ASCENT
Promoting Sustainable Access to Uplands & Natural Environments

Northern Periphery and Arctic Programme 2014–2020

EUROPEAN UNION
Investing in your future
European Regional Development Fund

# ASCENT to Summit: A Journey to Sustainable Management in European Uplands & Natural Environments

## Conference Report 2019

www.ascent-project.eu

Comhairle Contae Dhún na nGall Donegal County Council

Comhairle Ceantair an Iúir, Mhúrn agus an Dúin Newry, Mourne and Down District Council

Mourne Heritage Trust
Caring for Mourne

Hordaland County Council

Metsähallitus

Soil Conservation Service of Iceland

Údarás na Gaeltachta

Causeway Coast & Glens Heritage Trust

Mosfellsbær

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ASCENT
Promoting Sustainable Access to Uplands & Natural Environments

# Executive Summary

**In 2016, five European countries representing seven sites, with over 500,000 visitors annually, came together connected by a shared goal – to protect and manage their respective upland sites and natural areas sustainably. ASCENT is a multi-region project rooted in collaboration, sustainability, conservation, international learning and the power of communities working together. This conference report: ASCENT – A Journey to Sustainable Management in European Uplands and Natural Environments is the summary output of that work.**

In response to protecting upland sites and natural areas in a sustainable manner, Chapter 1 presents the common environmental challenges and the measures and approaches adopted by working in partnership with all project partners, stakeholders and local communities, who are focussed for the long-term conservation of seven sites of natural beauty. Chapter 2 sets the policy context for the project on an international basis, referencing clear alignment with the priorities of the Northern Periphery and Arctic Programme and the management of protected areas. Chapter 3 establishes the condition of all sites, recommending a more collegiate approach to site specific responses and further develops sustainable collaboration for national and international alignment. Chapter 4 details the progress made to develop site specific sustainable solutions and community participation to determine the best approach to management planning. Chapter 5 presents the practical, innovative solutions and measures and the mechanism tested, which cultivates better engagement with host communities, key users and stakeholders for sustainable environment management. Chapter 6 explores how an awareness of the value and vulnerability of sensitive landscapes was raised and thereby changed behaviours. The impact of ASCENT in the journey to sustainable management is included in Chapter 7.

The ASCENT partnership was established to achieve the project's objective; to deliver on the main outputs, appropriate to each site; and in setting the knowledge base for the transfer of learning, skills and expertise. Collaboration, engagement and transnational co-operation were the key themes that underpinned ASCENT's main achievements and its legacy.



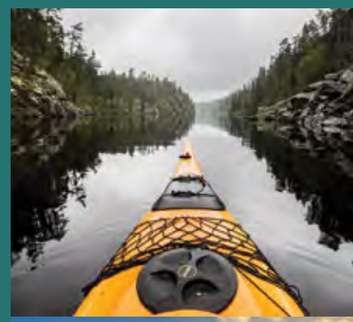


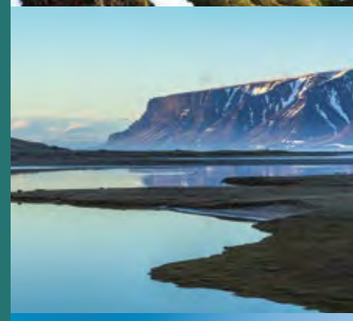
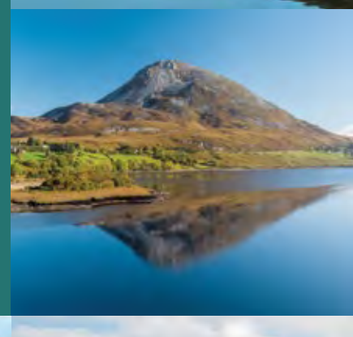
## CHAPTER 1
# Introduction

ASCENT - an acronym for Apply Skills and Conserve our Environment with New Tools - was awarded funding under the INTERREG VB Northern Periphery and Arctic Programme (NPA) 2014-2020; with support from the European Regional Development Fund; whose vision is to generate sustainable communities through transnational cooperation. Under the Programme Axis 4, Objective 4, which seeks to increase the capacity of remote and sparsely populated communities for sustainable environmental management, the ASCENT project, was developed.

Donegal County Council (DCC) managed the European project and worked with local and environmental authorities including Metsähallitus Parks & Wildlife Finland (PWF), the Soil Conservation Service of Iceland (SCSI), Newry, Mourne and Down District Council (NMDDC) and Mourne Heritage Trust (MHT) in Northern Ireland and Hordaland County Council (HCC) in Norway from 2016 to 2019, for its successful implementation. In addition, Údarás na Gaeltachta in Ireland, Causeway Coast and Glens Heritage Trust in Northern Ireland, Mossfellsbaer Municipality and Skaftárhreppur in Iceland were associated with the project.

Rapid growth in tourism numbers and the desire to experience and explore the natural environment has brought its own unique challenges in managing the landscape and in preserving its qualities for future generations. Multi-region ASCENT partners were committed to address the environmental challenges associated with increased visitor numbers and unregulated access and in marrying their collective experience to create new ways to conserve, protect and sustain these natural sites without taking from the experience they offer. Working in partnership with all project partners, stakeholders and local communities focussed on promoting sustainable access has positively contributed to the long-term conservation of these natural areas for future generations to enjoy, whilst also allowing the local communities to benefit.




CHAPTER 1.1

# The Project Focus

The ASCENT project aligns with the NPA Programme Objective; priority axis 4 in contributing to increased capacity for community-based sustainable environmental management to facilitate community development while balancing environmental, economic and social interests in remote and rural areas.

With recreational induced demand adversely impacting on upland and natural environments and landscapes, ASCENT brought together five regions to collectively address the challenges facing the conservation of natural areas of beauty, which were experiencing degradation and loss of unique biodiversity and bio-resources.

This transnational co-operation effectively shared the knowledge and expertise from one region to the next, in tackling the common characteristic – that increased footfall was having an adverse effect on the natural and sensitive landscapes across all project sites.

ASCENT responded to those conservation challenges by setting out the core objectives to:

*'Undertake international learning and to transfer that collective knowledge across the partner regions, in an effort to design practical solutions and to trial new initiatives and concepts for sustainable environmental management.'*

And in the delivery of three outputs:

1. A research report documenting upland path management approaches to contribute to enhanced knowledge and appreciation of the issues affecting sites.
2. Five sustainable management toolkits for balancing tourism, cultural and economic interests with environmental needs.
3. Five trial study reports to pilot practical initiatives appropriate to each site, for long term sustainable management.

The approach taken to achieve ASCENT's objective and outputs involved:

### Collaboration and Sharing Knowledge

With each region having a unique set of characteristics including governance, designations, capacity to respond to future environmental challenges, opportunities to overcome those would be realised with collaboration and shared knowledge, whereby competency and experience in one region permeates across the partnership rippling down to benefit local host communities.

### Progression of Sustainable Solutions

Collaboration and transnational co-operation contributed to establishing affected areas restoration needs and in the development of unique solutions to manage environmental damage.

### Engagement with Communities and Trialling Techniques

Key to increase competencies for the long-term maintenance and management of each site was met by empowering local host communities to respond to future challenges

**Raising awareness** of responsible recreation to increase knowledge **and change behaviour** of all target groups.


Figure 1.1: Project Focus





CHAPTER 1.2

# Seven Sites of Natural Beauty

The Seven Sites of Natural Beauty are experiencing heavy recreational induced pressure. ASCENT sites are visited by over half a million people per annum. ASCENT partners are collaborating to address the environmental threats and pressures to their local upland areas and natural sites, where the high conservation value of the seven unique and natural sites is sensitive to tourist demands and numbers. A coordinated and sustainable approach is required more than ever, across all sites, to build solutions to maintain the balance between competing environmental, economic, social and tourist interests.

## Eldhraun Lava Field, Iceland

The unique lava field of Eldhraun, created during one the greatest volcanic activities in human history, is located within the municipality of Skaftárhreppur in the centre of South Iceland. A main coastal touring route traverses the vast lava field with significant tourist numbers. The many viewpoints provide spaces to experience the uniqueness of the landscape. A nature first policy is adopted for the protection of the site's geological heritage and vegetation uniqueness.

## Úlfarsfell Mountain, Iceland

Úlfarsfell's 300 metre mountain is located on the border of two municipalities and is part of an extensive belt of nature reserves. With its gentle slope and urban setting near Reykjavik, Ulfarsfell is a very popular mountain for many recreational activities, thus requiring a holistic view in addressing the impact of visible erosion on its volcanic soil and for its sustainable management.

**Did you know?**

Úlfarsfell draws it name from the man's name Úlfur, meaning wolves, which is strange because there are no wolves in Iceland and there never has been. The name therefore, must originate from settlers from Scandinavia, or perhaps Ireland or Britain.

## Errigal Mountain, Ireland

Errigal Mountain is one of Ireland's most popular mountains. Its quartzite peak rises 751 metres above the blanket bogs of West Donegal. As more and more walkers are drawn to its slopes to enjoy the panoramic views from its summit, concerns of its ability to withstand increased numbers are mounting. Facilitating the responsible enjoyment of Errigal in a way that protects its special qualities and benefits the local community is envisaged, with agreement among multiple agencies that habitat restoration and sustainable access is desired.

## Slieve Donard, Northern Ireland

Standing at 850 metres, Slieve Donard, rising dramatically from the Irish Sea, is the highest peak in Northern Ireland and is characterised by sensitive heathland habitats and thin peat soils. Increasing visitor numbers put strain on the fragile landscape, and with new tourist proposals focusing on the mountain, there is a need for a joined-up vision for Donard to bring the fragmented ownership and wider stakeholder interests together to help protect this iconic landscape and valuable ecosystem, while responding positively to new challenges and opportunities.

## Slieve Gullion, Northern Ireland

Located in the heart of the Ring of Gullion's Area of Outstanding National Beauty in Northern Ireland is Slieve Gullion; a unique landscape of heathland, grasslands and wetlands of high conservation value, extremely sensitive to footfall damage. Rapid expansion in visitor numbers has adversely affected the designated habitat. The anticipated outcome of ASCENT is for reduced impacts on habitats with a sustainably managed and ecological compatible upland path to accommodate increased numbers that is in keeping with the natural landscape.





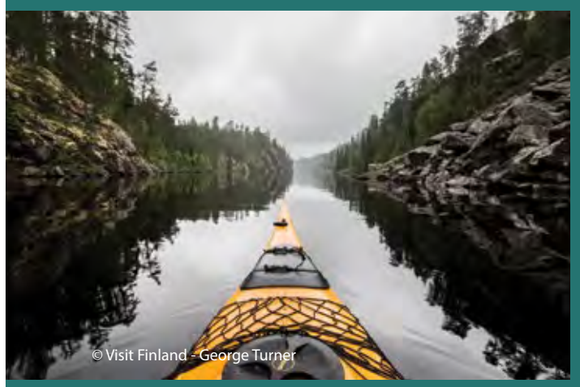
CHAPTER 1.2 - SEVEN SITES OF NATURAL BEAUTY

**Did you know?**

Hossa National Park was established as Finland's newest and 40th National Park in 2017, marking 100 years of Finland's independence. It is possible to travel from Hossa all the way to Bothnian Bay by water, a distance of more than 350km.

## Trolltunga, Norway

Maintaining a balance between economic growth and socio-cultural and environmental concerns is very evident at Trolltunga in Norway, where exponential growth in visitor numbers occurred with the promotion of the spectacular site across tourism platforms. A subsequent increase in rescue missions, parking and littering is paralleled with an economic boost to the local communities. The necessity to manage the landscape in a better way to preserve its natural qualities in tandem with balancing economic and tourist needs, for future generations. This the vision for Trolltunga.




## Hossa Region, Finland

For decades the Hossa region in Finland has been a very popular hiking and fishing destination. Despite the region's distinction from other ASCENT sites, with its low topography, common challenges of growing visitor numbers and erosion are common place. With National Park status, visitor numbers doubled to 120,000 in 2017. Located within a barren landscape, the ground is sensitive to erosion, with recovery very slow. Shared learning from other partners is very important in planning and implementing Hossa's future sustainability.

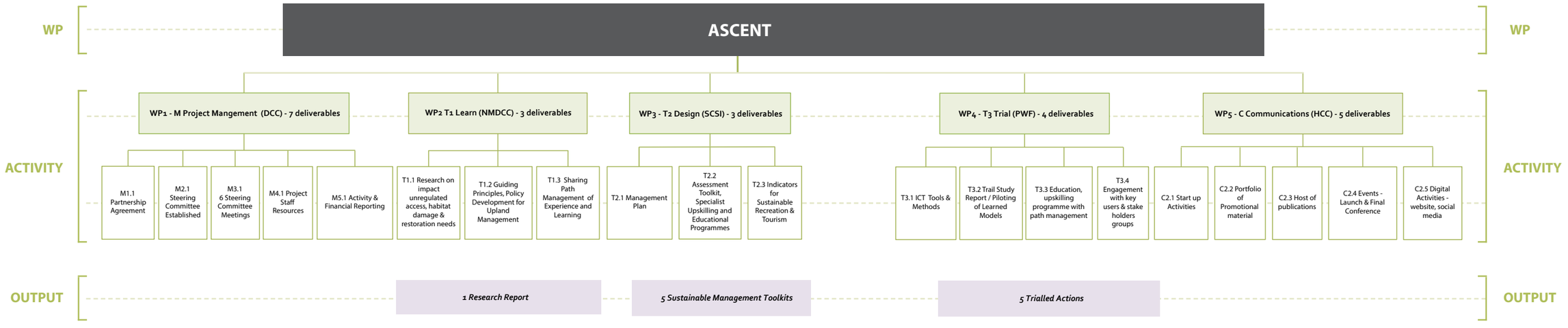
CHAPTER 1.3

# Project Management and Implementation

DCC successfully managed ASCENT and oversaw the implementation of all work packages on a multi-faceted front. In effect, the core project objectives were delivered across five work packages; each of which contained a group of related activities; to contribute to the delivery of three main outputs by August 31st, 2019. Guided by a comprehensive work plan, the approach taken was that international learning informed the design of appropriate site-specific interventions which then facilitated trialling of new techniques. All work packages were underpinned with the Communication Strategy, allowing for raised awareness among stakeholders and target group of ASCENT's responses to counteract the growing pressure placed on protected sites.

In summary, twenty-two activities and respective targets were fully delivered by the partnership. Notably T1.1 – Reports on the impact unregulated access. T1.3 - Exchange of Experience and Learning, C3.1 – Project Publications and C5.1 Digital Activities exceeded specified targets while the engagement with key users and stakeholders surpassed all targets set at project initiation.

Figure 1.2: ASCENT Work Plan



CHAPTER 1.4

## Collaboration and Sharing Knowledge

For the sustainable management of protected sites, establishing the current condition of seven partner sites was the necessary and initial step taken by NMDDC and sub-partner MHT, to set a specific baseline and to better inform of the way forward. Chapter 3 emphasises that the international aspect of the project greatly facilitated adaptable solutions to diverse sites, while the teacher-learner principle was key to knowledge transference throughout. The proliferation of social media is examined as an emerging trend common to many protected sites, while the 'Managing Uplands Paths – Are Good Principles Enough?' workshop and the Living Laboratory Study Visits exemplify the main achievements of the work package.

CHAPTER 1.5

## Progression of Sustainable Solutions

The need to engage and consult with key stakeholders is essential in developing and implementing a management plan, as outlined in Chapter 4 by the work package lead the SCSI. Cross partnership collaboration with NMDDC, determined the merit in applying the amber and red survey as the standardised method of assessment of path conditions. A programme of specialist upskilling on path techniques was established across vulnerable sites in Iceland, while video was the main resource deployed to educate users on the vulnerabilities of the natural landscape. In collaboration with PWF, the Limits of Acceptable Change (LAC) method is showcased to effectively analyse and evaluate sustainability.

CHAPTER 1.6

## Engagement with Communities and Trialling Techniques

As a practical continuation of the two previous work packages, Chapter 5 authored by PWF, promotes practical initiatives by use of innovative solutions including participatory surveys to support management planning across the partner regions. GIS technology showcased its effectiveness as a tool for community consultation, decision making and for monitoring change over time. A range of methods were tested including sheep wool, rushes and timber as traditional resources for path material, while exploration work in natural drainage methods were applied to limit water erosion.

Learning new skills through working together was proven to be a most efficient way to share knowledge and establish long lasting connections between partners and path operators.

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CHAPTER 1.7

## Raised Awareness and Changed Behaviour to Natural Areas

The overall aim of the communication strategy was to promote the successful implementation of the project and its achievements, whilst ensuring audiences were aware of the contribution through the NPA funded programme. The project's strong environmental ethos resonates in Chapter 6 through the various digital communication channels used to profile the impact of all project activities. The awareness of the value and vulnerability of sensitive landscapes was raised through a BBC television production – The Chronicles of Mourne featuring members of Mourne Heritage Trust's path team. User behaviour was also monitored and changed by HCC, with mountain guards communicating the hiking challenges and safety risks on upland sites.

**Did you know?**

The name Slieve Donard comes from the name of a local Christian missionary, Saint Donard, who is said to have appropriated the mountain for Christianity in the 8th Century. Slieve Donard was originally Benn Boirchi – 'the peak of Boirche'. Boirche was the legendary cowherd of the Kings of Ulster who dwelled on the mountain. Slieve Donard's other name was Sliabh Slainge. Slanhga, son of the legendary Partholon, was interred in the cairn on its summit following his death, and the mountain was named after him.

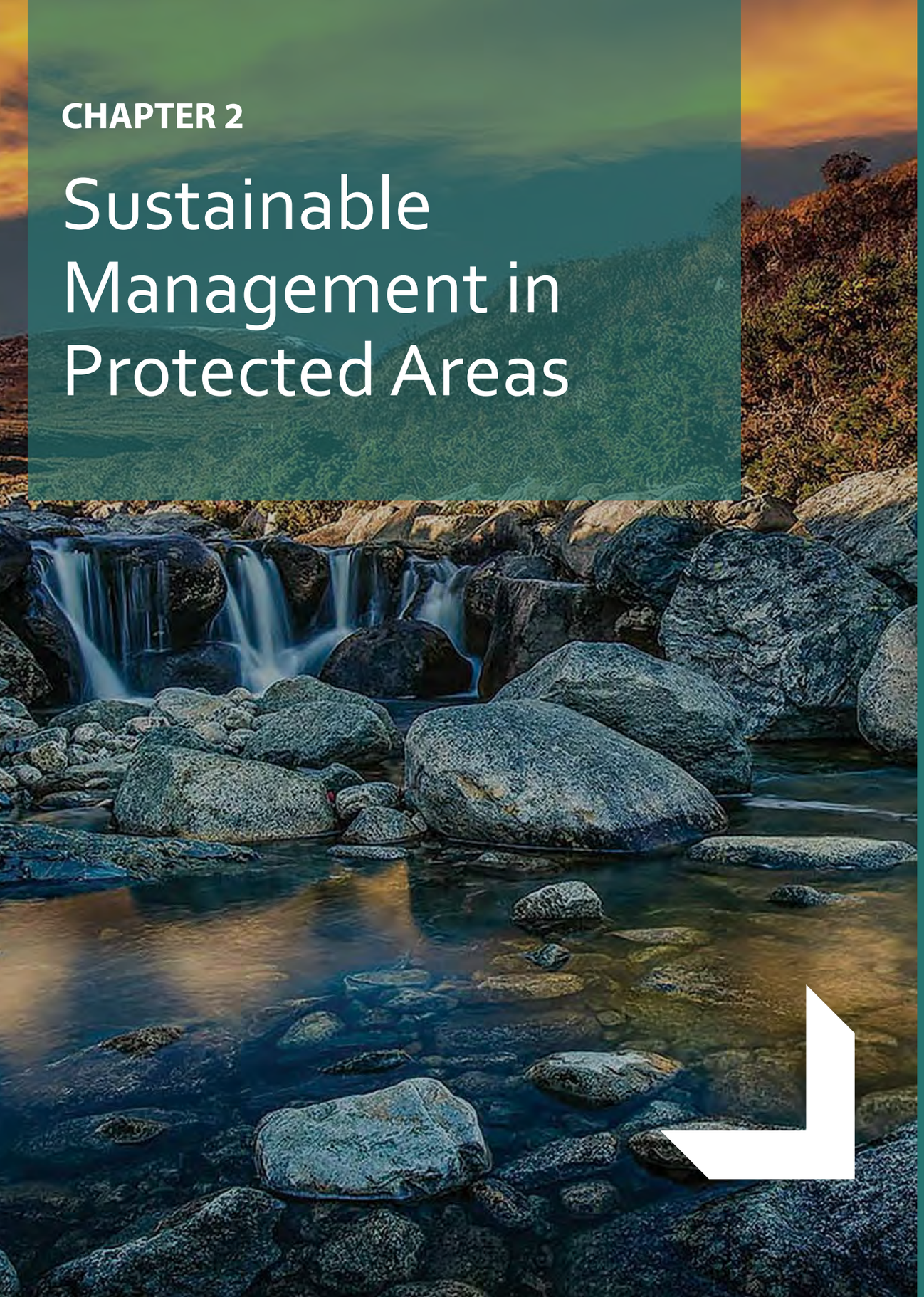
CHAPTER 1.8

## The Project Partnership

The ASCENT partnership comprised of eleven members from five countries with a nominated main and an alternate representative to the steering committee. The establishment of its steering committee in 2016 laid the foundations for a strong partnership, conducive to achieving the project objectives.

The lead partner was responsible for the successful implementation of the three-year project and ensuring the internal project coherence across all work packages. A chairperson and a vice chairperson were nominated from DCC, while designated leads were appointed to each respective work package.

The partnership met on a bi-annual basis, a total of six times over the project implementation phase with meetings rotated around the partner regions and supplemented with sixteen conference calls.



CHAPTER 2

# Sustainable Management in Protected Areas



CHAPTER 2.1

## Global Sustainable Development

The United Nations in 1987, defined sustainable development as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs'.

At the UN Sustainable Development Summit in 2015, 17 Sustainable Development Goals and 169 Targets were set to promote the use of the earth's natural resources and to protect the planet from degradation. Goal 15 is to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation, halt biodiversity. It came into effect on 1st of January 2016 to guide all decisions until 2030.

Since nature does not recognise borders, nature protection requires co-operation across borders - especially if global challanges such as climate change, loss of biodiversity, and deforestation are to be overcome, and the desired results are to be achieved.

In responding to global environmental challenges at the European level, the strategy of the Northern Periphery and Arctic Programme is to ensure that horizontal principles are integrated in all funded projects. Specifically, environmental sustainability refers to actions that reduce harmful effects of interventions and ensure beneficial social, environmental and climate results through the most resource-efficient and sustainable options and supporting actions to mitigate any remaining impacts. ASCENT identifies the most resource efficient and sustainable methods to combat environmental challenges facing the conservation of areas of natural beauty, through the development of management plans. These guide stakeholders and local communities to monitor and maintain protected areas.

CHAPTER 2.2

## The Northern Periphery and Arctic Programme Area

The Northern Periphery and Arctic Programme 2014-2020 co-operates with nine countries located in the outer fringes of Europe including Ireland, Northern Ireland, Iceland, Norway and Finland, in a vast geographical programme area that encompasses the European to Arctic zone.

The NPA region is characterised by a high quality of life and an abundance of natural resources and cultural heritage, paralleled with low population density, lower levels of accessibility, and a weaker economic base with susceptibility to climate change. Communities in the region rely heavily on the direct and indirect benefits from tourism offerings in rural and scenic peripheral areas as the main economic drivers.

The NPA Programme realises that transnational cooperation is key by empowering communities to respond to challenges and to find a balance between environmental, social and economic conditions in rural communities to ensure their viability. By co-operating across the regions, models of best practice and capacity-building emerge. Sharing knowledge facilitates local environmental authorities and rural communities in finding solutions, which in turn allows for the achievement of sustainable growth to benefit current and future generations.

The NPA Region spans both EU Member States and non-EU member states including Norway and Iceland.

### 2.2.1
## EU Member States

For the partner regions, all national policies are set within Europe 2020: A Strategy for Smart Sustainable and Inclusive Growth for activities at EU level, which are translated into national targets to monitor progress towards common goals, met through a mix of national and EU action.

Specifically, the protection and conservation of the natural environment and assets are enshrined in national and EU legislation and are of relevance for Errigal, Slieve Donard, Slieve Gullion and Hossa Region.

Within the 28 EU Member States, the Natura 2000 network has a total area of 1.1million square kilometres, across 27,000 sites. 18% of the total land area in the EU is protected to ensure the long-term survival of the continent's most valuable and threatened species and habitats. The centrepiece to the EU's nature and biodiversity policy is the Natura 2000 network comprising of Special Areas of Conservation (SACs) established under the Habitats Directive (Directive 92/43/EEC) and Special Protection Areas (SPAs) designated under the Birds Directive (Directive 79/409/EC).

The approach to sustainable use and conservation is focussed on communities working with nature rather than in opposition. EU Member States are required to ensure that Natura 2000 sites are managed sustainably, both economically and ecologically. In the management of Special Areas of Conservation, Member States are to adopt conservation measures and appropriate management plans corresponding to ecological requirements. Special Protection Areas are to be managed in accordance with the ecological needs of the habitats of birds and conservation objectives are required to be met. The Natura 2000 sites participating on the ASCENT project are listed below.

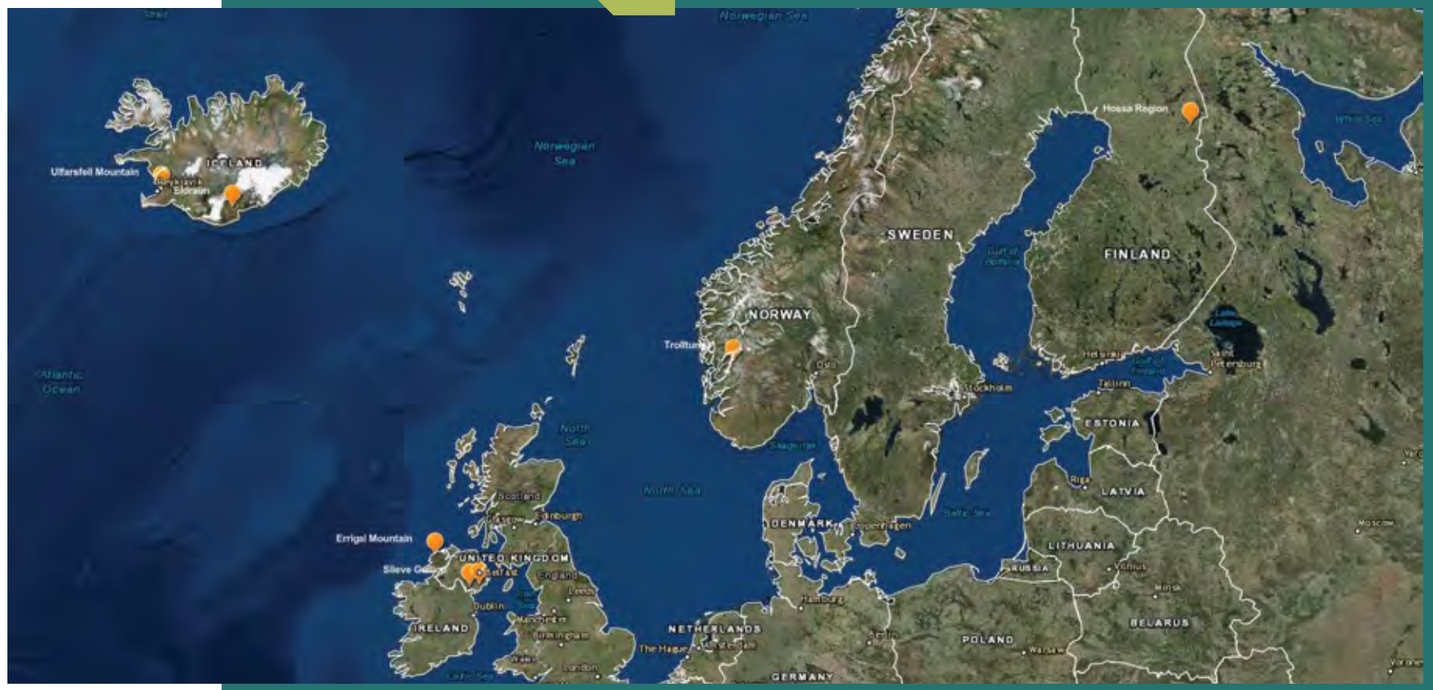
**Table 2.1 - Natura 2000 sites participating on ASCENT**

| Project Sites | Site Code | Area (hectares) | SAC | SPA | Data |
|---|---|---|---|---|---|
| **Hossa National Park** | FI1200743 | 10,162 | ✔ | | http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=FI1200743 |
| | FI1201013 | 1,554 | ✔ | | http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=FI1201013 |
| **Errigal Mountain** | IE0002047 | 33,457 | ✔ | | http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0002047 |
| | IE0004039 | 31,483 | | ✔ | http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IE0004039 |
| **Slieve Gullion** | UK0030277 | 612 | ✔ | | http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=UK0030277 |
| **Eastern Mournes** | UK0016615 | 7,509 | ✔ | | http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=UK0016615 |





## ASCENT Project Sites




In **Ireland**, The Wildlife Act of 1976 is the principal national legislation providing for the protection of wildlife, this gives statutory protection for the designation of Natural Heritage Areas (NHAs). Regional operational programmes are framed within the context of national policies and consistent with the National Biodiversity Action Plan 2017 – 2021. The National Parks and Wildlife Service (NPWS) is responsible for the designation of conservation sites and in having an advisory role for the protection of habitats and species identified for nature conservation for SACs, SPAs and NHAs. NPWS' role extends to the implementation of Irish and EU legislation and policies for nature conservation and biodiversity including the EU Habitats and Birds Directives.

The **Northern Ireland** Environment Agency (NIEA) within the Department of Agriculture, Environment and Rural Affairs has responsibilities for conserving nature, biodiversity and protecting species and habitats, including policy. Various legislation provides for their protection including The Wildlife and Natural Environment Order (Northern Ireland) 2011, and The Environment (Northern Ireland) Order 2002, which provides for Areas of Special Scientific Interest due to the area's flora, fauna, geological, physiographical or other site selection features. The Environment Order places certain legal duties and requirements on all Public Bodies. NIEA also has primary responsibility for SACs, SPAs, Ramsars and AONBs in Northern Ireland.

Metsähallitus, the Parks & Wildlife **Finland**, is responsible for the conservation and monitoring of species and habitats and the management of cultural heritage sites as well as providing recreational services within an area of 45,000km2. The majority of protected areas in Finland are situated on state-owned lands and waters and can be established by law, by statute, or a decision by Finland's environmental administration. About 9% of Finland's land area is protected under the Nature Conservation Act and the Wilderness Act. The network of protected areas in Finland not only includes areas already established by statute, but also those yet to be established, with decision making made at a government level for these areas to be reserved as protected areas.


## 2.2.2
## Non-EU Member States

Outside of the EU, the management of protected areas is primarily determined at national level. Relative to the ASCENT sites in non-EU member states:

National Parks and conservation reserves cover approximately 20% of **Iceland**'s surface. Four organisations are mostly responsible for the management and maintenance of paths – the Environmental Agency of Iceland, Vatnajökull National Park, Thingvellir National Park and the Forestry Service. The Soil Conservation Service of Iceland is a government funded public body operating under the Land Restoration Act, with reference to nature conservation law, which includes land degradation and soil erosion. With significant growth in tourism SCSI's focus is on related impacts on vegetation and soil degradation at conservation sites.

Surtsey and Thingvellir National Parks are included in the UNESCO world heritage sites, while Vatnajökull National Park is in the process of becoming such a site, selected on their merit of having cultural, historical, and scientific or other form of significance and intended for practical conservation. There are six Ramsar sites in Iceland for the protection of birdlife. The Planning Act and general provision apply to all other sites in Iceland, including Eldhraun and Úlfarsfell.

In **Norway**, the national parks and other protected areas such as cultural sites and protected recreational sites, are governed by The Nature Diversity Act of 2009, where Article 35 specifically relates to National Parks national legislation and the responsibility for managing the protected area is split between national and county level. The County Governor is the regulator and works in partnership with local and regional government, supported by research institutions and other relevant bodies.  The borders to the national parks are subject to many of the same regulations as the national parks, for example, the activities on the Trolltunga trail are closely monitored because of the close proximity of the Hardangervidda National Park and the wild reindeer herds which breed there. A design manual for visitor strategy for Norway's national parks has been developed by the Norwegian Environment Agency. This has been piloted in four of Norway's 46 national parks. The manual describes a suggested process for creating such a strategy for the relevant area.





CHAPTER 2.3

# Planning Control for Conservation Management

For the conservation management of Natura 2000 sites, research was undertaken to identify the current planning framework across the partnership. In Scotland, the repair and management of paths does not qualify as 'development' under planning statute and consents are generally not required for most operations. However, much of the current path work has been taken through the planning process partly due to greater use of machine construction. Initial concerns by statutory bodies over potential impacts of path reconstruction on nature conservations values, were largely resolved in the first few years of large-scale path work. Generally, path work is viewed as beneficial to conservation values, even on very vulnerable Natura 2000 sites. This is due to the reduction of soil erosion, vegetation loss and concentrates disturbance and trampling. Low key light touch works is regarded as positive.

Maintenance of existing mountain paths does not usually require planning permission in Northern Ireland; however, approval must be given by the Northern Ireland Environment Agency where the routes are on Natura 2000 sites.

In Finland, decisions on land use in protected areas are put into practice through implementation plans. Planning permission is needed when a new structure or building is planned but when a minor action is in question, for which a planning permission is not required, actions will be undertaken based on an implementation plan only. The planning permission is finally granted by the local municipality. PWF ensures that the planned action will not harm any species and habitats or any sites of cultural heritage.

Figure 2.1 : The ASCENT Project team with Speakers at 'Managing Upland Paths – Are Good Principles Enough?' Event

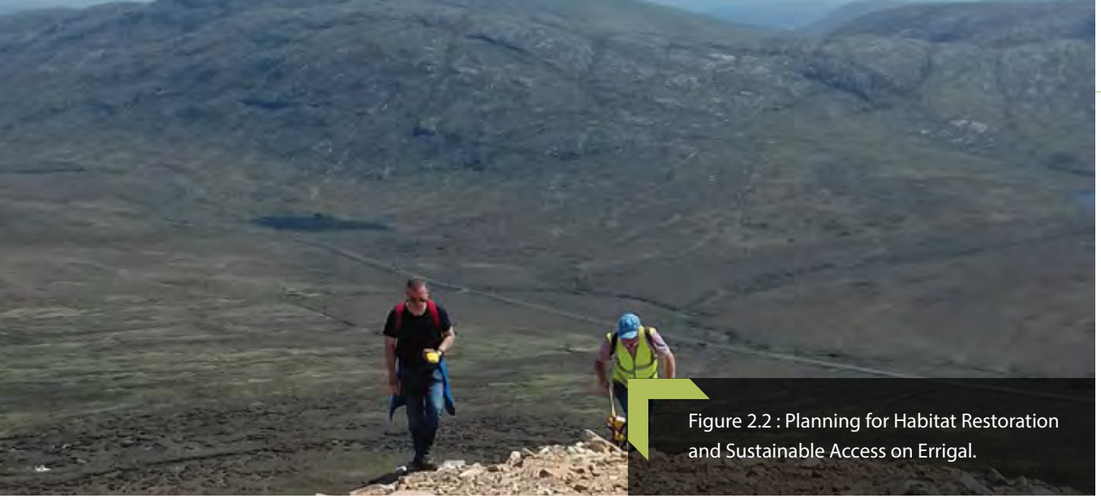


Figure 2.2 : Planning for Habitat Restoration and Sustainable Access on Errigal.

### 2.3.1

## Case Study 1: Donegal County Council at Errigal Mountain

In the context of Ireland, development by a Local Authority is exempted development within its own functional area and does not require planning permission. However, certain prescribed developments must go through a statutory Part 8 process, consisting of public consultation and presentation of a Chief Executive's Report to a plenary Council meeting for consideration by the Elected Members. However, if a Local Authority development requires Appropriate Assessment (AA) it may not proceed in this manner. In Ireland, where appropriate assessment is required in respect of a Local Authority's own development, then a Natura Impact Statement shall be prepared, and the Local Authority shall apply to An Bord Pleanála for approval.

As Errigal is located within, or within the zone of influence of, the Natura 2000 sites: Cloghernagore Bog and Glenveagh National Park SAC, Fawnboy Bog/ Lough Nacung SAC and the Glendowan Mountain SPA, formal consideration of the requirement to carry out AA was necessary. Appropriate Assessment (AA) is the key protection mechanism and process by which the possible effects of a plan or project on a Natura 2000 site are considered. Of note is the provision that plans or projects that are directly connected with or necessary to the management of a Natura 2000 site do not require AA.

To determine the appropriate consent process an ecological report was prepared for Errigal, which determined that the restoration works involved in the ASCENT Project on Errigal, are necessary to the nature conservation management of the designated site and therefore do not require AA, but that sustainable access on Errigal required screening for Appropriate Assessment. As a result of the ecologically informed and carefully considered approach taken to the restoration and sustainable access proposals for Errigal the subsequent AA Screening process determined that the risk of likely significant effects on a Natura 2000 site could be excluded and accordingly AA was not required for habitat restoration or sustainable access on Errigal.

This allowed the project to proceed as a Part 8 development to a Plenary Council meeting, with the approval of the Elected Members confirmed on April 24th, 2019.

Through ASCENT, the approach taken at Errigal created a model to inform national upland path policy and established competent evidence-based reference material guiding Local Authorities and others in their approach to what can be a complex nature conservation and development consent process. A process of patient and deliberate engagement with stakeholders, competent experts, research, study and shared learning has enabled DCC to negotiate the consent processes, formulate appropriate site-specific interventions and establish an exemplar for habitat restoration and sustainable access on one of Ireland's most sensitive and important natural environments.





### 2.3.2

## Case Study 2: Soil Conservation Service in Iceland

Through participation on ASCENT, the SCSI brought all responsible bodies together for collaborative discussion, which led to the establishment of a formal co-operation in 2017, primarily focused on raising awareness of issues and the maintenance of the natural quality of the sites. At that time, the Icelandic Government adopted the National Plan for the development of infrastructure in tourism, with recommendations for the distribution of funds and the provision for specific projects, in enhancing the design and construction of path infrastructure.

That collaborative group, established through ASCENT, expanded to include representation from the association of municipalities, the national museum and the cultural heritage bodies and chaired by the project's team members from SCSI. The decision followed by national government to apply knowledge and the outcomes gained through ASCENT for the development of guidelines on upland path design and a series of upskilling seminars for continued education for path workers.

Through involvement on ASCENT, the SCSI has contributed to national path policy and to upskilling of path workers in Iceland, resulting in the project's legacy incorporated into the Icelandic National Plan.

Figure 2.3: Co-operation by responsible bodies

# CHAPTER 3

# Collaboration and Sharing Knowledge

Learning how to sustainably manage upland areas and natural environments that are used for tourism and recreation was achieved by assessing the current situation at partner sites, researching best practice approaches, carrying out shared site visits, and making initial test trials of techniques. Reciprocal learning continued to flourish throughout as partners engaged in a constant effort to exchange knowledge, skills and experiences through site visits, workshops and seminars. The teacher-learner principle was successful as a key driver in knowledge transference primarily through the living laboratory study visits, and the constant effort approach employed on some of the partner's sites that demonstrated and trialled the learning from each other, as well as the research carried out during the project.



## CHAPTER 3.1

## Researching the ASCENT Sites

ASCENT partners identified the current state of play at the seven project sites to collectively inform the way forward. The resulting reports elucidated common issues, but also reflected the unique circumstances of the particular partner site - hence there was a variety of approaches and issues identified. Moreover, some partners decided to explore in more depth due to their own needs and experience. To this end all partners carried out assessment of the impact of unregulated access to their sites, and the partners from Iceland, Ireland and Northern Ireland explored further and surveyed the particular habitat impacts and also carried out a strategic review on the path networks at their sites.

A total of fourteen reports were produced that clearly illustrated that similar problems were replicated across all partner sites, albeit with varying levels of intensity. Partners were at different stages of response to the problems, and had varying skill sets and resources available to them. There were differing requirements on managers and practitioners whether legal, planning, or policy. The local framework for managing impacts and developing ideas and solutions differed due to factors such as land ownership, government agendas and stakeholder buy-in.

In particular, the project theme of developing the capacity of remote and sparsely populated communities for sustainable environmental management would have to be addressed with different approaches by the partners depending on local context. For example, the Dunlewey community in Donegal had been involved as a key initial driver with the Errigal Stakeholders Group and DCC in plans for Errigal, that ASCENT could help take forward, whereas other project partners may not have had such a cohesive group initially to work with and had to focus on developing a community dynamic, or opportunity for it, through stakeholder engagement as the project progressed.

However, the differences as outlined above were actually the potential strength of the project, as it meant solutions had to apply broadly to varying scenarios, and be adaptable, while still delivering the aims of ASCENT. This was a key attribute in the international project.

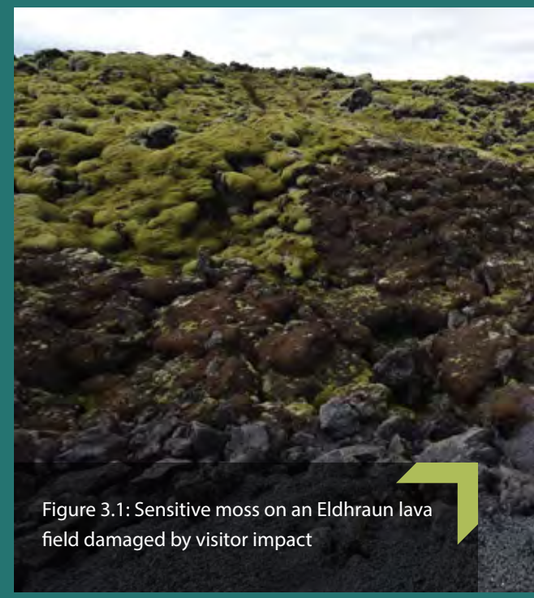


Figure 3.1: Sensitive moss on an Eldhraun lava field damaged by visitor impact

### 3.1.1

### Case Study 1: Social Media Game Changers

A trend identified in the reports of significance, was the 'game changer' effect of social media posts, which had in several locations caused an exponential increase in user numbers such as at Trolltunga in Norway and increased damage to sensitive habitats, such as at Eldhraun in Iceland.

Site studies at the lava fields at Eldhraun showed the impact of tourists on the sensitive moss ecology. The landscape has become a popular background for advertisement and music videos, often involving famous actors or singers such as Justin Bieber, who's YouTube video was associated with an upsurge in people visiting the sensitive moss areas, and in management circles this came to be known as the so-called "Justin Bieber effect". The result is that the area becomes a tourist hotspot instead of just an incidental site of interest.

CHAPTER 3.2

# Reviewing Best Practice

The next stage was to gather a fuller understanding of existing best practice with regard to wider policy development, and also specific upland path guidance and the practical work it had influenced before and stakeholders thoughts about it. Given the escalating demand and impacts, were they still relevant and did they need revising?

Other EU projects were scoped to identify how they influenced policy, a key aim of ASCENT. Innovative strategic projects that operated across transnational boundaries were reviewed and common themes highlighted were: extensive sharing of knowledge and skills, standardised research methods, the importance of networking and collaboration, partnerships on a multi-disciplinary basis, stakeholder participation and the recognition that challenges require a wide perspective, ultimately of global significance. The ASCENT approach was consistent with the common themes identified and it was further recommended that perspective is maintained during project implementation, to inform policy, to be of strategic significance and to sustain international co-operation.

A desktop review was undertaken of guiding principles, ethics and standards in upland path management and aligned manuals and toolkits to inform the debate and an ASCENT way forward aiming at a more consensus approach across the NPA region. The research paper identified relevant approaches in UK, Ireland and further afield in USA, South America and Europe. It found that best practice ethics and principles followed a lineage developed from Scottish and other UK upland areas, and while there is also an apparent US autonomous lineage, it can be traced back to a Scottish approach via a John Muir late 19th century influence. A recurring theme is that the value of the landscape should be a priority where the need to develop access is being considered, and that there should be a gradation of moving to less intervention in path design and maintenance when moving from urban to rural and remote landscapes, with the use of natural and local materials preferred. Lessons from the USA, where access is often controlled through a licensing system, are deemed difficult to impose, particularly for the ASCENT sites where the challenges of increased demand are compounded with unregulated and unmanaged access. Moreover, best practice needed to be reviewed in light of current contextual developments such as changes in environmental (e.g. increasingly erratic weather), user (e.g. exponential increases in use) and funding (e.g. lack of strategic joined up resourcing for landscape management) scenarios.

The opportunity was also taken to benchmark practical path techniques identified in the research by drawing them into the Path Team's work at Slieve Donard and Slieve Gullion.


Figure 3.2: Welcome Address in the auditorium at Tollymore National Outdoor Centre





3.2.1

## Case Study 2: Managing Upland Paths – Are Good Principles Enough?

Contributing to the development of guiding principles for Upland Path Management Policy, an ASCENT-led workshop entitled 'Managing Upland Paths – Are Good Principles Enough?' took place on the 22nd and 23rd of November 2017 in Bryansford, County Down, in the foothills of Slieve Donard. Eighty-five representatives, including path experts, from the UK, Ireland and Iceland, met to review Upland Path Principles and their applicability for land managers, practitioners and local communities, who are responding to increased erosion in environmentally sensitive landscapes. Site visits to Slieve Donard helped focus thinking and initiatives and ideas were explored through themed presentations and two workshops aimed at identifying a consensus way forward.

The challenges of balancing the opportunity for natural landscapes to provide the hook on which to develop rural, economic and health and well-being initiatives, against the need to preserve their inherent natural and wilderness value was recognised as becoming an increasingly greater dilemma. As in Case Study 1 above, this was highlighted by the observation that user patterns can now dramatically increase due to social media, while, for example, climate change adds to the challenge.

The lack of a strategic approach and joined up management with limited resources for maintenance in particular, and managers and practitioners often operating in relative isolation focused a clear need to improve effective networking across land managers and practitioners that enables easy and quick access to information, advice, skills, and training and helps develop group funding bids etc. The UK based Upland Path Advisory Group and the Irish Uplands Forum were models for how a network could develop.

A recurrent theme was that remote sensitive landscapes should be valued much more. This could be achieved through education programmes for users and practitioners and an advisory set of guiding principles that land managers should be required to pay attention to when planning activity in these sites; for this, government leadership and the role of local authorities would be key. The Helping the Hills Principles, which cover the geographical area of the island of Ireland, were a good basis for an agreed approach, albeit with some suggested amendments for ASCENT partners, participants and represented organisations to adopt.

CHAPTER 3.3

# Sharing knowledge through Living Laboratory Study Visits

The third element of learning, and the one that encapsulated best the theme of sharing knowledge and skills, both in landscape and habitat knowledge and in path management, was achieved through the living laboratory study visits. These in effect ground truthed the condition assessments, habitat and path surveys, and the best practice principles. Moreover, the project's teacher-learner principle was primarily implemented through the living laboratory study visits, where the sharing of knowledge and skills was enhanced through one partner, NMDDC with sub partner MHT, making prolonged visits to all partners' sites; thus, enabling a more thorough understanding to develop.

The idea was that the sites were literally living laboratories where empirical evidence could be observed and theory or best practice could be practically applied, or innovation trialled. In this way they are laboratories to work things out and to learn from the experience, mistakes or otherwise. In contrast, the thematic seminar is a more formal technique that contributes to the above.

Living laboratory Study Visits gave more substance to an understanding of the following:

- Site responses have happened in isolated management and practitioner contexts resulting in varying approaches with varying success .
- There is a need and appetite for wider sharing of knowledge and skills and training of managers, practitioners and volunteers.
- Pressures can cause an urgency to be seen to be doing something to mitigate a site issue, often within a narrow window of funding, with varying success.
- The sites need a constant effort, albeit good work should be relatively resilient to erosion, but pressures mount and dynamics can change, which can make this difficult to achieve.
- There is a need to step back and consider the longer term rather than responding to an immediate problem in a kneejerk reaction and risking escalating the problem.
- Early intervention may allow a less interventionist and more cost-effective approach – 'stitch in time'.

**Did you know?**

On 1st April, the DNT, Norway by way of a joke, suggested that hikers wear colour coded hats to indicate their interest in dating other hikers, with a green hat meaning "I'm available", red meaning "no thanks" and yellow meaning "I'm open to suggestions". Surprisingly, 48,000 Facebook users loved the idea and wanted to make the joke a reality.

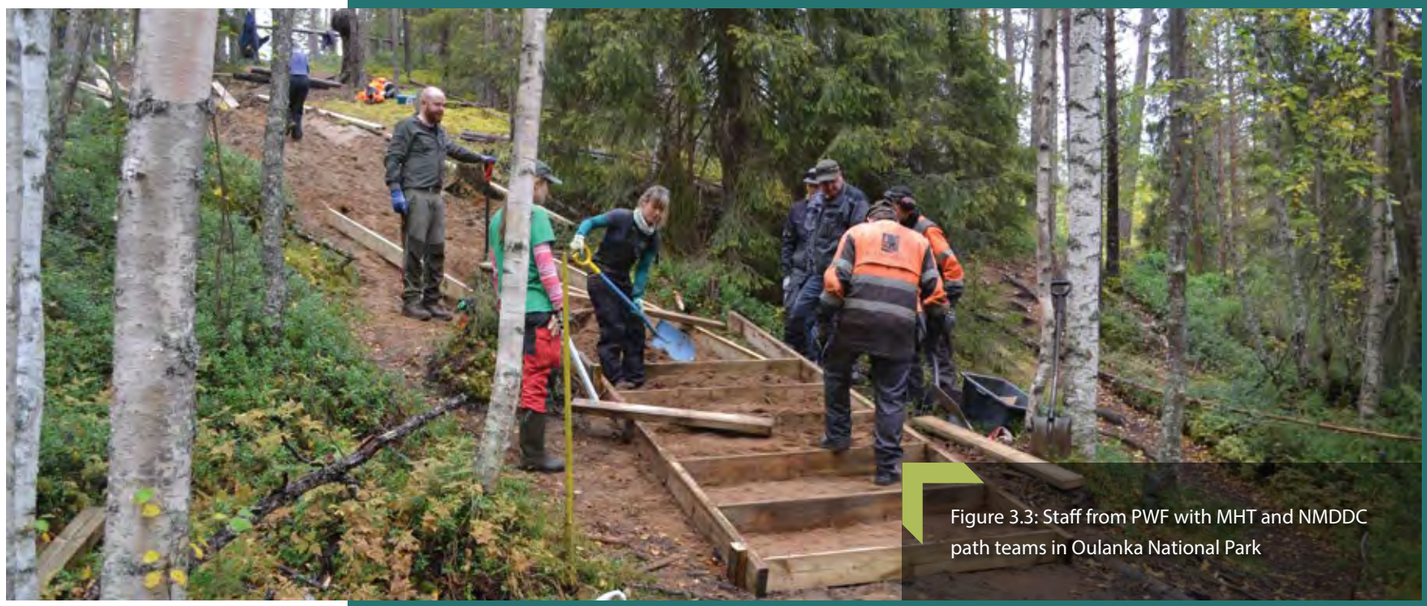


Figure 3.3: Staff from PWF with MHT and NMDDC path teams in Oulanka National Park

3.3.1

## Case Study 3: Living Laboratory Study Visits

The principle of accompaniment underpinned the visits, which aided learning and a feeling of mutual effort and opened dialogue and helped overcome language barriers. This came into its own when sleeves were rolled up and partners got digging together; whether helping shift old timber off site before installing new steps at the Kiutaköngäs trail in Oulanka National Park, Finland, or demonstrating stone built cross drains near Trolltunga or sheep wool paths near Odda, Norway.

It allowed time to observe the challenges facing some partners and offer suggestions for immediate and longer-term solutions. At Laki in the Vatnajökull National Park, Iceland, the increasingly popular mountainous path had suffered considerable damage from snow melt over the spring season, causing large areas of erosion.

Park Rangers mentioned the difficulties in maintaining the paths due to the limitations of the short summer season for work (the area is inaccessible during heavy snow cover) and the restricted staff and volunteer resources. Similar problems were seen at Trolltunga, Norway and Riisitunturi National Park, Finland.

Significantly, the teacher-learner approach is activated, but as a reciprocal process, which develops a more collegiate approach to site specific responses with wider initiatives and policy influence. This can help sustainable collaboration to develop regional and international alignment of approaches.

CHAPTER 3.4

# Key Learning

There is an opportunity to develop a collegiate approach to developing skills and competencies, with benefits such as: sharing best practice, problem solving, training, building trust, a quick support network, sustaining momentum and buy-in for legacy options. The Learn element has been approached from a practitioner's perspective and therefore seeks solutions and opportunities within that framework, which is maybe a rare focus, where usually development of ideas is at the management and policy level. It also recognises that the key factor is people; and usually a small number of committed and informed individuals that are the internal champions and inspiration to others but can often be side-lined. Without opportunities for those to be supported or for them to be exposed to other similar mentors or to tap into the latent potential that resides in other staff and volunteers, their knowledge and work can often be contained and isolated. It helps establish common ground in approaches, but also provides a platform for innovation and different thinking that may have validity.

The issue of constant and consistent effort highlights the undervaluing of sensitive landscapes and the false economies of simply capital, knee-jerk and piecemeal responses to mitigating impacts, and the lack of a strategic and coordinated approach. Constant effort would require a consistent revenue funded approach that would embody early intervention that could avoid greater problems arising. Moreover, with more time and funding, path workers have the opportunity to know the landscape they are working with, its ecology, geology, soil and vegetation, develop their land literacy, learn from mistakes, and be able to develop more effective site-based solutions. This would, by its nature, engender a greater focus on effective networking, knowledge sharing, skill development and training and greater policy focus.

The varying frameworks (strategic/policy/funding/legal etc.) under which each partner operates will have a direct impact on how ASCENT will be able to influence resources and policy. For example, it is not a given that the target to 'Develop Guiding Principles for Upland Path Management Policy' can easily be written into the existing policy of all ASCENT partners. In this case, the principles may sit parallel as an informal check and balance. To maintain this, therefore, it will be important to encourage ongoing connectivity between Partners, which may be by identifying further shared goals and a commitment to finding a way to resource them.

©Trolltunga Active

# CHAPTER 4

# Progression of Sustainable Solutions

For the long-term sustainable management of upland areas and natural environments, designing adaptable management plans, was fundamental for each partner site.

Furthermore, to assist in management planning, complementary activities involved the exploration of various condition survey techniques for their effectiveness and reliability in assessing path condition and their adaptability to all ASCENT sites, and a programme of specialist upskilling for the design and construction of upland paths and videos produced as a resource to educate users. Finally, indicators for sustainable recreation and tourism were profiled.



CHAPTER 4.1

## Management Plan

All partners developed a management plan for each of the respective sites, with the overarching aims of protecting the natural quality, ensuring sustained access and in addressing and balancing environmental, social, tourism and cultural challenges.

### Eldhraun

A draft management plan was completed for Eldhraun in collaboration with Skaftárhreppur Municipality and Vatnajökull National Park. A visitor survey indicated a preference for the use of local material and traditional crafts in the path design and associated infrastructure. The plan included eight proposals with various interconnected 'pop-up' spots along the national highway, focussing mainly on the most popular pocket. The plan also included guidelines and techniques for designing and constructing path network, using the unique indigenous material.

### Úlfarsfell

A draft management plan was developed for Úlfarsfell in cooperation with the municipality of Mosfellsbær and based on the research report on the impact of unregulated access on the mountain. To complement the plan, a survey on visitor perception was completed and involved collaboration with various stakeholders. The plan addressed the matrix of paths and categorised those in accordance with recreational use, with reference to the Recreational Opportunity Spectrum (ROS) and in the context of local, regional plans and policies and the masterplan for Reykjavik. It also included different guidelines for recommended path construction techniques.

### Errigal

An Integrated Management Plan was delivered in 2019, to assist and guide the Errigal Stakeholders Committee, the local community and DCC in promoting the sustainable management, maintenance and promotion of Errigal Mountain, in a considered and balanced way.

In its core objective of the management of the resource, that is Errigal, the 7-year Plan was developed through a participatory process involving the Errigal Stakeholders Committee, DCC and all relevant bodies, with specific regard for the agreed shared vision to 'facilitate the responsible enjoyment of Errigal in a manner that protects the mountains special qualities and benefits the local community. The Integrated Management Plan will steer the work of the stakeholders and examine the relationship between Errigal and the village of Dunlewey and will generate an ASCENT project legacy in the management capacity of the Errigal Stakeholders in addressing on-going and meeting future needs and challenges.

### Slieve Donard and Slieve Gullion

The management plans for Slieve Donard and Slieve Gullion are frameworks for the various landowners and stakeholders to develop a joined up approach and action plan over the incoming years. The varying and disconnected nature of land ownership, management and use of both Slieve Donard and Slieve Gullion, meant that the challenge for ASCENT was to identify issues and explore possibilities for taking forward a cohesive plan to achieve buy-in. The aim was to consolidate the existing management approaches and underlying plans for both sites and inform a broader vision. To that end, ASCENT generated site reports, developed site activity through Path Team work, supported volunteers and partner rangers and provided training, and facilitated stakeholder site visits and the November 2017 Upland Path Principles Workshop. Through this, The National Trust has emerged within the various interested parties as a champion for Slieve Donard, and the ASCENT management plan is based on its initial 2 year project (2019-2021; £250k delivering two mountain rangers, surveys, user engagement and erosion control works), which provides the focus for dialogue with other landowners and stakeholders towards a more strategic and joined up plan and activities.

Figure 4.1: Habitat restoration seminar in Eldhraun Iceland

The Ring of Gullion Partnership has secured annual funding for maintenance of strategic access routes on Slieve Gullion, a constant effort approach. The partnership is also actively encouraging and managing more low land routes to encourage users to stay on more sustainable trails.

Staff from NMDDC involved in the delivery of ASCENT are also involved in the strategic management of access, recreation and tourism on the uplands most notably the current application to become a UNESCO Global Geopark. Plans for a UNESCO Global Geopark also include sustainable use and management of our most fragile land and seascapes including Slieve Gullion and Slieve Donard.

## Hossa National Park

A management plan for Hossa National Park was drafted during 2018 and 2019. Long term management plans are required by law for all National Parks in Finland, usually for periods of 10 to 15 years. Metsähallitus PWF is responsible for the management of state-owned protected areas and formed a group of specialists to work on the plan. Stakeholders, such as municipalities, environmental agencies and NGOs were engaged in the process and the wider public was invited to comment and discuss the plan also.

The management plan includes a description of the current status covering nature conservation and the state of species and habitats, cultural heritage, nature tourism and other activities. The core values of the national park are discussed, as well as the main threats and how to tackle them. The plan guides PWF in its work and in the implementation of all planned actions on site. In addition, a code of conduct has been drafted providing detailed guidelines on the use of the national park. Both documents will be ratified by the Ministry of the Environment.

## Trolltunga

The management of the natural area between Skjeggedal and the viewpoint of Trolltunga, including the trail, parking facilities and access road was originally under the management of the ground owner Statkrarft. Odda Municipality originally carried out maintenance by annual agreement with the landowner. Following negotiations, a long-term agreement was reached with the landowner with Odda municipality maintaining this area and the revenue generated from the parking. Odda municipality created a limited company, Trolltunga AS, which is 100% owned by the municipality, with responsibly for all strategic planning, maintenance and management of the access road, parking with facilities and trail between Skjeggedal and Trolltunga. Trolltunga AS is dedicated to completing all criteria supplied by the Norwegian directorate for nature management to become certified as a Norwegian Scenic Hike. This includes the production of a Visitor Strategy, which was completed in the spring of 2019. As part of the agreement a regulation plan will also be developed for the area.





CHAPTER 4.2

# Assessment of Upland Path Conditions

To undertake a strategic programme of work for upland path sites and for an indicative estimate of the cost of repair work, information is required on the scale of path erosion, and the partnership referred to the use of the Scottish standardized surveys developed to assess path condition and to inform the need for repairs: Green, Amber and Red Survey techniques have proven to be easily adaptable, effective and reliable in providing a comprehensive picture of path condition.

- **Area (Green) survey:** Mainly desk based and consists of analysing maps and photographic records.
- **Condition (Amber) survey**: Field-based and particularly useful when surveying the condition of several paths and projected path condition.
- **Specification (Red) survey:** Detailed survey, uses site sketches showing the required work referenced to a bill of quantities.

The Amber Survey was used effectively by the National Trust to determine path erosion on Slieve Donard along the main access corridor and for an estimation of cost of repair in 2018, and a Red Survey was undertaken at Slieve Gullion in 2018 for the approach path and summit path.

An Amber Survey was carried out on Errigal in 2015 and repeated in 2017 to assess the level of change over time, while the Red Survey was commissioned by an upland path expert, for a detailed specification showing each section of the proposed route and the condition and the works required for restoration of damaged habitats. That Red survey supported the planning application for habitat restoration and sustainable access, referred to in Case Study 1.

Figure 4.2: Local material and traditional crafts

CHAPTER 4.3

# Specialist Upskilling Programme

In collaboration with the Agricultural University of Iceland (AUI), SCSI developed four seminars on upland path work, which included a combination of theory based lectures and practical on-site learning, with an emphasis on hands-on work at Eldhraun and other sites including Mount Vífilsfell and Reykir Ölfusi (AUI vocational facility). Participants were prepared in advance to undertake practical techniques supplemented with theory based scientific lectures. Target groups included rangers, local authorities, relevant organisations and institutions, volunteer leaders, contractors, and those with a general interest in path work. Participants' sectors determined the focus of each course, whether it was habitat restoration, local material use and traditional crafts, paths and viewpoints, design and construction, and recreation and tourist sites.

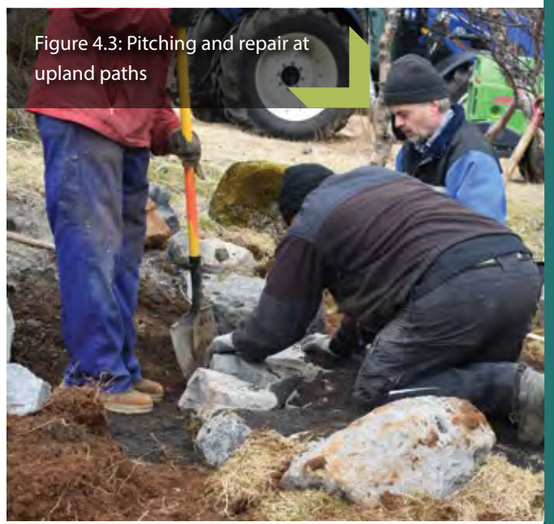


Figure 4.3: Pitching and repair at upland paths

CHAPTER 4.4

# Educational Upskilling Resources

Awareness videos and digital tools were produced to inform and educate the target audience, visitors and stakeholders of the ASCENT project in preserving access in a sustainable manner.

## Promoting Responsible Recreation at Errigal

DCC developed Promoting responsible recreation at Errigal to encourage the responsible use when visiting and climbing, to communicate clearly the sensitivity of the natural environment there and to advise of the measures adopted through the ASCENT project to address those. The documentary style video conveys the high conservation value of Errigal, located in a special protected area using imagery and drone footage with participation from the local community, the stakeholders group and the project team.

## Hike to Trolltunga Video

HCC produced ASCENT Project Trolltunga which highlighted the challenges on site and ASCENT's approach to possible solutions. They also advised Visit Norway on key messages for their Safety First video featuring a nature guide explaining to hikers the importance of suitable clothing, sticking to paths and using local guide services. Distributed worldwide, this video had a positive impact.



## PAVE

Developed by PWF, PAVE is a GIS based digital tool for managing information on buildings, structures, paths and archaeological sites on protected areas and other state-owned land. Launched in 2018, more than 200 PWF staff attended a nationwide upskilling programme. The upskilling programme was carried out in modules, targeted to the specific needs of different user groups. The ultimate aim of the upskilling programme was to make the transition from the old system as smooth as possible and to make the most of new features through knowledgeable staff. Therefore, training was practical and based on existing projects and tasks in the GIS environment.

## Mr. Moss

Moss is characteristic for the great Eldhraun lava field in Iceland. The Moss takes hundreds of years to grow and is very vulnerable for footfall, even with very gentle footfall. Vatnajökull National Park in Skaftárhreppur, in cooperation with Visit Klaustur, produced a short computer animation, directed at children as well as adults, advocating for visitors not to step on the moss. The movie is displayed at the Park's Visitor Centre and was distributed as widely as possible on information screens including the national and local airlines.

## Branch and Aggregate Technique on Slieve Donard

MHT and the ASCENT Path Team made a video demonstrating an innovative repair technique on the path along the Glen River leading to Slieve Donard. User impact had exposed tree roots and rocks, making walking difficult, particularly in wet conditions, and when travelling downhill, causing users to find an easier line, which in turn caused wider erosion. The focus was on finding a way to provide a sustainable surface across the tree roots, without damaging the trees. The team proposed a way of laying large branches on top of the roots and backfilling with aggregate; the idea was that the use of curved branches would mimic the naturally exposed tree roots which often formed 'steps' with mineral soil trapped between. Moreover, the team were inspired to try the technique after visiting Finland in September 2017 where timber has been used for path work for generations.

Figure 4.4: Machine work at Recreation and Tourist Sites

4.4.1

## Case Study 1: Indicators for Monitoring Sustainability

PWF developed a set of principles and measures for the evaluation of the sustainability of recreation and tourism. The measures were applied through sustainable nature tourism management strategies and/or management plans and carried out using GIS based software. The planning framework is based on the concept of Limits of Acceptable Change (LAC). An essential aspect in drafting strategies and management plans is initially setting standards, i.e. limits of acceptable change for selected sustainable recreation and nature tourism criteria by means of participatory planning.

LAC is based on a selected range of applicable criteria, which is connected to the principles of sustainable tourism. A targeted evaluation and selection of several criteria is decided upon.

Indicators specifically suitable for Hossa National Park were decided on to measure sustainability of recreation and tourism. It was evident that visitor surveys were important sources of data to provide baseline information to several LAC indicators. Challenges arise with the frequency of surveys for monitoring purposes, since data across indicators may date from different time periods. Experience from the pilot phase assisted in the further development of the LAC ICT tool. As such, the connection between management planning and monitoring is intrinsically linked and incorporating them in a single system is well justified.

CHAPTER 5

# Engagement with Communities and Trialling Techniques

Sustainable environmental management across protected sites was addressed through several techniques including the use of surveys, through new solutions and models being implemented and in the delivery of upskilling programmes across the partnership.

Visitor surveys have been carried out on all project sites to inform and support on-going management. A digital application was created to explore partner sites. Promoting local ownership and the importance of sustainable environmental management has occurred through a series of events, seminars and workshops.

A thorough snapshot of all unique activities was captured across a total of twenty-four reports. Many activities of engagement will be reported on in Chapter 6 as it reaches out to key users, locals and other stakeholders and provides a communicational bridge to promote environmental awareness and local ownership.



CHAPTER 5.1

## Participatory Methods/ICT based tools

As evidenced across the partner sites, visitor surveys provided vital baseline information and all sites faced similar issues associated with growing visitor numbers in leading to path erosion and habitat degradation, while littering and keeping users on sustainable paths were key challenges. The number of visitors surveyed varied between sites, however information on the impact of nature tourism and recreational use, for the future management of the sites, as well as the visitors' preferences were provided by all. The majority of visitors tended to be domestic, with the exception of Eldhraun Lava Field and Hossa National park, where most winter time visitors were international. The reasons for visiting ASCENT sites included e.g. hill walking, hiking, cycling, health and well-being and enjoying nature. The main motivation for climbing Errigal was for the scenery and natural landscape while responses informed that the majority of visitors were part of a group and mostly staying 3 to 5 nights in the local area. Commonalities reported were littering, lack of facilities and information panels. Furthermore, as discussed in Chapter 4, many indicators of the LAC method are based on data derived from visitor surveys, making them a crucial source of information in managing protected sites sustainably.


Figure 5.1: Errigal 3D - Deploying GIS to manage uplands sustainably

5.1.1

### Case Study 1: ASCENT in 3D

DCC explored the applicability of appropriate ICT based tools to enable analysis, planning and in managing upland areas sustainably. Initially all paths were accurately mapped, and a GIS application developed to display locations and imagery for all seven ASCENT project sites. The outcome was the development of ASCENT in 3D using GIS technology to allow users to explore the seven project sites.

GIS technology therefore showcased its effectiveness as a tool for decision making, in undertaking visitor monitoring surveys at Errigal and for creating heightened user awareness for the vulnerability of all ASCENT sites. Furthermore, at the ASCENT workshop in November 2017, GIS was used interactively to display data related to the challenges of managing sites and thus allowing for engagement with all in attendance.

Deploying GIS technology created a digital tool for monitoring changes in heavily used sites offering a lasting project legacy in managing areas of natural beauty sustainably. Further applications by DCC used drone technology to assess the impact of erosion over time at Errigal by producing high resolution spatial date stamped imagery for the restoration of damaged habitats.

CHAPTER 5.2

# Piloting of Learned Methods

Piloting newly learned methods and undertaking interventions in each partner country was the target of this activity. Actions taken included trialling path work techniques inspired by the work of other ASCENT teams, demonstrating again the value of learning through working together to be an efficient way to build capacity.

Techniques aimed to address similar challenges across all sites, including erosion and path creep caused by high visitor numbers and excessive surface water, damage to sensitive habitats, safety issues, and directing visitors. A wide range of primarily hand work methods were piloted using materials, such as sheep wool, rushes, branches and timber, using 'natural' landscaping to demarcate visitor flow and to manage surface water through constructing pitched drains and water bars to prevent the path from washing away.

Understanding the nature of a site was key to planning and implementing solutions, and with many possible approaches to solve issues, the challenge was to develop a site specific toolkit of techniques that best suited the individual site. However, it was evident there was not one solution to fit every site, but through trial - and sometimes error – it was possible to find ways forward in sustainable path building.

Figure 5.2: Landscaping in Oulanka National Park, Finland





5.2.1

## Case Study 2: Sheep Wool

A demonstration of using sheep wool instead of geotextiles in path building was given by the Northern Irish team to Norwegian stakeholders in Buerdalen, Odda, in September 2018. When building or repairing a path across soft or boggy areas, geotextile is often used to stop gravel or aggregate from sinking into the wet soil. However, sheep wool is a natural alternative, which will perform the same function as the geotextile, and has been used historically in path work. The wool acts as a membrane to prevent particles of aggregate passing through, while allowing water to permeate, and the path is often described as floating on top of the bog.

At the same time, wool particularly from the old norse sheep or "villsau" is largely a problem product for the farmers, who often burn or bury it. Many farmers avoid shearing their villsau, as the wool becomes heavy. It is also unpopular for knitting as it is coarse and has a high fat content. However, this makes it particularly useful for path building and so it was possible to turn a problem into an opportunity.

The trial started by carefully removing the turf, which was kept for later. A trench to the width of the path was dug. Once the ground was prepared, a substantial quantity of wool was placed on the ground. In the CHAPTER with the French drain, clean rocks where placed across the path and towards the well. A final layer of wool was added to the top. Finally, aggregate and gravel were mixed, and a significant layer was added on top of the wool. The surface will feel springy at first and it should be compressed as much as possible. In the end, the turf that was removed at the beginning of the work was placed back to line the path to the desired width. After a month or two more gravel and aggregate mix may have to be added.

Experiences from elsewhere show wool paths in perfect condition years later. Weather and soil conditions will obviously play a part and it will be exciting to see what the path looks like after the first winter. The trial generated a lot of interest and contacts have been made by parties across Norway wanting to learn more about the technique.

Figure 5.3: Using sheep wool in path building

**Did you know?**

Sheep's wool has been found in remnants of old Roman roads, with the material still recognisable hundreds of years later. Rushes, juniper or other natural material can also be used.

CHAPTER 5.3

# Education and Upskilling Programmes

Capacity building through upskilling programmes and training courses was the main target of this activity complimenting actions profiled in Chapter 4. The skills will be retained and benefit more than just the ASCENT sites - knowledge and experience have already been spread outside of the partnership and will offer a lasting legacy on path management.

NMDDC and MHT developed a structured path training course, which became a more significant element in the project than originally envisaged, meeting a need identified through the Living Laboratory Study Visits. Flexibility was key in adapting to the particular needs of stakeholders. The courses included a theory session involving webinars, a site visit and practical hands on training in a range of path techniques. Ultimately, the aim is to register the course with LANTRA.

In Iceland, further enhancing the training programme, meant that machine path work was demonstrated by NMDDC and MHT and training given to local contractors and volunteers in October 2018.

Most of PWF field staff attended an upskilling course in connection with the launch of a new GIS system used for implementation planning in protected areas. The system will raise planning and monitoring on a new level, making planning path work and maintenance faster, economically more efficient and ecologically more sustainable.

For DCC, since onsite training on the local site at Errigal would only be possible with planning approval, upskilling training was undertaken at Sliabh Liag coastal path, one of the County's flagship tourist destinations, with annual footfall of 185,000. This upskilling component of the project was further supplemented with members of the local community shadowing MHT Path Team on restoration and landscaping measures in March 2019, thus allowing for new learned skills to address future challenges at Errigal.

The significance of learning new skills through working together cannot be stressed enough. Project partners, with many others, got to know each other during the project. Valuable connections were established, which will form a starting point for post project co-operation.

CHAPTER 6

# Raising Awareness and Changing Behaviour

The overall aim of the communication strategy was to promote the successful implementation of the project and its achievements, whilst ensuring audiences were aware of the contribution of the EU through the NPA programme. A communications strategy was produced which outlined the need for clear and consistent communications throughout the project, internally between partners and externally to different target audiences, including local stakeholders. Further to this, the project used a range of dissemination tools, defined by the intended audience.

The communications strategy underlined the project's strong environmental ethos with the decision to avoid unnecessary travel, the production of printed material and the preference for all internal communication to be digital. Outside of the steering committee meetings, all other meetings were facilitated via Skype.

An important outcome of the ASCENT project was to change visitor behaviour. Visitors can be physically encouraged to use paths and avoid leaving the trail by using suitable path building techniques and materials and local knowledge. At the same time, encouraging users to want to make the right decision can be achieved through communication means. This was particularly applicable to sites like Eldhraun and Trolltunga, where visitors are primarily motivated to experience the stunning landscape rather than protecting and preserving it.

CHAPTER 6.1

## Communication underpinning Activity

Central to the delivery of many project activities were three key themes including increasing knowledge, raising awareness and changing behaviour.

### Increased Knowledge:

As discussed in Chapter 3 the teacher-learner principle allowed project partners, their path teams and local stakeholders to learn theoretical and practical approaches from each other. Drawing on the skills of each partner, allowed for comparison of the techniques, as well as building an environment of mutual trust and understanding through working side by side over the project period, which led to MHT applying for national LANTRA accreditation for the courses.

### Raised Awareness:

Participation on ASCENT secured HCC a place in the resource group for the national initiative – "Norwegian Scenic Hikes", aimed at natural mountains and uplands where the tourism footprint has increased dramatically over a short period. The initiative aims to protect the landscape by establishing criteria for sustainable management and the resource group gathers representatives from all relevant national and regional organisations and groups as well as departments in Norwegian central government. Presenting ASCENT to this group and working closely with other regions and organisations in the Norwegian Scenic Road initiatives, ensured that the values and objectives of ASCENT will continue past the project period and that the project had a broader geographical impact outside of Trolltunga and the Odda region.

6.1.1

### Case study 1: Changing behaviour at Trolltunga

The most pressing concern at Trolltunga in 2016 was the safety of the hikers on the path. The length and characteristics of the hike including the high altitude and remote location, coupled with an increasing number of ill prepared hikers meant that the number of search and rescue operations increased dramatically, which proved to be a major drain on the local community with concerns raised that fatalities would occur. In addition to making the path as clearly defined as possible, the team's main concern was to raise awareness among the hikers to enable them to have a safer hike. This was achieved through three different activities.

1. **Inform and encourage at the planning stage**
   Working with Innovation Norway, a series of videos were produced with detailed instructions on how to prepare, dress and pack for a hike. The videos were distributed through Visit Norway's websites, stressing that the trip is unsuitable for certain groups.

Figure 6.1: Trolltunga Active starting point

2. **Inform, encourage and facilitate at the start of the hike**
   Better information signs were erected at the start of the hike, reinforcing the message about having suitable clothing and footwear.

3. **Assist, encourage and regulate during the hike**
   The most effective measure was the introduction of on-site mountain guards. One or two guards stay in the cabin and assist hikers who are tired or distressed and ensure contact is maintained to confirm their status. Their presence also deters hikers from deliberately dropping rubbish. Two new emergency cabins are in place, with facilities including heat reflecting mattresses and an emergency box with food are available from a locked storage container following a call to the Red Cross, if necessary.

With the introduction of the mountain guards, the number of search and rescue operations has declined from 42 to only 12 rescue missions in 2018. Over time, the positive effects are noticed, with tourists now better equipped and have a better understanding of the demands of the hike at Trolltunga.

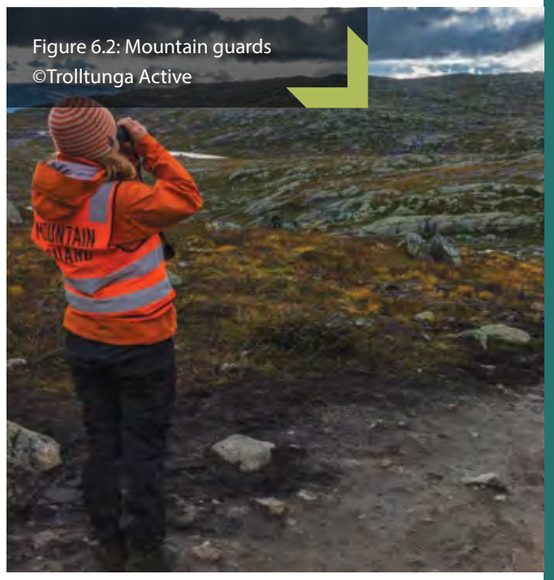


Figure 6.2: Mountain guards ©Trolltunga Active

CHAPTER 6.2

## Promotional Material

To publicise the support of the NPA programme and to raise awareness of ASCENT to stakeholders and target groups, the project logo was developed to represent the project's correlation with maps and the common resource for partners; upland areas, with colours reflecting the link to nature and the natural environment.

Communication by digital means was advocated throughout, with only a small number of posters and promotional leaflets printed to keep the production of non-recyclable materials to a minimum, while two pop-up banners were rotated around the partnership for publicising ASCENT at external events and conferences. A digital library was established containing project images and videos and made available to all partners.


Figure 6.4: The Chronicles of Mourne on BBC





CHAPTER 6.3

## Publications

Digital newsletters were produced using Mail Chimp software, for circulation among the target audience, with four editions published during the project term. The newsletters highlighted key activities, results and achievements and sent to the combined network for all five partners.

Nine press releases were published during the project term, with favourable media coverage in local, regional and national newspapers as well as radio and television, including the project launch in Donegal in 2016. As the world of media has changed in recent times, the role of the traditional press release with subsequent printed coverage has radically altered. Trolltunga, for instance, attracts significant attention worldwide. While most coverage is focused on the photos from the actual spot, a considerable amount of attention is now directed at the issues of safety and nature management, both core element of ASCENT's work. Through clear and consistent messages, ASCENT has actively communicated the value of the landscape and the measures being implemented to address sustainable management across the partnership.

Figure 6.3: Press Release

Figure 6.5: The Chronicles of Mourne on BBC iPlayer

6.3.1

### Case study 2: The Chronicles of Mourne

In October 2018, the BBC aired The Chronicles of Mourne which showcased the natural beauty of the region. The four-part series took viewers on a journey through the seasons and stunning scenery of the Mournes mountains and the people who work, live and play there. The series featured ASCENT's path team members Katie Taylor and Phil Savage from MHT as they talked about the opportunities ASCENT has brought to the constant effort of repairing and protecting the sensitive landscape on Slieve Donard in Northern Ireland.

Figure 6.6: Local support for ASCENT in Donegal

CHAPTER 6.4

# Public events

The ASCENT project has been presented widely across all five partner regions. In addition, individual partners presented at lead partner seminars in Iceland, Ireland, Northern Ireland and Scotland and at national events including the Association of Geographic Information in the UK, An Taisce in Ireland and at international venues such as the North Sea Commission.

The project was officially launched by the Mayor of Donegal near Errigal in Co Donegal in October 2016 and was attended by key target groups including local, regional and environmental authority representatives, along with the local and business communities. The launch was publicised through local and national radio, included an interview with partners on national television in Ireland and received widespread international coverage via social media channels and multiple press articles. The ASCENT to Summit final conference takes place in County Donegal in Ireland on the 26th June 2019. The conference is a culmination of three years of research and exchange of international best practice across the European partnership, identifying sustainable solutions in managing uplands and natural environments.

To coincide with each of the six steering committee meetings, thematic seminars took place in Scotland, Finland, Northern Ireland, Iceland and Norway. Project partners invited local stakeholders and guest speakers to discuss and share knowledge and experiences. Topics addressed were the approaches to path repair in sensitive landscapes, innovation in sustainable nature-based tourism and nature management. A common theme was the importance of sustaining volunteers, their value to local communities and how to support and value their efforts.

The thematic seminar in Scotland formed part of a study visit to Glen Coe, Ben Nevis and Ben A'an. The seminar was a thorough introduction to Scottish best practice and principles for path and nature management. All thematic seminars were valuable networking opportunities and for the exchange of ideas.





6.4.1

## Case study 3: Norway Path Conference

Norway's National Path Conference is organised by the Norwegian Trekking Association (DNT) and the Norwegian Outdoor Association. The ASCENT project was invited to present at their conference in Bergen in 2019. Each partner provided a presentation on a different outcome from ASCENT to an audience of 320. The ASCENT project was introduced by the Chief Executive from lead partner DCC followed by the value of using GIS technology when mapping paths, the use of Limits of Acceptable Change – as a monitoring tool, the effect of unregulated tourism on a sensitive landscape, the teacher-learner principle in establishing trust and mutual understanding and the technique of using sheep's wool as a path building material.


Figure 6.7: Norway Path Conference 2019

CHAPTER 6.5

# Digital Activities

The project website www.ascent-project.eu was launched in Iceland in 2018. The website explores the measures taken in response to the environmental challenges faced and informs the relevant stakeholders and local communities about the activities undertaken across all seven sites.

Communication has also been carried out extensively through Facebook to 480 followers and Twitter with 140 followers.

A large number of project videos which have been created and shared through ASCENT's YouTube channel, supported reports including the living laboratory study visits and showcased the work through the medium of video to share knowledge gained.

Dropbox for Business was the file sharing platform that provided easy access, secure storage and sharing for all partners and any external parties to relevant images and documents.

CHAPTER 7

# Further ASCENT

CHAPTER 7.1

## The ASCENT Impact on Sustainable Management

The ASCENT journey has contributed to the development of sustainable management in European uplands and natural environments and outlined a course towards a strategic objective on a European and indeed international basis. Throughout the project, key themes have emerged that have encapsulated that journey, and presented opportunities for further collaboration towards that objective. These themes are set out in the following section.

Figure 7.1.1: Building Sustainable Sites

### 7.1.1
### Building Sustainable Sites and Durable Communities

At the core of ASCENT is the management of the natural resource and ensuring that the integrity of the protected sites legislated at national and EU levels is upheld and maintained. The condition of project sites was established early in the project. Working in partnership with stakeholders and local communities, appropriate interventions for management planning and in building sustainable sites was delivered. This will positively contribute to the long-term conservation of these natural areas for future generations to enjoy.

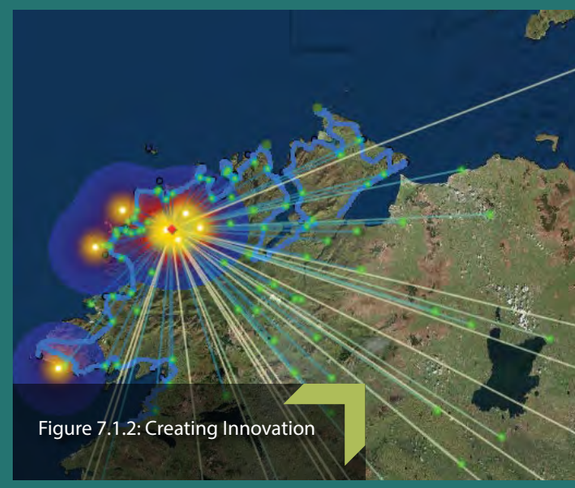


Figure 7.1.2: Creating Innovation

### 7.2.2
### Creating Innovation

Committed to exploring and implementing innovative ways to conserve and protect vulnerable sites, a number of technologies were tested to exemplify how GIS, PAVE and remote monitoring yielded positive results for the conservation of iconic project upland sites, in assessing the impact of erosion over time and allowing for the repair and restoration of damaged habitats through sustainable solutions. Local communities successfully participated in applications to complete surveys to support management planning, while project wide activity saw the successful mapping of pathways across extensive mountain ranges.

Through innovative use of technology, the impact of human recreational activity on the natural environment was determined, thus creating a heightened awareness and a lasting project legacy in managing and monitoring natural environments sustainably, to preserve their qualities for future generations.

### 7.1.3
## Exchanging Solutions

The importance of learning through partners collaborating cannot be overstated as a key impact of ASCENT. Through that process, ASCENT delivered substantial learning and knowledge exchange through its implementation with 9 living laboratory study visits, 6 thematic seminars and 6 educational resources. This raised the knowledge base for upland path management, provided inspiration, allowed ideas to flourish, built trust and established strong foundations for future cooperation beyond 2019.

### 7.1.4
## Flourishing Skills and Competencies

ASCENT acknowledges the collegial approach to developing skills and competencies and recognised that the key drivers are people, often being a number of committed 'internal champions'. Constant and consistent effort engendered a greater focus, and effective networking with skills development has allowed a training environment to flourish. Beyond the training element initially envisaged in allowing

Figure 7.1.3: Exchanging Solutions

local practitioners and volunteers to respond to future maintenance, the development of tailored path training courses led to opportunities for an outreach consultancy role and potential accreditation of a national qualification delivered through LANTRA emerged.


Figure 7.1.4: Skills and Competencies

### 7.1.5
## Transferability to natural protected areas

The experience of ASCENT provides clear guidance for adaptation to other upland areas in the NPA region and beyond, that are responding to environmental challenges which have an environment first ideology, focussed on the high conservation value of the protection of natural and cultural heritage.

Launched through ASCENT, the Limits of Acceptable Change (LAC) monitoring system for the sustainability for nature tourism had readily available indicators for the application to other protected areas. LAC is to be implemented across 15 National Parks in Finland that will last for decades in their management but has immense potential for transferability as the future model for all European national parks and the management of protected areas.

The approach taken at Errigal created a model to inform national upland path policy and established competent evidence-based reference material guiding Local Authorities and others, in their approach to what can be a complex nature conservation and development consent process. A process of patient and deliberate engagement with stakeholders, competent experts, research, study and shared learning has enabled DCC to negotiate the consent processes, formulate appropriate site-specific interventions and establish an exemplar for habitat restoration and sustainable access on Errigal as one of Ireland's most sensitive and important natural environments and for other Irish upland sites and protected areas.


Figure 7.1.7: ASCENT Brand


Figure 7.1.6: Glencoe in Scotland

### 7.1.6
## Exposure to National and International Networks

Through participation on ASCENT, partner organisations were brought closer to expertise nationally and made connections with associated initiatives including the Norwegian Scenic Path initiative, the Norwegian Institute of Nature Research, Upland Path Advisory Group and the Irish Uplands Forum. Exposure to an international network of path management experts improves partner organisations's reputation in the multidisciplinary field of sustainable path management.

### 7.1.7
## Moving from a brand to a concept

The ASCENT brand gathered considerable momentum and support well beyond the host communities originally intended to benefit directly from sustainable interventions to the wider NPA region. The ASCENT brand is widely regarded and already referenced, as a rationale for resourcing upland management and policy by non-ASCENT bodies including the National Trust in the UK and through the development of design guidelines based on knowledge sharing and benchmarking, with inclusion in the Government Act of 2018 National Policy and Action Plan for Infrastructure Development on tourist sites in Iceland.

ASCENT matured from a brand to a concept for Sustainable Management in European Uplands and Natural Environments based on the premise that co-operation across borders is fundamental if global challenges, including climate changes and loss of biodiversity are to be met.

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