and Stóragil, crossing Skaftá river (cable ferry or bridge)
- by Eldgjá, crossing Nyrðri-Ófæra river

Footbridges may be used by other traffic, such as snowmobiles or horses, if the access route to the bridge is open to such traffic, except where special conditions prevent this, e.g. due to weight limits or hazardous conditions. Such a prohibition shall be signposted.

7.7.10 Horse riding trails

Horse riding is permitted in the national park on the bridle paths which are listed below and appear on the park's published maps. Permission from the park wardens is required for riding groups with 20 horses or more. Holding places (*áningarstaðir*) for horses are set aside; at these designated sites (information available from the national park) it is also possible to put up temporary fencing to corral the horses. Park wardens provide information about this.

Horse riding is also permitted on those roads defined in chapter 7.7.1 provided that no other riding route is available. Horse riders must keep to the surface of the road or follow the marked (posts) route or tracks made by motorised vehicles where possible. Utmost care must be taken on busy roads, particularly on good roads where fast traffic can be expected.

Marked riding trails should be followed when they are available.

When travelling in the highlands of the national park, or in other poorly vegetated areas, riders should always have with them sufficient fodder for their horses. It is prohibited to graze horses within the national park except where this is specifically permitted at horse holding places.

In Vatnajökull National Park horse riding is allowed on the following riding trails (bridle paths):

- **over Sprengisandur, Bárðardalur east of Skjálfandafljót, Nýidalur and Tómasarhagi**
- **over Sprengisandur, Bárðardalur west of Skjálfandafljót, Nýidalur, Tómasarhagi and Fjörðungsalda**
- **over Sprengisandur, Nýidalur – Laugafell**
- **Jökulsárgljúfur – Mývatnssveit**
- **Mývatnssveit – Möðrudalur, over Herðubreiðarlindir and Upptyppingar**
- **between the equestrian competition track in Ásbyrgi and the sports ground**
One horse and rider only
- **Fljótsdalur – Sauðárkofi, over Laugafell, Þjófadalur, Snæfellsskáli and Fjallskarð, into Vesturöræfi**
- **along Morsá to Bæjarstaðarskógur**
The route follows a disused road. Park wardens should be consulted about riding trips along this route.
- **Hrossatungur – Blágil – Blængur**
The route is to follow a disused road
- **by northern Fjallabaksleið mountain road**
Hollow-ways on present route to be improved. In collaboration with local government, the intention is to lay a new bridle path west of the present Fjallabaksleið mountain road.

Planned bridle paths:

- **bridle path from Fossgil, between Svínadalur and Vesturdalur**
Track for one horse plus rider (no spare/pack horse)
- **in the Heinaberg area, from Haukafell to the bridge over Heinabergsvötn river system**

Holding places (*áningarstaðir*) for horses are defined as follows:

Overnight area (*næturhólf*): Permanent fenced (sturdy) enclosure with water and access to bring in fodder.

Holding area (*áningarhólf*): Permanent fenced area with water but no access to bring in fodder.

Changeover area (*skiptihólf/áningargerði*): Permanent fenced area/holding rail without water or access to bring in fodder.

Temporary area (*aðhald*): Holding rail and area where it is possible to put up temporary horse-proof fencing

In the Vatnajökull National Park horses can be rested at the following places:

- **above Hólmatungur: temporary area**
- **in Svínadalur: temporary area**
- **Langavatnshöfði: overnight area**
- **racetrack in Ásbyrgi: overnight area**
- **mouth of Ásbyrgi and Ás: changeover area**
- **innermost end of Ásbyrgi: changeover area**
- **at bridge over Jökulsá á Fjöllum by Upptyppingur: temporary area**
- **at Kreppubrú: temporary area**
- **at northern bridge by Upptyppingur, by the turn for the hydrological measuring hut: temporary area**
- **Snæfellsskáli: overnight area**
- **Sauðárkofi: overnight area**
- **At Skuggafjallakvísl on northern Fjallabaksleið mountain road: changeover area**
- **At junction of F208 and F223 mountain roads (mouth of Eldgjá) on northern Fjallabaksleið mountain road: changeover area**
- **At service area at southwest end of Langisjór: temporary area**
- **By Blautulón: temporary area**
- **Nýidalur/Jökuldalur: overnight area**

It is intended to gradually increase the number of holding places for horses on the designated bridle paths.

National park wardens may restrict travel methods to ensure that nature and cultural features are not damaged.

The national park reviews bridle paths and holding places and includes them on published maps.

7.7.11 Cycle paths

Cycling is permitted on roads, car parks and designated cycle paths in the national park. Cycling is permitted on footpaths and walking routes except where specifically banned, provided that no damage is caused and due care is taken regarding pedestrians. A national park warden may permit cycling on specific horse-riding routes or bridle

paths, provided that cyclists show consideration for horse traffic, and give way to it.

National park wardens can prohibit cycling on footpaths, walking routes and bridle paths in busy areas and where the vegetation could be damaged.

Normal traffic laws apply to cycling as appropriate.

7.7.12 Access for all

Good access for all must be ensured at the main service centres and selected hiking paths must be accessible for people with reduced mobility e.g. in wheelchairs.

Access for the disabled to information and education will be ensured as far as possible. Information about access for people with disabilities will be clearly provided and compatible with the accepted classification scheme.

7.7.13 Air traffic

Two unregistered runways are in the highlands within the Eastern Region, at Snæfell and Kverkfjöll.

Construction work has been kept to a minimum. The flat areas have only been rolled and marked with windsocks. The runways are mainly used for tourism, accessing fishing, land reclamation work and medical evacuations. The runway at Kverkfjöll has been maintained by those supervising cabin accommodation and road repairs.

Permission to land an aircraft within Vatnajökull National Park shall be sought from a park warden.

Regulations will be set regarding the use of drones within Vatnajökull National Park.

7.8 SERVICE AREAS

7.8.1 General provisions

Service areas are places where visitors can use services or access information in some way. In these areas the national park provides one or more of the following service units:

- **Visitor centres** (*Gestastofur*)
- **Information centres** (*Upplýsingastöðvar*)
- **Ranger stations** (*Landvörslustöðvar*)
- **Visitor shelters** (*Gestaskjól*)
- **Picnic areas for day visitors** (*Áningarstaðir fyrir daggesti*)
- **Campsites** (*Tjaldsvæði*)
- **Huts** (*Skálar*)

- **Information and interpretive boards** (*Upplýsinga- og fræðsluskilti*)

Some service areas have a mixture of the above units. The board can also cooperate with private parties regarding operations in service areas, providing that all requirements for operating in the national park are met.

Overnight stays by visitors to the national park must be within organised service areas, where accommodation/facilities are available.

Service areas with buildings are generally specified in municipal (local authority) development plans, either as shopping and service areas or as mountain huts. Local development plans are required for all construction areas.

Changes to the service network in the national park are anticipated e.g. more ranger stations. Such changes shall be discussed by the board of the national park, and cooperation sought with the relevant local authority. Procedure should be combined with revising the development plan where appropriate.

The following general stipulations apply to service units in the national park:

- **Service areas shall be kept to a minimum and all service units and areas are to be sited where they impact least on the region's natural and cultural remains and impinge least on its unique and/or sweeping landscape.**
- **Building design and local development planning shall use the best available techniques to predict the appearance of the building and area before commencing construction.**
- **Buildings shall be low-rise, harmonise with the landscape and have a consistent appearance and also reflect the character of the local area.**
- **Quality workmanship shall be ensured for buildings and their vicinity; work on the surrounding area shall be completed at the same time as the building work.**
- **The drainage system (waste-water) for buildings shall not cause pollution and all drains and septic tanks shall meet standard requirements and be approved by the health and safety inspector.**
- **Refuse from the service units must not cause pollution; sorting and disposal of refuse should comply with the national park's environmental policy.**

Before a new service unit is made or built the following shall be assessed:

- **Necessity of the project, for example its importance for nature conservation, service or interpretation.**
- **Possibilities and advantages of the location with regard to natural and cultural features, other aspects of the area, roads, footpaths, and bridle/cycle paths.**
- **Conservation value of natural and cultural remains in the area.**
- **Risks to such remains arising from the project, and mitigation measures e.g. patrolling or other methods.**
- **Development of operations, traffic and visitor numbers in the area.**
- **Operational basis for the project, type and scale of service, and running cost e.g. monitoring, provision of information/instruction.**

Vatnajökull National Park is a participant in Vakinn, the official quality and environmental system for Icelandic Tourism, based on Qualmark – New Zealand tourism's official mark of quality.

7.8.2 Visitor centres

Visitor centres should usually be at the main access routes to the four administration regions of the national park. There should be good connections between routes into and out of the area, and internal routes e.g. roads, footpaths, and cycle/bridle paths. Each visitor centre acts as the midpoint for information and interpretation of the nature and society in that particular area.

There should also be enough space available for car parks and it is an advantage if the visitor centre is connected to other services provided in the area so that large constructions such as car parks can be shared.

Visitor centres can be operated in conjunction with other parties and it is advantageous to use pre-existing buildings or services.

Local development plans provide for plot size, house elevation, colour scheme, car park size and main routes e.g. roads, footpaths, and cycle/bridle paths.

Visitor centres are to be open all year or as funding allows and the following minimum services shall be available:

- **Information desk**

- **Instruction in the form of exhibits, events and walks**
- **Toilets, refuse disposal and picnic areas**

7.8.3 Information centres

Information centres shall generally be sited on popular routes into the four administration regions of the national park but not necessarily inside the park. Their role is to provide necessary information to people planning to visit the park.

If the information centre is inside the national park the local development plan shall specify plot size, house elevation, colour scheme, car park size and main routes e.g. roads, footpaths, and cycle/bridle paths.

Information centres shall generally be open from May until September, but otherwise depending on local conditions. The following minimum services shall be provided by the national park but other services may be offered by private parties:

- **Information desk**
- **Instruction in the form of small displays**

7.8.4 Ranger stations

Ranger stations shall generally be where visitor traffic makes it necessary to have daily supervision inside the national park. They provide manned services e.g. accommodation, information and instruction. Ranger stations should also be placed to ensure that they can fulfil their role and reach the visitors in the area, being placed where most park visitors pass by or stay, e.g. at campsites, picnic areas or main routes.

Ranger stations can be operated in cooperation with other parties and it is an advantage to use pre-existing buildings and services. Local development plans are required for new ranger stations to provide for plot size, house elevation, colour scheme, car park size, campsites and main routes.

Ranger stations shall be open for part of the year and provide:

- **A base for park rangers**
- **Information desk**
- **Instruction in the form of guided walks or other means**

7.8.5 Visitor shelters

Visitor shelters shall in principle be situated where other services already exist: e.g. picnic areas, ranger stations and places where it is not possible to have a manned facility with regular opening

times. The visitor shelters are intended to provide information and instruction indoors and are open in seasons when other services are available in the area.

A new visitor shelter shall only be built where there is an intention to build another type of service building. Visitor shelters shall be open part of the year and provide:

- **Self-service information**
- **Instruction in the form of small, simple exhibitions**

7.8.6 Picnic areas

Picnic areas for visitors shall generally be where natural/cultural features attract fairly large numbers and there is a reason to provide information and instructive services. Picnic areas shall also usually be located so that they act as a focus for visitor traffic, minimising impact on natural/cultural features.

Local development plans should provide for size and positioning of picnic areas, and for location, height, colour scheme/style for buildings, car park size and main routes.

Picnic areas shall be open when traffic and conditions permit and unless stated otherwise they should provide:

- **Car park**
- **Toilet (W.C. or dry toilet)**
- **Picnic tables**
- **Refuse collection (lowland sites)**
- **Information and interpretive boards**

7.8.7 Campsites and terms for camping outside them

There are three campsite classes in Vatnajökull National Park:

1. **Campsites with extensive services shall normally be located on the periphery of the national park where there are pre-existing services from the park or private parties. Campsites shall be spacious and situated where it will be possible to extend the area or offer additional services.**
2. **Campsites with minimal services shall generally be inside the national park where there is a permanently staffed ranger station or other service e.g. accommodation huts. Campsites with minimal services shall be unobtrusive in the landscape and the surroundings**

should be left in their natural state i.e. no mowing or fertilizing the vegetation. The campsites shall be where impact on nature is minimised.

3. **Designated campsites for hikers' tents shall generally be on the national park's long hiking trails where it is necessary to direct hikers to a special designated area where camping is permitted. The condition of hikers' campsites shall be monitored.**

Stipulations about camping outside marked campsites

Visitors to the national park have to stay at organised campsites. There are the following exceptions to this rule:

- **In the highlands, people who are hiking or cycling may camp for one night outside of an organised site if it is at least 4 km to the closest organised site and there are no special restrictions about camping.**
- **Travellers on highland roads that are marked as "difficult" (F3) may camp for one night by the road side if they are at least 25 km from the closest organised campsite. If there are more than three cars together, the permission of the relevant park warden shall be sought.**

When camping outside organised campsites, care must always be taken to leave no visible signs behind, and all refuse must be taken away.

Camping outside marked campsites is prohibited in the following areas:

- **Jökulsárgljúfur.**
- **Areas with special protection status at Mt. Askja.**
- **At Kreppulindir in Krepputungusporður.**
- **On the lowland areas at Hoffell and Heinaberg.**
- **On Skaftafellsheiði, in Bæjarstaðarskógur woods and the Morsárdalur valley. It is, however, permissible to camp in the Skaftafellsfjöll mountains at an altitude above 400 metres, and in an area at the mouth of the Kjósa river. Visitors should contact the national park for information on camping in these areas.**

The national park board in cooperation with the relevant local authority can set special regulations about camping in specific areas, including banning

it entirely. Such regulations shall be available on the park's website and displayed on park premises.

7.8.8 Huts and shelters

Huts in Vatnajökull National Park are mountain and highland huts for visitors to use for accommodation, resting or other short stays. Use of huts shall generally be available to the public under the terms and conditions of the owners, e.g. good and responsible behaviour, reservation rules and rental payment.

Huts in the national park fall in three classes:

- **Overnight huts. Accessible by motor vehicles and generally shall be where other services are also available e.g. campsites, information desks and instruction. They shall also generally be located a comfortable day's hike apart so they can be used by visitors hiking long distances in the national park and adjacent areas.**
- **Hiking huts. Generally on national park long-distance hiking routes which connect to adjacent areas. They shall be a comfortable day's hike from other overnight accommodation. In summer access to hiking huts is closed to public motor traffic, and each guest's unique experience of the area's remoteness shall be ensured.**
- **Research huts. Built for the use of scientists and others whose research involves the national park and who have priority use of such huts. When not used for this purpose they are available to the general public for accommodation, resting or other short stays.**

Emergency huts are also situated in the national park (including *sæluhús* or refuge huts) and intended for shelter and use of the public in an emergency.

Round-up huts are specifically intended for use by people involved in the autumn round-up of sheep, but are available to the public in an emergency.

Restricted-use huts with basic facilities exist or may be constructed when necessary for special work-related needs e.g. shelters needed for telecommunication installations, mobile huts required temporarily for research, geodetic surveys, road or power line construction/repair, land conservation/reclamation etc. Permission must be sought from the park wardens and a permit obtained from the local authority before

erecting restricted-use huts which are not classed as real estate.

7.8.9 Information and interpretive boards

Information and interpretive boards shall be placed where required to provide information about routes, services, nature and cultural remains.

More extensive signage is planned at the entrances to the national park where it is considered essential to inform visitors. The information point could take the form of an information square or gate and be placed at the entrance to the national park; on routes where this is not appropriate the boundary of the national park should be specially marked. The style and size of the park boundary sign depend on the type of road or other route into the park (footpath or cycle/bridle path).

An information square or gate (information point) provides necessary information about the relevant area, routes, how to get around, and safety issues.

Smaller signs, information and interpretive posts, shall generally be placed by popular lowland and highland footpaths, as well as in picnic areas on less-used highland routes. Information and interpretive posts display a phone number which visitors can call for interpretive information about the relevant area or specific natural or cultural remains which the information post refers to. The post is an unobtrusive construction which harmonises with the area's nature.

7.9 SERVICE AREAS WITHIN THE NORTHERN REGION

7.9.1 Entrance to Ásbyrgi, Ás and Ástjörn

Basis for service area

The area is one of the largest service areas in the national park's Northern Region. The national park operates Gljúfrastofa visitor centre, a campsite with associated service buildings, staff facilities, storehouse and workshop. In addition private parties, associations and organisations run a shop and restaurant, petrol station, handicraft gallery, equestrian competition track, golf course and summer camps. The current local development plans also provide for hotel and chalet/cottage plots.

Objectives

To have a large and spacious service area by one of the main entrances to the national park's Northern Region which can accommodate services provided by the national park and private enterprises.

To have a well defined service area at the entrance to Ásbyrgi, connecting together the national park and the community.

Stipulations

When the local development plans are renewed provision is to be made for a larger service area extending across the mouth of Ásbyrgi gorge on both sides of Eyjan, Ás, Ástjörn and the southern part of Ássandur.

7.9.2 Inner part of Ásbyrgi gorge

Basis for service area

This is a popular and frequently visited locality in the Northern Region of Vatnajökull National Park. In the past it was also a campsite but now it is only used as such when many visitors are in the area.

Objectives

To provide a minimum-standard picnic area and a unique experience for anyone who visits this popular destination in Ásbyrgi.

Stipulations

Designated as a picnic area for day visitors, reserve campsite, and play area.

There are no plans to extend the service area to the detriment of the natural birch woods.

7.9.3 Vesturdalur and Hljóðaklettur

Basis for the service area

A ranger station is in the area. Natural meadows at Vesturdalur are used as a minimum standard campsite and the Hljóðaklettur area is popular with campers as a picnic site. The campsite cannot easily sustain high visitor numbers and spring floods bringing meltwater and silt make it prone to damage. Motorised traffic on the plains can compact the soil and thus increase the fragility of the vegetation. Future plans are that the main picnic area for day visitors is to be at Langavatnshöfði at the start of the main hiking route in Hljóðaklettur.

Objectives

To provide a minimum standard service area and a unique experience in the natural environment of Jökulsárgljúfur.

To maintain the unique experience available in Vesturdalur campsite, and to limit traffic through the area.

Stipulations

Local development plans for a new picnic area at Langavatnshöfði and for Vesturdalur provide for a ranger station and a minimum standard campsite, hiking paths and interpretive signs.

7.9.4 Hólmatungur

Basis for service area

A popular place to visit in the Northern region. The current picnic area is to be closed and a new one made at Ytra-Pórunnarfjall where there is a good view over Hólmatungur and Forvöð.

Objectives

To provide a minimum standard picnic area and a unique experience for visitors to Hólmatungur.

Stipulations

Local development plans provide for a new picnic area for day visitors at Ytra-Pórunnarfjall.

7.9.5 Dettifoss and its western approach

Basis for service area

This is a new service area planned for the western approach to Dettifoss. A new road, Dettifossvegur (no. 862), requires additional services. The service area is to be at the current car park by Dettifoss and is to include information for those intending to visit the national park.

Objectives

A new service area connected to a hiking trail network, suitable for a busy tourist destination in the national park. Information is to be available there about the nature of the area in accordance with the park's education programme.

Stipulations

Local development plans are to provide for the service area, car park and buildings as well as tourist routes in Hafragilsundirlendi, to the north and west of Hafragil and south to the road linking to Dettifoss. An information centre is planned, toilets (WC), picnic area with picnic tables, information, restaurant and a campsite for hikers. Local development plans should also provide for hiking, cycling and bridle paths.

7.9.6 Herðubreiðarlindir (public land outside the national park, on an access route)

Basis for service area

Herðubreiðarlindir area is public land under the aegis of Vatnajökull National Park according to an agreement with the Environment Agency. Improved services in Drekgil have resulted in fewer overnight stays in Herðubreiðarlindir, both in huts and tents.

Objectives

It is planned to have a ranger station, campsite with service buildings, hut accommodation and a picnic area for day visitors.

Flooding and associated increased erosion in Jökulsá á Fjöllum could affect the future use of the area. In this context, in collaboration with the Icelandic Road Administration and stakeholders, decisions must be taken about the future of Öskjuleið (F88) through Herðubreiðarlindir.

7.9.7 Drekgil

Basis for service area

The regional development plan for the central highlands designates the Drekgil area as a highland centre. Access to the Austurleið and Öskjuvatnsvegur routes are through this area and traffic is increasing annually.

Objectives

A fairly large but demarcated service area in the northern highlands of the national park where there is space for services provided by the national park and private enterprises.

Stipulations

There is, in the near future, no intention to enlarge the area covered by local development plans. Local development plans are to provide for a road outside the area to create more space and prevent through traffic. A ranger station is planned at Drekgil, a campsite with associated services, and hut accommodation.

7.9.8 Vikraborgir at Askja

Basis for service area

Askja is the most popular destination in the northern highlands. When winter snows are heavy, this may delay the opening of the picnic area at Vikraborgir in summer. It is necessary to increase supervision and instruction in the area.

Objectives

A minimum standard picnic area and educational information at a short distance from Öskjuvatn lake and Víti.

Stipulations

Local development plans provide for a car park, a picnic area for day visitors and a warden's hut at Vikraborgir. Services at Vikraborgir will be minimal and visitors directed to Drekgil for additional services.

7.9.9 Road junction north of Gjallandi

Basis for service area

A designated service area is by the road junction of F910 and the road to Gjallandi waterfall and Gjóstuklif. A ranger station is planned with a small space for a visitor shelter. There is already a minimum standard campsite, and an information

board about the national park. Under new regulations about camping for hikers/cyclists and overnight stays on routes classed as "difficult", the need for a organised campsite in this location is less.

Objectives

To establish a minimum standard service area at an important road junction northwest of the ice cap. There will be a ranger station, toilet (dry) and campsite for hikers, and it will be used to improve supervision and instruction in the northern highlands of the national park.

Stipulations

The area is to be by the junction north of Gjallandi. The impact of any development on visitor experience and the nearby wilderness area must be considered. There will be no further development in the area unless it is clearly urgent and necessary.

7.9.10 Gæsavötn lakes

Basis for service area

The established vegetation and access to water make Gæsavötn a desirable picnic spot and place to stay on a popular driving and walking route. There is a mountain hut owned by Gæsavatnafélagið (the Gæsavötn Society) whose members have priority use of the hut. The general public may use the hut when available, under conditions set by the owners.

Objectives

That travellers are able to stay at Gæsavötn, in the hut or in tents.

An agreement is to be made with the hut's owners, defining the public's right to use it.

Stipulations

Local development plans are to provide for the existing hut and campsite, and possibly a second hut by the lakes.

7.9.11 Lake Mývatn and surroundings (outside the national park)

Basis for service centre

Mývatn district is one of the national park's busiest centres and it is planned to build a Vatnajökull National Park visitor centre there. It is important that the visitor centre is by a thoroughfare and accessible all year. Consideration must be given to access by public transport, collaboration with the Environment Agency of Iceland about the protected area of Mývatn and Laxá, and the possibility of working with knowledge bases in Mývatn district.

Objectives

That a busy visitor centre is to be in the Lake Mývatn area, where promotion of the national park can take place in cooperation with other parties, such as the local authority, organisations and private enterprises as appropriate.

The visitor centre will be a dynamic forum for visitors and locals all year round, where research into the national park's nature will take place and local communities and businesses are supported.

Stipulations

A visitor centre will be located so that travellers have good access to it and it is easy for staff members to work there all year. Connections with public transport must be considered.

7.9.12 Other service areas and service units

In the following area general stipulations apply to service units:

- **Bræðrafell** - Hikers' hut.
- **Dyngjufell** - Hut accommodation with access for cars and picnic area for visitors.
- **Suðurárbotnar** (on the boundary of the national park) - Hut accommodation with limited car access.
- **Kistufell** - Emergency hut on a difficult route. Is also to be accommodation hut and picnic area for guests.
- **Stóraflesja** - Round-up huts just outside the national park, picnic area for visitors.
- **Dettifoss** (eastern side, outside the park) - Picnic area for visitors.

Information points (squares/gates) are to be at the following places:

- **by junction between national road no. 85 and Dettifossvegur no. 862**
- **by junction between national road no. 1 and Dettifossvegur no. 862**
- **by junction between national road no. 1 and Öskjuleið no. F88**
- **by junction between Austurleið no. F910 and Arnardalsleið no. F905**
- **by junction between Austurleið no. F910 and Sprengisandsleið**
- **by junction between Austurleið no. F910 and track from Bárðardalur to summer pasture land**
- **at park boundary on Dyngjudalsleið, approaching from Mývatn**
- **at park boundary on Dyngjudalsleið, approaching from Svartárkot**

Outside the national park cooperation with the following services at the following places is envisioned:

- **Information centre at Kiðagil in Bárðardalur. Cooperation with local tourist service provider.**

7.10 SERVICE AREAS WITHIN THE EASTERN REGION

7.10.1 Visitor centre at Skriðuklaustur, Snæfellsstofa (outside the park boundary)

Basis for service area

Snæfellsstofa visitor centre is located at Skriðuklaustur in the Fljótisdalur valley, close to the junction with road 910. It has an exhibition room with an emphasis on cycles in nature, vegetation and wildlife in the eastern region of the national park, information, a coffee outlet, a souvenir shop, and an office for the national park warden.

A restaurant and museum are 500 m away, at Skriðuklaustur itself. The closest campsite and accommodation are at Végarður and Hallormsstaður. Hengifoss waterfall, one of the best-known destinations in the district, is about 5 km away.

Objectives

The objectives of the visitor centre are to provide visitors with the best information and knowledge about the Eastern Region of the national park and surrounding area, as well as the whole park. In the visitor centre is a souvenir shop where emphasis is placed on environmentally friendly souvenirs from the districts in the national park. An emphasis will be placed on strengthening collaboration with research institutions, schools and other entities, and on the visitor centre being open all year.

7.10.2 Service area at Virkisfell (north of Kverkfjöll)

Basis for service area

There is a ranger station situated here. Ferðafélag Fljótshéraðs touring clubrun an accommodation hut here (Sigurðarskáli) and Ferðafélag Húsavíkur touring club run a campsite, toilet facilities and a picnic site for day visitors.

The Iceland Touring Association (Ferðafélag Íslands) had a local development plan produced for the area (2005) which provides for the building of a small visitor centre and staff accommodation. The plans allow for extending the campsite to the west and north, a new service building for the campsite

and building small cottages/chalets around the campsite. The plans include a larger car park, with stone walls and cairns to mark the boundary.

The plans need to be reviewed with the needs of the national park in mind, e.g. a ranger station and visitor reception.

A few short hiking trails are marked from the service area.

Objectives

That the service area is a hub for travel in the Kverkföll mountains and surrounding countryside. The ranger station is to remain, with an increased role for the ranger in supervision, information and instruction.

Stipulations

Local development plans make provision for facilities for the national park, a ranger station and visitor reception or centre, in addition to the existing buildings.

7.10.3 Kverkjökull

Basis for service area

There is a long tradition for travel facilities at Kverkjökull. There used to be an ice-cave that was a great attraction, but only the remains of it are now visible.

The area is both interesting and dangerous.

It is possible to go on long or short hikes in the vicinity. A short circular trail leads to the glacier and the river Volga. A glacier tour guide is required for hiking on the glacier.

The bridge over Volga opened up a trail to the source of Jökulsá á Fjöllum. A marked trail leads from Sigurðarskáli to Kverkjökull. History shows that every 8–15 years a flood flows below and from under Kverkjökull, issuing from a lake in the glacier. This must be considered when drafting plans for the area. The area must be carefully monitored when the glacial lake is full and a flood is anticipated.

Objectives

To establish a picnic and service area with basic facilities close to the glacier, and also to address visitor safety with warning notices and more information. Also, to increase information about the glacier and hot spring area, to increase visitors' understanding of the area and improve their experience.

Stipulations

Local development plans need to take into account the dynamic nature and natural hazards, and

provide for a picnic area for day visitors, as well as information and education boards.

7.10.4 Kreppubrú

Basis for service area

Kreppubrú is one of the main routes into the national park north of Vatnajökull, both for visitors heading for Krepputunga and those who are only going to Askja. Traffic through Krepputunga has increased in recent years. Land protection has been increasing across the area and the presence of a ranger is important.

It is important to receive visitors and provide them with information and guidance as they enter the national park. Thus it is necessary to have a picnic area at Kreppubrú, with toilet facilities and a visitor shelter where land wardens can be during the day and where visitors can get information.

Objectives

To offer facilities for day visitors and land wardens at Kreppubrú. Where visitors can be received and informed about the national park.

Stipulations

Local development plans make provision for a picnic area for visitors, and a visitor shelter.

7.10.5 Hut in the Kverkfjöll mountains (owned by Iceland Glaciological Society)

Basis for service area

There is a hut belonging to the Iceland Glaciological Society; it is an important base for the society's expeditions.

Objectives

Continued use of the hut for scientific purposes and the possibility of accommodation for the public.

Stipulations

The local development plan should provide for one hut for scientific work.

There are no plans for further activities or development.

7.10.6 Hvannalindir

Basis for service area

Hvannalindir has been a protected area since 1973. There is a ranger station, an information service and a picnic area for day visitors, a dry toilet and accommodation for the ranger. There is no campsite or accommodation hut.

It is expected that the number of rangers will increase, and local development plans need to make provision for the ranger's accommodation

being relocated. The current ranger's accommodation is at Lindasel.

Objectives

The area is to continue to have a ranger station where information is provided and visitors can benefit from interpretive/educational material. Signage and marking should relate to the local and nearby landscape.

Stipulations

Local development plans make provision for a ranger station, visitor shelter and a picnic area for visitors, and picnic facilities by the car park at Eyvindarrústir.

7.10.7 Snæfellsskáli

Basis for service area

There is a ranger station in the area. There is an accommodation hut, campsite and picnic area for day visitors. Short interpretive walks are offered. Brúarjökull is close and a variety of walks are possible in the hut's vicinity. A marked (posts) hiking trail (suitable for all) goes up Mt. Snæfell.

Objectives

It is planned that the ranger station at Snæfellsskáli is to continue and more hiking trails are to be marked. Supervision, information gathering and instruction are to become more important but otherwise no major change in the services is anticipated. The intention is to improve access for people with impaired mobility. The service area needs to be demarcated and a local development plan produced.

Stipulations

The local development plan is to provide for unchanged services i.e. ranger station, accommodation hut, campsite and picnic area for day visitors.

7.10.8 Geldingafell

Basis for service area

A hut and campsite exist but no ranger station. It is proposed that the desirability of establishing a ranger station be considered. It is anticipated that traffic in the area could increase, amongst other reasons because of improved road access and a general increase in visitor numbers to the park.

Objectives

To set up a ranger station and improve picnic/rest facilities.

Stipulations

The local development plan is to provide for unchanged services, i.e. accommodation hut and campsite.

7.10.9 By Eyjabakkajökull (east of Háalda and south of Hnúta)

Basis for service area

This is a new service area by a well-known vehicle track up onto Eyjabakkajökull from the west, south of Snæfell, east of Háalda and south of Hnúta. A new service area requires local development planning; the advantages of this location are proximity to the glacier, summer access for vehicles and good conditions for motorised vehicles on the glacier.

Objectives

To establish a picnic area, a minimum standard service area, near the Eyjabakkajökull ice cap.

Stipulations

Local development plans should initially provide for a toilet and visitor shelter.

7.10.10 Accommodation huts east of Snæfell

The national park board can permit mountain huts to be built east of Snæfell at places specified in the development plan for Fljótdalshreppur district: at Snæfellsbúðir east of Snæfell; at Kverkkvíslargil; east of Kelduá dam; and below Þjófahnjúkar.

7.10.11 Goðahnúkar

Basis for service area

A hut in the area is owned by the Iceland Glaciological Society and is an important base for the society's expeditions.

Objectives

Continued use of the hut for scientific purposes plus the possibility of accommodation for the public.

Stipulations

The development plan is to provide for one hut for scientific work.

There are no plans for other operations or additional services.

7.10.12 Eastern Region - other service areas and service units

General stipulations relating to service units apply to the following areas:

- **by the bridge over Jökulsá á Fjöllum (Upptyppingur) - Picnic area for day visitors, car park and toilets**
- **Hveragil - campsite and toilets**
- **by the northern Upptyppingur bridge, by the turnoff for the hydrological**

measuring hut - picnic area, car park and hiking trails

- **by the northern end of Lindafjöll - picnic area, car park and hiking trails**
- **Hálskofi - Hikers' campsite and proposed hut for hikers**
- **by Kreppa bridge - Picnic area for day visitors**
- **by Kárahnjúkar - Picnic area for day visitors**

Information points (squares/gates) are to be at the following places:

- **by road junction in Fljótsdalur**
- **by road junction at Fiskidalsháls (F907, F910 and 923)**
- **by road junction west of Mýnnisfjallgarður (F910 and F905)**
- **by the bridge over Kreppa**
- **by the road junction in Mörðrudalur valley F905/F901**
- **by the road junction of Austurleið F910 and Arnardalsleið F905**
- **by the road junction of national road 1 and F901 (at two places)**
- **by the bridge over Jökulsá á Fjöllum**
- **by the road junction of 910 (Austurleið) and F909 (Snæfellsvegur)**

Outside the national park the following collaboration between the national park and private parties is anticipated regarding the following services in the following places:

- **Information centre in Mörðrudalur á Fjöllum. Collaboration with tourist services**
- **Information centre at Aðalból. Collaboration with tourist services**
- **Information centre at Laugarfell. Collaboration with tourist services**

7.11 SERVICE AREAS WITHIN THE SOUTHERN REGION

7.11.1 Skaftafell

Basis for service area

The main service area in the southern region of Vatnajökull National Park is at Skaftafell. There is a visitor centre (*Skaftafellsstofa*), a large campsite with various services and service buildings, as well as staff housing. Marked hiking trails suitable for all are in the area and park rangers offer interpretive hikes and various educational activities. Information and interpretive signs are at many

locations within Skaftafell. Visitor numbers are high at Skaftafell all year round.

Note that this description of the service area applies to the service centre and the adjacent area, including areas within a short walk of the centre.

Objectives

To have a large spacious service area at one of the main entrances to the national park with space for diverse services for visitors, including those provided by private enterprise.

Stipulations

When renewed the local plan shall provide for enlarging the service area and campsite due to increasing numbers of visitors. Measures will be taken to reduce traffic closest to the service area and the campsite, and an emphasis will be placed on an attractive and safe environment in front of the building.

Provisions should be made for those services that are necessary to park visitors and in keeping with the park's objectives. Provisions should be made for a play area for children, with an outdoor pursuits connection.

7.11.2 Morsárdalur

Basis for service area

The Morsárdalur valley lies between the Skaftafellsheiði heath and the Skaftafellsfjöll mountains. The Morsá river flows through the valley. The river is crossed by two footbridges. Several walking routes in the valley are marked: a circular route to the Bæjarstaðarskógur woods, and a walking route up to the Morsárjökull glacier. The glacier falls steeply over cliffs at the head of the valley. A major landslide fell onto the glacier in 2007.

Lupin has spread widely over the silt beds of the Morsárdalur valley, especially below the Bæjarstaðarskógur woods. Efforts are being made to eliminate it.

Objectives

To promote the Morsárdalur valley as a recreational area, and thereby to spread the visitor load in Skaftafell, and offer people reason to stay longer in the area. Facilities to be provided for walkers, and information to be available.

To open a circular route around the valley by installing a footbridge over the Morsá river at the Morsárlón lagoon.

Stipulations

Local plan to provide for a campsite and a hikers' hut east of Vestra-Meingil, toilet facilities and

interpretive signs, and to specify walking routes and location of footbridges.

7.11.3 Stafafellsfjöll/Lón (outside the national park)

Basis for service areas

Within the conservation area at Lónsöræfi there are various operations e.g. accommodation huts and campsite; hiking trails have been marked and guided hikes are offered. A park ranger is in the area for part of the summer. The conservation area is outside Vatnajökull National Park but under the aegis of the national park subject to an agreement with the Environment Agency.

Objectives

The park ranger is to continue to work in Lónsöræfi during the summer. Work includes maintenance of hiking trails, marking them and installing more interpretive posts in cooperation with the landowners.

A national park information desk is also to operate in Lónsöræfi during the summer. The ranger's tasks and provision of information are to be achieved in close cooperation between the national park and the landowners.

7.11.4 Town of Höfn (outside the national park)

Basis for service area

Höfn is the only urban centre in the Southern Region of the national park, and lies at its easternmost point. It is a long way to the next town. Vatnajökull National Park's visitor centre in Höfn is at Gömlubúð – an old building with a long history. The national park has an exhibition there, visitor information and a souvenir shop.

Höfn has comprehensive services for tourists and the proximity of the visitor centre to those services can both support them and make the park's promotion work more effective. The national park's offices at Höfn are close to the Hoffell and Heinaberg areas and also to the conservation area at Lónsöræfi which is under the aegis of the national park.

Objectives

That Höfn should have a visitor centre that is open all year. The national park will be promoted there in collaboration with other entities. Collaboration with research organisations, schools and other entities in the area will be supported.

7.11.5 Hoffell

Basis for service area

Part of the mountainous area east of Hoffellsjökull is within the national park. In front of the glacier a deep lake has formed since the glacier began to retreat and it is a popular tourist destination. There are information and interpretive boards, and warning signs about dangers in the area.

There are demanding hiking trails around the rugged gullies and majestic mountains. Parts of the trails have been posted by rangers and volunteers working with the national park. There are wooded areas near Hoffellsjökull including habitats of rare vascular plants and lichens.

Objectives

The main picnic area at Hoffell is to be by the lake at the foot of Hoffellsjökull. Access to the area needs to be improved, in consultation with the Ministry for the Environment and landowners. Additional hiking trails are anticipated and more interpretive signs in cooperation with the landowners, including a footbridge over Efstafellsgil. Collaboration about information services for the area will be sought, with a service agreement with the landowners.

Stipulations

Local development plans will be drafted in collaboration with the landowners and should make provision for a picnic area by the lake below the terminal moraine, a car park, toilets, the location of information and interpretive boards, and a hut below Gjánúpur for hikers as well as the main hiking and cycling trails within the area and connecting to other areas. The findings of the focus group from 2009, regarding the development of the Hoffells area, will be taken into account.

It is expected that there will be a tourist centre on behalf of the landowner at the end of the road out of Hoffellsdalur. The centre is to be connected to the existing road in the valley, if it is extended to the park boundary; this has been approved by the local authority and the Environment Agency. This construction would be on behalf of the landowners.

7.11.6 The Heinaberg area from Skálafellsjökull to Fláajökull

Basis for service area

The area is shaped by ever-changing glaciers and glacial river systems and these have also greatly influenced the patterns of habitation in this area. The coexistence of man and glacier has rarely been more intimate than here and it is of interest to inform tourists about the area.

Objectives

To develop a well-organised area for outdoor activities in the Heinaberg region with picnic areas, toilets, learning opportunities and varied hiking trails.

Stipulations

Local development plans should make provision for access by two routes, east of Kolgríma and west of Hólmsá, hiking huts, toilet facilities, picnic areas and information boards, as well as the main hiking trails, cycle/bridle paths and connections with trails outside the area. The findings of the focus group from 2009, regarding the development of the Heinaberg area, will be taken into account.

7.11.7 Hjallanes

Basis for service area

Hjallanes is on the Skálafell estate in Suðursveit district. The river Kolgríma flows south of Hjallanes. Marked hiking trails are on Hjallanes and an information sign with text from Icelandic folk tales and information about historical sites. Hjallanes is adjacent to Skálafellsjökull and in many places the visitor can see how the glacier has carved out the landscape and left behind moraines and other features.

Objectives

Further development of the hiking trails, signposting and interpretive signs about the area's geology is to continue in cooperation between the landowner and the national park. Collaboration about information services for the area will be sought, with a service agreement with the landowners.

Stipulations

Local development plans will be drafted in collaboration with the landowners.

7.11.8 Winter sports and outdoor pursuits at Jöklasel

Basis for service area

At Jöklasel is a centre for tourist agencies organising trips on Vatnajökull. There is an opportunity to develop additional services for tourists who are interested in glacier tours, mountain trips and perhaps skiing. The landscape around Jöklasel is typified by mountains over 1000 m high and the ice fields of Vatnajökull. The landscape, altitude and good access make the area ideal for glacier tours and summer skiing.

Objectives

The area is to become an interesting choice for developing tourist services with emphasis on winter sports and outdoor pursuits on a glacier.

Stipulations

The area is expected to offer winter sports facilities with catering etc. managed by private enterprises. It shall be ensured that this type of operation does not lead to pollution, noise or traffic which might spoil the experience of other visitors in nearby areas.

7.11.9 The Iceland Glaciological Society's mountain hut at Esjufjöll

Basis for service area

The Iceland Glaciological Society has a mountain hut in the area; it is an important base for the society's longer expeditions.

Objectives

Continued use of the hut for research purposes, with the possibility of accommodation for the public.

Stipulations

Local development plans should provide for one hut for scientific purposes. An extremely cautious approach must be taken, consistent with the protection status of nunataks.

There is no provision for other operations or development.

7.11.10 Other service areas and units

Information points (squares/gates) are to be at the following places on national road no. 1, the Ring Road:

- **by the start of the road into the Heinaberg area, on the western approach initially, and then on the eastern road once it has been opened**
- **by the approach road to Hoffell**
- **at Skálafell**

Information points (gates/signs) are to be on the national park boundary at the following places:

- **by the national road at Skaftafell**
- **by the road to Heinaberg area**
- **by Hoffellsjökull, Jöklasel, Gígjukvísl, Háalda, the road to the east side of Skeiðarárjökull, and by the walking route in Hjallanes**

Collaboration is anticipated between the national park and the owners of land within the national park, regarding localised services that meet the needs of the national park and park visitors, and which can be expediently dealt with locally.

It is also expected that the national park will engage with private parties regarding provision of certain services for the national park, if this is expected to improve park services and the experience of park guests.

7.12 SERVICE AREAS WITHIN THE WESTERN REGION

7.12.1 Skaftárstofa at Kirkjubæjarklaustur (outside the national park)

Basis for service area

A visitor centre – Skaftárstofa – will be built, south of the river Skaftá, located where there is a good view of Lómagnúpur and Vatnajökull. A footbridge will connect the visitor centre to the Kirkjubæjarklaustur urban area so that the services there are within easy reach. Locating the visitor centre close to existing services can both support those services and strengthen the promotional work of the national park.

Objectives

That a popular visitor centre is established in Kirkjubæjarklaustur where work to promote the national park will be carried out in cooperation with other parties. Research into nature in the national park is to take place and local business and the community are to be supported.

Initially information about the national park is to be provided in cooperation with the Skaftárhreppur municipality and others, at the Skaftárstofa tourist information centre.

7.12.2 Hut south of Sveinstindur

Basis for service area

South of Sveinstindur is an accommodation hut owned by the Skaftárhreppur municipality. The *Útivist* touring club has leased the hut, and rented out accommodation to the public.

Objectives

Continuing possibility of hut accommodation and camping in tents for the public, especially hiking groups.

Stipulations

Local plan to provide for possible enlargement of accommodation hut, a small campsite with minimum service, WCs and picnic area for visitors.

7.12.3 Hut at Stóragil, Skælingar

Basis for service area

In the Stóragil canyon at Skælingar is an accommodation hut owned by the Skaftárhreppur

municipality. The *Útivist* touring club has leased the hut, and rented out accommodation to the public.

Objectives

Continuing possibility of hut accommodation and camping in tents for the public, especially hiking groups.

Stipulations

Local plan to provide for possible enlargement of accommodation hut, a small campsite with minimum service, WCs and picnic area for visitors.

7.12.4 At southwestern end of Langisjór

Basis for service area

At the southwestern end of Langisjór is a campsite with basic facilities and basic picnic area for visitors and rangers (toilets, picnic table and shelter). Provision is also made for facilities to launch small boats.

Objectives

To offer minimum facilities for camping in tents and picnic facilities.

Stipulations

Local plan to provide for moorings for boats, a small campsite with minimum service, WCs and picnic area for visitors.

7.12.5 At northeastern end of Langisjór

Basis for service area

No services or facilities for staying overnight exist at Langisjór, which is visited by a growing number of visitors, to visit or to walk around the lake. Most hikers spend one or more nights below the Fögrufjöll mountains at the northeast end of the lake. A service area there could also serve hikers on longer hikes on Bárðargata or around the Vatnajökull glacier.

Objectives

To offer minimum overnight and picnic facilities for hikers and other visitors north of Langisjór.

Stipulations

Local plans to provide for a hut and campsite with minimum service, lavatories and picnic area for day visitors. Structures to harmonise with the landscape as far as possible.

7.12.6 In Eldgjá

Basis for service area

Eldgjá is visited by up to 15,000 day visitors every year. In Eldgjá WCs and picnic facilities are in place, but it is deemed desirable to provide in addition a small day-shelter/visitor shelter, where rangers can

be available during the day, and where visitors have access to information.

Objectives

To improve facilities for rangers and day visitors at and near Eldgjá on the Fjallabak route.

Stipulations

Local plans to provide for WCs and picnic area for day visitors, also a day-shelter for rangers, which would also serve as a visitor shelter.

7.12.7 Hólaskjól by Lambaskarðshólar (outside national park boundary)

Basis for service area

The regional development plan for the central highlands designates Hólaskjól as a highland centre. Tourist services are operated, and national park rangers serving the southern part of the western region have had facilities there.

Objectives

A ranger station is envisaged, together with provision of information for the national park.

7.12.8 Nýidalur/Jökuldalur on the Sprengisandur highland road

Basis for service area

The Iceland Tourist Association runs accommodation huts and a campsite in Nýidalur. A park ranger is resident during the summer. Nýidalur/Jökuldalur is well connected to hiking trails over Vonarskarð; there are also tracks for vehicles to Vonarskarð, to Askja via Gæsavatnaleið, and to Jökulheimar via Bárðargata.

Objectives

The area is to have a ranger station where information about the nature of the area is to be provided, with special emphasis on geology and history. Information is to be provided as text and pictures in leaflets and on posters and information signs.

Stipulations

Local development plans should provide for normal evolution of service in cooperation with private enterprises as has been the case. Scale will depend on growing visitor numbers.

7.12.9 Blágil (outside the national park)

Basis for service area

Regional plans for the central highlands make provision for a service area with shops in Blágil and for the development of tourism. There is a campsite, a hut used during the annual round-up,

stables and horse enclosure. The park rangers for the Laki area are based at Blágil.

Objectives

There are provisions for the park rangers to continue in Blágil. Provisions must be made for further development in the area because of increasing numbers of visitors and rangers.

7.12.10 Galti (outside the national park)

Basis for service area

Galti, just south of the national park boundary, is a hyaloclastite ridge southwest of Varmárfell. The main access route to the Laki craters is over Galti, providing an opportunity to improve and broaden the information provided to visitors and thus reduce the strain on the Laki crater area.

Objectives

Provision is made for a service centre at Galti with a visitor shelter and toilet facilities for visitors. At, or around, the service centre is to be a stopping area with tables and benches where the view over the Laki craters can be enjoyed. Information about the nature of the area would be provided there, with an emphasis on geology and history.

7.12.11 At Laki

Basis for service area

Every year up to ten thousand day visitors go to the Laki craters. At the foot of Mt. Laki are WCs and picnic facilities for visitors, as well as a small day shelter where rangers can be based during the day and visitors can access information.

Objectives

To improve facilities for day visitors and rangers at the Laki craters.

Stipulations

Local plans provide for WCs and picnic facilities for day guests, as well as a shelter for rangers which can also be used as a visitor shelter.

7.12.12 At Tjarnargígur

Basis for service area

Every year up to ten thousand day visitors go to the Laki craters. At the car park by Tjarnargígur are WCs and picnic facilities for visitors, as well as a small day shelter where rangers can be based during the day and visitors can access information.

Objectives

To improve facilities for day visitors and rangers at the Laki craters.

Stipulations

Local plans provide for WCs and picnic facilities for day guests, as well as a shelter for rangers which can also be used as a visitor shelter.

7.12.13 Hólaskjól at Lambaskarðshólar (outside the national park)

Basis for service area

A highland centre is at Hólaskjól south of Eldgjá. Tourist services operate from there, and there is a ranger station which primarily serves the southern part of the Western Region.

Objectives

Provision is made for the ranger station to continue, and for information services.

7.12.14 Hrauneyjar (outside the national park)

Basis for service area

A ranger station primarily serving the mid-Western Region is at Hrauneyjar. Provision of information is important there because it is the main access point for visitors walking or driving into the northern part of the Western Region via Sprengisandur, Bárðardalur – Vonarskarð – Askja, Jökulheimar, Landmannalaugar and onto the Vatnajökull glacier. There is motor traffic all year.

Objectives

Bearing in mind that Hrauneyjar is a centre for traffic in the highlands and there is considerable traffic all year, the policy will be to cooperate with operators, environment and tourism authorities regarding information provision all year.

7.12.15 Jökulheimar

Basis for service area

There are huts in the area belonging to the Iceland Glaciology Society which are important bases for society expeditions.

Objectives

Continued use of the huts for scientific purposes, with the possibility of accommodation for the public.

Stipulations

Local plans should provide for up to four huts for scientific purposes.

It is permitted to rent accommodation in the huts to members of the public.

There are no provisions for other operations or development.

7.12.16 At Svarthöfði

Basis for service area

Provision is made for a campsite with basic facilities at Svarthöfði south of Vonarskarð. The campsite is to be equipped with a dry toilet, and it is to be accessible to visitors arriving by car or on foot. The main hiking trails to Vonarskarð are from Svarthöfði.

Objectives

To offer accommodation and an information service south of Vonarskarð.

7.12.17 Hnýflar and Gjóstá

Basis for service area

Provision is made for a campsite with basic facilities (dry toilet) near Hnýflar north of Vonarskarð. The hut would be accessible by car or on foot. Provision is made for longer hiking trails in the area, connecting the Northern and Western Regions: Gæsavatnaleið in the east; Bárðargata to Vonarskarð and Jökulheimar in the south; and Marteinsflæða and the head of Skjálfandafljót river in the north.

Objectives

To offer a campsite and dry toilet on a less-used driving/hiking route, and a picnic area for visitors north of Vonarskarð.

Stipulations

Local development plans should provide for a campsite and dry toilet in a new service area, and hikers are also to be permitted to camp by the hut. Provision is also to be made for a picnic area with information at Gjóstuklif by the northern end of Vonarskarð.

7.12.18 Grímsfjall

Basis for service area

The Iceland Glaciological Society has mountain huts in the area that are an important base for the society's longer expeditions and are used as the location for a variety of research.

Objectives

Continued use of the hut for scientific purposes, with the possibility of accommodation for the public.

Stipulations

The local development plan is to provide for up to four huts for scientific purposes and telecommunications structures.

There are no provisions for other operations or development.

7.12.19 Information points (squares/gates)

Information points are to be at the following places:

- **Information board in the car park at Laki and Tjarnargígur, F207**
- **Information gate at Galti on Lakagígavegur F207**
- **Information gate at Hnúta on Lakagígavegur F207**
- **Information gate on Sprengisandsleið F26 north of Tómasarhagi and south of Nýidalur**
- **Information gate at the entrance to the national park on Hágönguvegur**
- **Information gate on Jökulheimavegur**
- **Information gate at national park boundary on Drekatnsleið road F229**
- **Information gate at eastern and western boundaries of national park on north Fjallabak road F208**
- **Information gate at national park boundary in Tungnaáröræfi by Máni/Þórisós**
- **Information board at Hrauneyjar and Versalir**
- **Information board at Jökulheimar**
- **Information board in Nýidalur**
- **Information board by Svarthöfði**
- **Information board by Gjóstkúlfir**

7.13 TRADITIONAL LAND USE

Traditional land use such as livestock grazing, wildfowling, reindeer hunting, and angling in rivers or lakes is permitted for rights holders in those areas specified in the Vatnajökull National Park Act no. 608/2008 and subsequent amendment in Regulations no. 755/2009, annex III (see Article 26 of the Regulation) provided that the provisions of the Protection, Conservation and Hunting of Wild Birds and Wild Mammals Act no. 64/1994 and other legislation applying to the utilisation in question are met.

Angling in rivers or lakes, wildfowling and reindeer hunting are only permitted for the general public in the same areas i.e. those which fall under appendix III as referred to in Vatnajökull National Park Regulations no. 755/2009, Article 26: unless special restrictions have been locally applied. Elsewhere in the national park such land use is prohibited.

It shall be ensured that all traditional land use is sustainable e.g. by using a licensing system or other appropriate means. To ensure sustainability the relevant fish, bird and reindeer populations need to be assessed and monitored.

It shall be ensured, in cooperation with the land-use rights owner where appropriate, that land use causes no damage.

Angling and hunting shall be carried out in moderation and with respect for the prey, the environment and other visitors to the national park.

7.13.1 Livestock grazing

Livestock grazing is only allowed in areas where traditional land use is permitted and it shall be sustainable. The frame of reference shall be the assessment of grazing lands under Regulations no. 10/2008 for quality controlled sheep farming. If grazing proves to be unsustainable and detrimental to vegetation, the board of the national park can demand that grazing is halted or restricted in that area.

7.13.2 Wildfowling and reindeer hunting

Inside Vatnajökull National Park reindeer hunting and wildfowling are only allowed in areas where traditional land use is permitted, and which are defined in the aforementioned regulations and shown in descriptive plans. Within the Snæfell conservation area and adjacent land to the east, hunting/shooting is restricted because: the area is important as a breeding and moulting ground; it is a wetland which is scheduled to become an international protected area (RAMSAR); there are sensitive moss areas; and the area has value for general outdoor activities and nature watching.

All hunting/shooting/fishing (except for mink control) is prohibited in the following areas:

- **in Jökulsárgljúfur, see relevant Regulations for restrictions on the area**
- **at Skaftafell, see relevant Regulations for restrictions on the area**
- **all hunting, with the exception of mink and fox hunting, is prohibited in the Snæfell conservation area and to the east of it, cf. the demarcation detailed below**

The following restrictions apply to individual species:

Reindeer hunting is prohibited in the following areas:

In the eastern region between Háslón and Jökulsá í Fljótsdal, before 15 August. In reindeer hunting it is, however, permitted to fell an animal up to 1,000 metres inside the national park boundary before 15 August, but only if stalking a herd. In such an event, the reindeer hunting guide shall notify

rangers at Snæfell or a national park warden as quickly as possible.

Goose hunting in the eastern region:

A national park warden may, after consultation with the regional committee, issue notice that commencement of hunting is postponed, if in the judgement of recognised parties the progress of nesting by pink-footed goose justifies such a postponement. Such notice shall be issued not later than 15 July each year.

Snæfell conservation area and adjacent land to the east:

The eastern boundary follows the easternmost branch of Jökulsá í Fljótsdal river from its source northwards to a ford. From there it follows a straight line west to Sótaleiði and from there over to the top of Sandfell. From Sandfell it goes to Nálhúshnjúkar and then to the top of Tíutíu. The boundary then follows the Snæfellsslóð track where it goes over the Grjótlækir streams and on to the ford at Langihnjúkur where it crosses the top of Langihnjúkur and continues to the top of Ketilhnjúkur. It takes a direct line from there to the top of Litla-Snæfell and then to the westernmost source of Jökulsá í Fljótsdal river.

The southern boundary then follows the margin of Eyjabakkajökull to the easternmost source of Jökulsá í Fljótsdal.

The limits of the above area are shown on an information map.

7.13.3 Arctic fox hunting

Arctic fox (*Vulpes lagopus*) hunting is permitted under the general regulations which apply to fox hunting, and should be conducted in keeping with the Protection, Conservation and Hunting of Wild Birds and Wild Mammals Act no. 64/1994 and the hunting regulations of the appropriate local council, using accepted methods. Elimination of foxes in their dens shall be carried out in consultation with the national park warden, while there is a duty to notify numbers of animals hunted at large.

Fox hunting is not, however, permitted in the following areas:

- at Skaftafell
- in Jökulsárgljúfur
- in the Esjufjöll mountains

7.13.4 Mink hunting

Policy is to exterminate mink (*Mustela vison*). Mink hunting shall be conducted in accord with the

regulations of the appropriate local council, using accepted methods and in consultation with the national park warden. A record of mink caught shall be maintained and returned to the park warden.

7.13.5 Angling in rivers and lakes

Fishing in rivers and lakes under general regulations is only permitted in areas where traditional land use is permitted.

7.13.6 Egg gathering

Traditional gathering of limited numbers of eggs from nests of wild birds is only permitted for rights holders in areas where traditional land use is allowed, see Vatnajökull National Park Regulations.

Egg gathering is prohibited in the eastern region of Vatnajökull National Park.

7.14 QUARRYING AND OTHER EXTRACTION OF MATERIAL

It is not permitted to quarry or otherwise extract material from the national park except in special cases where the material is required for use within the park, see sections 1 and 2 below. Current and older extraction sites within Vatnajökull National Park are to be mapped and a clean-up schedule prepared for them. Unauthorised sites are to be closed. Administrative procedure for extraction of material shall be as stated below in sections 1 and 2, as appropriate.

It is prohibited under all circumstances to remove material from areas protected under Section X of the Nature Conservation Act no. 60/2013 and from areas which have special protection status, see section on land use. In assessment of conservation value of a proposed quarry/extraction site the evaluation process described in chapter 6 should be considered. The conservation value of unconsolidated deposits should also be assessed separately to establish if the area holds geological information which may need to be preserved for the future. It must be ensured that extraction of material has only negligible influence on nature and visual aspects of the site, and that it is consistent with conservation objectives.

- 1. The owner/custodian of privately-owned land is allowed, without special permission, to extract minor quantities of material for personal use unless the site contains geological formations or an ecosystem protected under Section X of the Nature Conservation Act 66/2013.**

Any extraction of material covered by this provision is to be notified to the national park warden to ensure that: the principles and objectives of Vatnajökull National Park are met; safety of visitors is addressed; care is taken regarding working and finishing the site; and environmental impact is minimised.

2. **It is possible to permit extraction of material for specific short-term projects within the national park following procedures provided under the Planning Act, the Strategic Environmental Assessment Act, and the Environmental Impact Assessment Act where appropriate; see chapters 2.7 and 2.8 for more on procedures. Such a permit may be granted conditionally.**
3. **The national park warden may grant permission for small-scale extraction of material for use within the national park, in making paths and minor road repairs. Such extraction may not exceed 200 m³. The extraction site must be made good, minimising traces of the work carried out.**

7.15 AREAS PROVIDING VARIOUS FACILITIES

Within the national park are areas used for various specific activities or businesses, usually not under the auspices of the national park. Such areas are identified in municipal development plans e.g. as an open area for a specific use or an area for service providers.

Changes to such uses are to be expected and they should be included in the local development plan. The board of the national park shall discuss such changes and seek the cooperation of the appropriate municipality. Procedure otherwise coincides with changes to the development plan, where appropriate.

Contracts with parties working in these areas should include a code of practice reflecting the conservation role of the national park, with a requirement for environmental management in accordance with the park's own procedures.

7.15.1 Summer camp at Ástjörn

Basis for special area

Ástjörn lake is an important habitat for the horned grebe (*Podiceps auritus*).

Objectives

The horned grebe shall continue to breed undisturbed at Ástjörn.

Stipulations

Traffic on and around the lake is restricted during the horned grebe's breeding season from 20 May to 1 July under the provisions for specially protected areas.

The local development plan for Ásbyrgi shall include Ástjörn.

7.15.2 Equestrian competition track

Basis for special area

The equestrian competition track (owned by *Hestamannafélagið Feykir*) is on land belonging to the Iceland Forest Service in the mouth of Ásbyrgi, western side.

Objectives

The area is to continue to provide facilities for horse-riders.

Stipulations

Renewal of the contract between the Iceland Forest Service and *Hestamannafélagið Feykir* requires consent by Vatnajökull National Park.

The local development plan for Ásbyrgi shall include the racetrack.

7.15.3 Sports facilities at Ásbyrgi

Basis for special area

The sports area is in the inner part of Ásbyrgi which is a popular picnic area for tourists. It is also a reserve national park campsite.

Objectives

The sports area is to continue in present format, with no further development.

Stipulations

A new contract will be made between Vatnajökull National Park, the Iceland Forest Service, and *Héraðssambands Þingeyinga* (youth/sport association).

7.15.4 Golf course at Ásbyrgi

Basis for special area

The existing golf course is in the mouth of Ásbyrgi. Hiking trails in Ásbyrgi are close to and cross the golf course. It is clear that increased numbers of tourists and the position of the golf course are not compatible. The local development plan for Ásbyrgi and the municipal development plan for Norðurþing district provide for the golf course to be relocated to grass fields at Ás.

Objectives

The golf course is to be moved from Ásbyrgi to the fields at Ás, and facilities for golf are to be available there.

Stipulations

A contract is to be made with the golf club Gljúfura, requiring the golf course to be certified as eco-friendly.

7.15.5 Nordic Volcanological Centre's hut at Dyngjufjöll

Basis for special area

The Nordic Volcanological Centre's hut at Dyngjufjöll has facilities for scientists researching Askja and the Dyngjufjöll mountains.

Objectives

A contract is to be made between Vatnajökull National Park and the Nordic Volcanological Centre regarding use of the hut for scientific purposes, and the possibility of relocation to the service area in Drekgil.

Stipulations

There are no provisions to renew the hut.

7.15.6 Hut at Sylgjufell

Basis for special area

A privately-owned hut at Sylgjufell is not registered as a property, has no property boundaries or any other parameters recognised by Ásahreppur district. The hut is on public land and requires permission from the prime minister and the local council.

Objectives

There should be no further development in the area.

Stipulations

Further development of the area is prohibited. The owner must provide public access to at least part of the hut as an emergency shelter.

7.16 UTILITIES, TELECOMMUNICATIONS AND POWER PLANTS

7.16.1 Utilities to and within service areas

The presumption is that, in service areas with nearby access to the mains systems for utilities, connecting installations will be underground, subject to further provision in local plans. This applies, for instance, to Skaftafell and Ásbyrgi. Disruption arising from installation and maintenance of utilities is to be minimised. Works

and their preparation shall be carried out in consultation with the national park warden.

7.16.2 Telecommunications equipment

Telecommunications are of vital importance to the national park, not least with regard to the safety of those who pass through the park, as well as community interests. Such equipment, e.g. amplifiers and their power sources, is to be installed in appropriate locations in consultation with the national park warden, in the case of autonomous units unconnected with utilities systems. This is subject to the stipulation that it be ensured that equipment and its location and arrangements be so selected as to have minimal impact on the visitor experience, e.g. with respect to noise or visual impact. Emphasis is placed on the power sources of such installations being environmentally friendly. If it is necessary to transport pollutant fuel off-road to a telecommunications installation, this shall be in consultation with the national park warden.

Telecommunications installations at the following locations are connected to mains utilities, e.g. by underground cables:

- **At Grjótárhjúkur. Fibre-optic cable and electricity supply via underground cables northward to the boundary of the national park.**

In addition a fibre-optic cable adjacent to road 910 across Vesturöræfi lies partly within the national park boundary.

7.16.3 Utilities: mains and distribution systems

This section is concerned with those parts of mains and distribution systems which are to pass through the Vatnajökull National Park, and may be presumed to be subject to development permits.

- **Krafla power line II. The line crosses the course of the river Jökulsá á fjöllum south of Fremri-Grímsstaðanúpur and Skarðsá.**
- **Krafla power line III. Line is planned alongside Krafla power line II.**

See further section 2.7 regarding factors of planning and permits.

7.16.4 Small power plants

Plans to erect a small hydroelectric generator in the stream at Drekgil are being considered. If the generator is installed, its electricity will be used for

research and telecommunications equipment at Vaðalda and operations at Drekgil. A ground cable is anticipated from the generator to equipment at Vaðalda and the buildings in Drekgil.

The following conditions will apply to the project:

- **It will be subject to obligatory assessment.**
- **It will be notified to the local authority in accordance with the Environmental Impact Assessment act no. 106/2000.**
- **It will be in agreement with the aims of Vatnajökull National Park regarding sustainability and nature conservation.**
- **Consultation will take place with the National Park Warden and the Regional Committee about the project and shaping the local authority plans. The environmental assessment will include the reasons why other environmentally friendly energy production methods are not suitable, and what will be the likely temporary or permanent effects of the project on the area and its appearance. The local authority plans will state if a reserve power source is necessary.**

7.17 MONITORING AND RESEARCH

Crucial steps to securing the preservation of the national park's natural and cultural heritage are, firstly, to catalogue and chart its features in their current state and, secondly, to monitor their condition going forward so that problems may be promptly addressed. It is also desirable to have oversight of the long-term sociological impact of the national park.

A considerable body of knowledge about the natural and cultural heritage of the region covered by the national park already exists, and a variety of monitoring programmes have been in operation in the area for a number of years. The state of the art in this regard will be detailed further in conservation plan proposals for individual areas of the park. An essential knowledge base for the national park, backed up by national policy on natural and social research, is itemised here below, along with some monitoring programmes which, optimally, should also be initiated or continued. Contracts must be drawn up with relevant research bodies for the design of data layers and appropriate use of research and monitoring data.

The national park also encourages academic research projects that have implications for, or will stimulate, increased knowledge of the natural and

cultural heritage of the national park and its sociological impact. All research within the national park is subject to licence granted by the relevant area's park warden, and must proceed in co-operation with the appropriate specialist agencies.

7.17.1 Primary research: cataloguing the existing state of the national park's natural and cultural heritage

- **Preparing geological maps of the national park (bedrock, surficial deposits, tectonics) at scale 1:250,000**
- **Producing more detailed geological maps where it is deemed necessary or where the geology is particularly unusual.**
- **Cataloguing and plotting the main geographical formations and ecosystems specifically protected under Article 37 of the Nature Conservation Act or other legislation (craters, pseudocraters, lava fields, geysers, hot springs, lakes, rivers, waterfalls, wetlands).**
- **Assessing and classifying the landscape of the national park and listing the principal features of its landscape.**
- **Mapping the hydrology of the national park.**
- **Preparing soil and erosion maps of the national park at scale 1:250,000.**
- **Producing more detailed soil and erosion maps where land is at risk.**
- **Preparing vegetation and habitat type maps of the national park at scale 1:50,000, marking those areas with unusual richness of species or where the biosphere is unique in other ways.**
- **Compiling a list of fauna (mammals, birds, fish, small animals), flora (vascular plants, mosses) and fungi (mushrooms and lichen) mapped on 10x10 km grids within the national park.**
- **Cataloguing and mapping the principal cultural heritage sites and routes within the national park (homesteads, shielings, bridle paths, ferry sites).**
- **Listing placenames and collecting stories and folk-tales linked to them and the national park.**

7.17.2 Continuing research: Evaluating and monitoring the condition of the park's natural and cultural heritage, including changes of land use and climate

- **Observing progress of vegetation and monitoring key species in the national**

park (planted areas in Skaftafell and Jökulsárgljúfur, gyrfalcon (*Falco rusticolus*), ptarmigan (*Lagopus mutus*), pink-footed goose).

- Evaluating and monitoring soil and land degradation in the national park (wind erosion and sand deposition, erosion by glacial rivers).
- Evaluating and monitoring changes in water conditions, for instance taking into consideration climate change.
- Evaluating and monitoring volcanoes and their activity.
- Evaluating and monitoring the spread and effect of invasive species in the national park (mink, lupin).
- Evaluating and monitoring utilisation of natural resources in the national park (pasture, hunting/fishing, berry/herb picking).
- Evaluating and monitoring the state of and access to the national park's heritage sites (abandoned farms, shielings, traditional tracks, ferry points)
- Evaluating and monitoring the effects of tourism on nature in the national park (damage to vegetation, disturbance of fauna, off-road driving, damage to geographic formations and geysers).
- Evaluating and monitoring the effects of climate change and changes of land use on nature in the national park:
 - changes in outlet glaciers (retreat, creep, thickness)
 - vegetation spread on tills (glacial deposits), nunataks, sands and deserts.
 - changes in plants' flowering times and migratory birds' arrival and nesting times.
 - changes to palsas in the eastern part of the park.

social development of communities around the national park (service provision, number of overnight stays, employment (person-years) connected with the national park, attitude of local residents to the national park, population development).

- Evaluating the contingent effects the national park has on tourism and Iceland's image (opinion surveys amongst Icelanders, foreign tourists and tourism businesses).

7.17.3 Economic and social research: The effect of the national park on social development, economy and public image:

- Evaluating and monitoring the extent of tourism in the national park (numbers of day visitors, cars, overnight stays and hikers).
- Evaluating visitors' attitude to education and services provided by the national park (visitor opinion surveys, counting number of visitors taking part in events).
- Evaluating the contingent effects the national park has on the economy and



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