

HEART OF ICELAND NATIONAL PARK: SOME THOUGHTS AND SUGGESTIONS

A great deal of thinking has been done about the **Heart of Iceland National Park** (HINP), especially by Landvernd and the Ministry of Environment and Natural Resources. This note gives an international perspective from personal experience and from work within the IUCN World Commission on Protected Areas, to help the development of ideas into firm proposals for legislation.

In this note, I take as read that there should be a national park covering a wide area of the Icelandic highlands. The current fragmented approach to nature and landscape protection with a variety of purposes for smaller areas is a missed opportunity to take a broad and large-scale view of the whole area covering more than half of the country. Iceland has a rare opportunity to protect such a large and near natural area that will be one of the largest in Europe.

I am influenced both by my own impressions and also by being in the company of and sharing the views and impressions of many Icelandic friends I have been with in the highlands. I have surveyed the scene from the summits of Hvannadalshnúkur, Kerlingarfjöll, Hekla, and Eyjafjallajökull. I have experienced the area by driving into the Kverkfjöll area and standing on Virkisfell and seeing the vast anastomosing channels of Iceland's great untouched river the Jökulsá á Fjöllum, and by viewing the extraordinary wetlands of Þjórsárver from Arnarfell and walking around the arcuate moraine formed by the recent surge of the Múlajökull. And, I have been fortunate to have driven and walked through and camped in many areas of the interior. Is there a more magical place than staying at the hut at Herðubreiðarlindir among the angelica and whooper swans? It is the scale of the scene, the diversity of nature, the dynamism of the natural environment, the vast variety of colours in the landscape and the relatively minor imprint of humans over most of the area that are the abiding memories and provide the outstanding case for the whole of this area to be protected as a national park. And, the interior, to me, is epitomised by standing at the foot of Hjartafell (having waded across the Þjórsá) with the heart shape formed by the lateral moraines of Nauthagajökull and Múlajökull to realise that, perhaps, there really is a natural 'heart of Iceland'.

1. Objectives of the park

At the outset it is essential to determine why the park is being established and what it is expected to achieve in the longer term. Without such clarity, there will be much argument from different constituencies which will hold back progress and undermine buy-in by the many stakeholders, including the people of Iceland.

What should the objectives be?

First, it is essential to **conserve natural systems** in all of their diversity, as these are the essence of the area. I emphasise natural processes rather than the traditional protection of species and habitats as the environment of the area is naturally dynamic and will also change as a result of the effects of climate change on ice caps and glacier sizes, the amount of water flowing through the system and the intensity of events associated with volcanic activity.

Second, it will be important to protect the **key geo sites** as examples of Iceland's unique natural abiotic processes. Not only are they important in their own right, but they have a determining effect on the biotic world of plants and animals at all scales.

Third, and related to the first two points, it is essential to develop conservation objectives for **individual species and habitats**, always bearing in mind the potential changes resulting from climate change and any human factors. In other words, a dynamic and adaptable approach, rather than a strictly protectionist approach, will be needed.

Fourth, the **scale and diversity of landscape** is important. It might be called 'wildland', but I do not think a particular label like that is necessary. Rather there should be recognition in the objectives of the park that the scale, diversity, colour and variation in the landscape over the years and through the seasons is an important asset of the park.

Fifth, protecting the **cultural artefacts and cultural history** of the area is important. These sites and areas should be given specific protection.

Sixth, **traditional activities**, such as sheep grazing, hunting and fishing, should be able to continue as they are part of the connection of communities with the area. But, it will be necessary to have management regimes which are founded on the principle of sustaining the natural process, and of reducing the level of land degradation which has been prevalent on some of the Highland Grazing Commons for a long time.

Seventh, the **use of the area for human focussed activities will need to be carefully managed** so as not to physically disturb the area as a whole or to allow key sites and routes to become overwhelmed with visitors. Regulation of access along present lines in the protected area, and restricting access in certain seasons, under certain weather conditions, and in relation to volcanic events and their aftermath, will be required both to protect the natural environment and to ensure the highest level of public safety. This is particularly important with the ever-increasing number of visitors to the area.

Eighth, the **national park should not be seen as an area for developing yet more renewable energy** sources. The Rammaáætlun process should be brought to a conclusion and the Alþingi finally sign off the outstanding issues. I note that there is a lack of need for more electricity generation sources apart from the outmoded large-scale industrial users. Also, there is need to reduce the GHG emissions from existing industrial developments within the proposed park area and those that are reliant for electricity from sources within the park. A carbon neutral national park is a worthy objective after all, even though it may not be possible to achieve in totality. Some specific areas must be identified as protected for all time from development.

2. International status

The International Union for the Conservation of Nature has published guidelines for the management of protected areas which should be used as helpful guidance in the development of the HINP

<https://portals.iucn.org/library/node/30018>

There is a qualifying definition of a protected area and specific interpretation which is set out below and the implications for the HINP provided.

The definition 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.

This is interpreted as follows with words in *italics* suggesting the implications for the HINP.

Clearly defined geographical space: implies a spatially defined area with agreed and demarcated borders covering land, inland water, marine and coastal areas or a combination of these. “Space” has three dimensions: in air, water and, of particular significance, it can include subsurface rocks and minerals. *This should be achieved for the HINP by demarcation of the boundaries on maps.*

Recognised: implies that protection can include a range of governance types declared by people as well as those identified by the state, but sites should be recognised in some way (in particular, listing on the World Database on Protected Areas (WDPA) <https://protectedplanet.net/>). *This is dealt with under governance below. The Vatnajökull National Park is already included on the WDPA.*

Dedicated implies binding commitment to conservation in the long term, for example, through international conventions and agreements; national, provincial and local law; customary law; covenants of NGOs; private trusts and company policies. *This is best achieved for the HINP through legislation with the appropriate objectives for the area as suggested in section 1 under objectives 1-3.*

Managed: assumes some steps to conserve the natural values for which the protected area was established; note that “managed” can include a decision to leave the area untouched if this is the best conservation strategy. For geoheritage conservation, management will usually focus on avoiding human-caused damage to features for which the site has been designated. In the case of volcanic sites, for example, management will also focus on issues of visitor safety. *There will have to be management of visitor access and use, including restrictions on the use of off-road vehicles, restrictions on hydro and geothermal exploitation for electricity generation, and also restrictions on other activities in the area, such as sheep grazing.*

Legal or other effective means: means that protected areas must either be gazetted (recognised under statutory civil law), recognised through an international convention or agreement, or managed through other effective means, such as recognised traditional rules of community conserved areas or the policies of non-governmental organizations. *As with existing national parks in Iceland, it is assumed that there will be a law approved by the Althingi.*

... ***To achieve:*** implies some level of effectiveness. *This implies establishing monitoring systems to check the achievement of the objectives of the park.*

Long-term: protected areas should be managed in perpetuity and not as a short-term or temporary management strategy. *It must be assumed that the establishment of the HINP will be for the longer term and not time limited.*

Conservation: in this context conservation refers to the *in-situ* maintenance of ecosystems and natural and semi-natural habitats; of viable populations of species in their natural surroundings or the surroundings where they have developed their distinctive properties; and of important

geological and geomorphologic characteristics. Many protected areas will include multiple values and management needs to identify and then protect all elements of importance. Of particular significance, will be the recognition of the link between geoheritage conservation and biodiversity conservation. *This can be achieved through the clear statement of objectives of the park set out in section 1 above.*

Nature: in this context nature *always* refers to biodiversity, at genetic, species and ecosystem level, and often *also* refers to geodiversity, landform and broader natural values. This broader conceptualisation of nature is an important change in the protected area definition that emerged in the 2008 revision. *This broadening of the definition is very important for Iceland as many of the features and processes are related to the volcanic and glacier activity.*

Associated ecosystem services: means here ecosystem services that are related to but do not interfere with the aim of nature conservation. *This is fundamental in the HINP given the dynamism of the natural environment.*

Cultural values: includes those that do not interfere with the conservation outcome (*all* cultural values in a protected area should meet this criterion), including in particular those that contribute to conservation outcomes (e.g., traditional management practices on which key species rely); and those that are themselves under threat. *This is relevant as there are cultural artefacts and that should be preserved and there are many cultural traditions still being carried on and also many written and oral cultural values that should be recorded.*

3. Stakeholders

International experience shows that stakeholder engagement throughout the process from identification through to long term management is vital for the success of the approval process and the operational stages. This lesson was applied successfully in the development of the Vatnajökull National Park with the establishment of two committees to engage with the local and national interests, although not all of the stakeholders agreed to the areas to be included and some have continued to resist. Nevertheless, the same should apply to the expanded park.

Who should be engaged formally?

First, it must include all those with formal rights, either as owners of land, or with formal long-standing rights of use, such as sheep grazing on the Highland Commons and fishing in protected lakes, such as the Veiðivötn. Second, local communities should be represented either because they have formal interests in the park area or are likely to be affected in one way or another by its designation and operation. This is usually best achieved through the elected representatives in the municipality and in the District. Third, as a national park is proposed, it is essential that those bodies representing the national interests are involved. These bodies will have legitimate interests in conservation of natural and cultural heritage, outdoor recreation and tourism, renewable energy and land use. Fourth, given that the impetus for the establishment of the HINP comes from the Icelandic Government, it will wish to be actively involved and represented. This should be at both elected representative and official levels.

How should the stakeholders be involved? In addition to formal governance arrangements (see next section), informal but meaningful consultation on all aspects of the development of the park proposals should occur.

4. Governance

Traditionally most protected areas have been owned and managed by governments, but this situation is changing. Protected areas are now under the control of many different types of institution. Sometimes several very different entities are working together: indigenous peoples, local communities, non-governmental organisations, private individuals, companies, religious groups and academic and research bodies. Furthermore, the “state” does not denote a single entity; in addition to the Ministry of Environment and Natural Resources, protected areas can fall under branches of government involved in forestry, agriculture, energy development and tourism. And, state can mean regional or local bodies, rather than just national. To make sense of the plethora of management agencies in existence, IUCN has agreed a typology of *governance* types, where governance is a complex process that includes:

- who decides the protected area objectives, and how these are implemented;
- how those decisions are taken;
- who holds power, authority and responsibility; and
- who is (or should be) held accountable for successes and failures of management.

IUCN defines four governance types, outlined in Table 1:

Table 1: Protected area governance types

Type	Name	Description	Icelandic example
A	Governance by government	<ul style="list-style-type: none"> ✓ Federal or national ministry/agency in charge ✓ Sub-national ministry/agency in charge ✓ Government-delegated management (e.g. to NGO) 	Vatnajökull NP and Breiðafjörður Conservation Area: report to the Minister for Environment Snæfellsnes NP reports to the Environment Agency
B	Shared governance	<ul style="list-style-type: none"> ✓ Collaborative management (various degrees of influence) ✓ Joint management (pluralist management board) ✓ Transboundary management (various levels over frontiers) 	
C	Private governance	<ul style="list-style-type: none"> ✓ By individual owner ✓ By non-profit organisations (NGOs, universities, cooperatives) ✓ By for-profit organisations 	Geysir

Type	Name	Description	Icelandic example
		(individuals or corporate)	
D	Governance by indigenous peoples and local communities	<ul style="list-style-type: none"> ✓ Indigenous peoples' conserved areas and territories ✓ Community conserved areas – declared and run by local communities 	Veiðivötn fishing lakes probably

http://cmsdata.iucn.org/downloads/governance_of_protected_areas___from_understanding_to_action.pdf.

There has been a lot of debate about the best governance type for protecting biodiversity, maintaining other values, and maintaining good relations between stakeholders. There is no definitive answer as it depends on the situation. However, it is clear from experience that protected areas set up in the face of opposition from a large proportion of the surrounding population or against the wishes of key stakeholder groups are likely to experience problems in the long term.

Although the tradition in Iceland has been for government control, i.e. Type A, there is good reason to argue in practice for the use of Type B, Shared Governance, as it ensures a collaborative approach between the parties and signals to the other stakeholders that joint effort and action is preferred, without actually lessening the leadership role of the government. There will be parts of the proposed HINP area where there is private ownership of land and again a collaborative approach of Type B is preferable.

Given the scale of the proposed HINP and the importance which the government and the people of Iceland ascribe to it, it makes sense for the park to be governed by a national park authority. In the spirit of the shared governance type and in the spirit of the engagement of all relevant stakeholders, the authority should have representatives of local and national interests representing civil society as well as government. Elections to the authority by the people living in and adjacent to the park should be held to provide a presentative membership, rather than being left to the Minister or the agencies of the ministry to determine. This would ensure democratic accountability, and also place an individual and a collective responsibility on the elected members to act in accordance with the founding legislation rather than in their own personal or their own constituencies interests. The board of the authority should not be so large that it is administratively cumbersome and not so small as to reduce the representation to a meaningless level. A maximum of 20 members would seem reasonable.

The roles of the national park authority Board should be similar to of the Vatnajökull NP Board, i.e. the development of park policy, supervision of Park Plan implementation, approval of expenditure and overall management of the budget, coordination of work through the area teams and committees, and assessment of the performance of the Park Director.

In addition, given the size of the area proposed and the large distances between settlements it makes good practical sense to have a series of Area Committees, similar to those established for the

Vatnajökull NP. Indeed, these new area committees could be developed from the existing 4 area committees of the latter with a similar composition and status. The role of these Area Committees would be to maintain close working relations with the stakeholder's interests in their area, to oversee the implementation of the national park plan, to provide support for locally based staff and to report periodically on progress to the national park authority Board.

5. Powers

The statutory powers of the HINP should be those already ascribed to the Vatnajökull NP. In addition, and if my suggestions for the objectives of the HINP are agreed, then powers to implement these objectives should also be included. The government will also need to determine the extent to which it is prepared to hand over powers from local government and other decision-making bodies to the park authority for the determination of permissions for all types of development. This is a crucial issue. If the park authority is to have no authority to determine development decisions, it becomes little more than a government advisory body and will have great difficulty in carrying out the integrated management of the area. More fundamentally, a restrictive approach will undermine the whole purpose of having the central highlands of Iceland designated as a national park.

More positively, the park authority should have the powers and resources to fund projects which improve the conservation and management of the natural and cultural assets of the park and to restore those areas, features and processes which have been damaged.

6. One national park authority or more?

At present there is a separate authority for each national park and slightly different reporting lines into the ministry or the Environment Agency. There has been consideration for some years of a single national park authority, begun by the previous Permanent Secretary and continued by the immediate previous minister. The proposals for the HINP are an appropriate time to consider this further.

Iceland has many relatively agencies operating in the environmental management field: I estimate at least 8. My observation over the years is that they do not always find it easy to cooperate and work together when providing advice to the Minister and his/her officials and to deliver what the minister seeks. Hence, my proposals for a single agency Auðlindastofnun - Natural Resources Agency of Iceland previously circulated to the Minister and officials in the Ministry of Environment and Natural Resources <http://rogercrofts.net/files/iceland/NaturalResourcesAgencyForIceland.pdf>

There is no reason for retaining all of the separate national parks and nature conservation area bodies. That approach would seriously undermine the administrative effectiveness and efficiency of the new arrangements. I recommend that a single national park authority be established by the Minister and reporting to the Minister: the **Icelandic National Parks and Conservation Areas Agency**.

What should its functions be? Put simply, it would develop policy and strategy, provide (with partners) necessary infrastructure, deliver management on the ground all informed by research-based scientific activity and knowledge exchange. This means that the Icelandic National Parks and Conservation Areas Agency would:

- develop the plans for the HINP and each of the other conservation areas,

- oversee and monitor plan implementation,
- allocate the budget provided by the government and from other sources in relation to needs and priorities agreed,
- ensure that the arrangements for engagement by stakeholders are working effectively for all interests,
- ensure effective collaboration with other parts of government and its agencies to enable the plans and priorities to be achieved, and
- communicate effectively with the public on the plans, progress and achievements of all of the areas under its jurisdiction.

I do not consider that this agency needs to employ experts to advise on research, science, people management, land management, and environmental restoration. There are already experts in the other specialist agencies reporting to the ministry which can provide this function, specifically the Nature Conservation Section of the Environment Agency of Iceland, the Icelandic Institute of Natural History, the Soil Conservation Service and the Icelandic Forest Service (in my view these are the organizations which should be merged to form the Natural Resources Agency of Iceland). What the Icelandic National Parks and Conservation Areas Agency will need to do is, with ministerial support, agree formal collaboration arrangements with these institutes and agencies to provide information and advisory services. From my practical experience, without these arrangements there will not be the cooperation and interaction that is necessary to make the operation of the agency effective.

In addition, the Icelandic higher education institutes will have a role in providing objective science-based advice. In particular, there are relevant experts in the University of Iceland Faculties of Earth Sciences and of Life and Environmental Sciences, and in the Agricultural University of Iceland's Faculty of Environmental Sciences.

7. Management areas through zones in the park

With such a large area within the HINP with a diversity of natural and cultural heritage interests and needs, it will be necessary to have management objectives and management work varying across the area. One excellent way of achieving this is to use the IUCN Management Categories system.

IUCN identifies a series of six different categories of protected areas, one with a subdivision, depending on how the area is managed. These are described in Table 2 below and are recognised as valid management approaches in protected areas by both IUCN and the Convention on Biological Diversity (CBD), provided the site *also* meets the overall definition of a protected area described in section 2. The category is based around the primary management objective(s), which should apply to at least three-quarters of the protected area – known as ‘the 75 per cent rule’. While the category system was originally developed primarily as a reporting tool, to be able to record and analyse how the world’s protected area network is being managed, it has increasingly also been used as a means of planning and management guidance and has sometimes even been enshrined in national laws. The category provides a shorthand for how the site is expected to be managed. (Note that the name is less important: places called “national parks” have been assigned to every category and some national parks are not protected areas at all.) Most countries assign categories to some of their protected areas, but many do not assign them to all, usually because of uncertainty about what is suitable in certain situations.

The HINP should have the same management objectives over 75% and will then qualify for IUCN Category II status. However, within the area there are already other forms of nature protection which are assigned to different IUCN Management Categories. These are illustrated in the table.

The major point for consideration is that the management categories can be used not only for assigning the majority of the HINP to a single category, but can also be used to recognise specific management objectives in different parts of the park and at different locations according to the needs of protection. It is worth considering legally designating the park area into different management zones and therefore appropriate management categories. For example, there will be areas where there are particular geoheritage features and forms, such as rock formations and waterfalls, and also particular Earth processes such as fissures and sub ice cap volcanoes which are managed primarily as Category III Natural Monuments. There will be areas of Category IV here habitat restoration is the priority. There will be scenic landscapes where managing tourists will be priority as in Category V. There may well be areas where it is decided to have strict protection and no public access, similar to the situation on Surtsey, and these areas would be Category Ia. I think that the Thjorsarver with its new protection status approved in 2017 fits Category Ib. But, I expect most of the area to be Category II management provided that there are controls on vehicular access, hunting and energy development to safeguard the natural features and natural processes, I stated earlier in this paper.

Table 2 IUCN protected area management categories and Icelandic examples

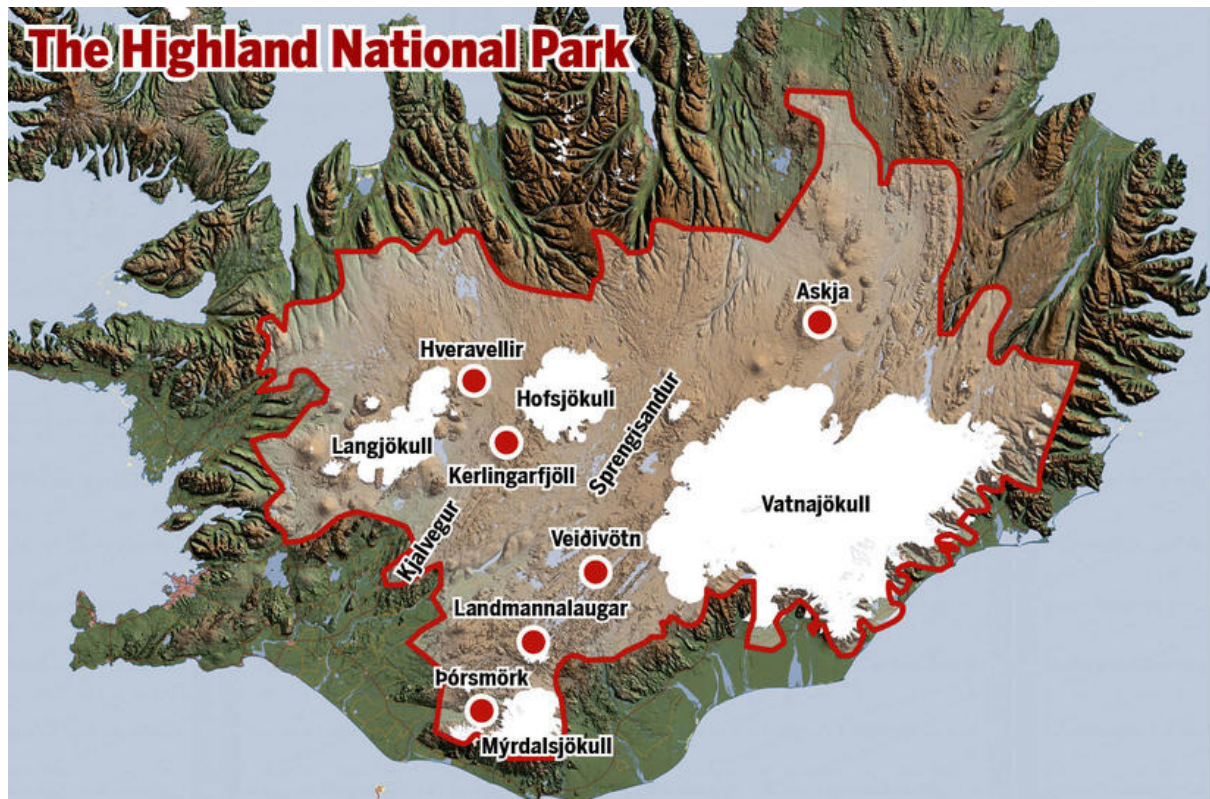
No	Name	Description	Example within or near HINP
Ia	Strict nature reserve	Strictly protected for biodiversity and also possibly geological/ geomorphological features, where human visitation, use and impacts are controlled and limited to ensure protection of the conservation values	Surtsey: volcanic island that emerged in 1963, access strictly limited for scientific research
Ib	Wilderness area	Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition	Hornstradir: isolated peninsular with access only by sea. Thjorsarver: extensive interior wetland access only on foot across major river
II	National park	Large natural or near-natural areas protecting large-scale ecological processes with characteristic species and ecosystems, which also environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities	Vatnajökull: based on major ice cap managed for natural geo processes and landscape conservation. Access only by snow vehicles or on foot
III	Natural monument or feature	Areas set aside to protect a specific natural monument, which can be a landform, sea mount, marine cavern, geological feature such as a cave, or a living feature such as an ancient grove.	Dettifoss, Gullfoss, Hraunfossar-Barnafoss: waterfalls over or through lava

No	Name	Description	Example within or near HINP
.			formations. Hverfjall and Hveravellir lava formations.
IV	Habitat/ species management area	Areas to protect particular species or habitats, where management reflects this priority. Many will need regular, active interventions to meet the needs of particular species or habitats, but this is not a requirement of the category	Husafell, Ingoldshofdi, Kringilsranni, Hvannalindar: habitat and species protection
V	Protected landscape or seascape	Where the interaction of people and nature over time has produced a distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.	Thingvellir: tectonic plate boundary site and cultural heritage site of original parliament. Fridland & Fjallabakki, Geitland, Herðubreiðarlindir: landscape and nature protection
VI	Protected areas with sustainable use of natural resources	Areas which conserve ecosystems, together with associated cultural values and traditional natural resource management systems. Generally large, mainly in a natural condition, with a proportion under sustainable natural resource management and where low-level non-industrial natural resource use compatible with nature conservation is seen as one of the main aims.	None identified as accurate for this category, although listed on the UNEP Protected Planet database

See <https://protectedplanet.net/search?country=Iceland&main=country> for Icelandic data

8. Size of area and location of the boundary

Figure 1 Ideas for the boundary of the park



Source:

https://icelandmonitor.mbl.is/news/nature_and_travel/2016/03/19/environment_turning_iceland_s_highlands_into_a_prot/

The boundary should be determined in negotiation with all of those with legitimate interests, owners of land, owners of traditional and continuing rights, and those with requisite scientific expertise. The rubric should be that the area should embrace as far as possible whole natural systems. In an Icelandic context that means ice caps and outlet glaciers, whole river systems and discrete volcanic belts. It will not always be possible to embrace whole catchments where these are far distant from the core area of the park and are heavily developed and/or settled. Hence the need for a pragmatic approach. International experience suggests it is better to define a large area from the outset, rather than incremental expansion over a long period of time. That is the very essence of the thinking in Iceland behind the establishment of the Heart of Iceland NP.

9. Visitor management

With the rapidly rising number of tourists coming to Iceland, many wishing to experience Icelandic nature and the excitement of the outdoors, management of people and their activities and their expectations will be a major part of the work of park authority staff. Also, working effectively with local providers of infrastructure services, such as guiding, site management, interpretation and education will be important roles.

There is a great opportunity to work more effectively with local businesses than has been the case with the Vatnajökull NP. I make the following suggestions to improve visitor management and local partnerships:

- creating visitor hubs around the boundary of the HINP at existing settlements, for example Hekla, Kirkjubæjarklaustur, Reykjahlíð, with expertise and capacity to manage visitors;
- develop the tourism infrastructure by encouraging private sector provision or making provision where government owned, to provide facilities of high quality at or preferably near to key sites and locations (the precise location being determined by not damaging in any way the site itself and being reasonably accessible to visitors but not up isolated valleys such as the Skriðuklaustur);
- implementing improved facility management at key sites where there is damage and confusion, especially Landmannalaugar;
- developing tourist guide accreditation schemes so that standards are high and comparable with the best overseas competitor countries;
- agreeing, implementing and enforcing codes of best environmental and visitor practice by private and public sector providers;
- strategies for footpaths development and maintenance funded and implemented using the best international experience; and
- managing visitors: education about environmental fragility and personal risk undertaken at entry points.

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