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Sustainable tourism governance in protected areas

Public and private sector roles in Iceland

Bachelor's thesis
In International Business

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Abstract

Tourism has experienced substantial growth in recent decades, and one of its most rapidly expanding segments is nature-based tourism. Nature-based tourism refers to travel in which the primary motive is experiencing nature, often through activities such as photography, hiking, and other outdoor recreation. However, this growth of nature-based tourism has placed significant pressure on protected areas due to increasing visitor numbers. This pressure manifests in physical degradation of natural environments, such as trail erosion. While these impacts often accumulate slowly, they can, over time, undermine the ecological sustainability of these areas and reduce their value for all stakeholders.

Addressing these challenges requires coordinated action from both the public and private sectors to promote sustainable tourism. This thesis examines how the rapid growth of nature-based tourism challenges the ecological sustainability of protected areas and how collaboration between sectors can support sustainable tourism management through institutional theory. The study utilises institutional theory and Public-Private Partnership (PPP) frameworks to analyse these dynamics, using Iceland as a relevant case study.

Successful cooperation between sectors requires shared objectives, a clear division of responsibility and a mutual understanding of ecological constraints. Public authorities and companies that depend on protected areas benefit from the long-term preservation of the natural assets, creating a shared motivation to ensure that economic activities do not compromise the environment. When PPP is implemented sustainably, such collaboration can strengthen the long-term resilience of protected areas and safeguard the conditions for future generations' tourism.

Keywords: protected areas, nature-based tourism, Public-Private Partnerships, institutional theory, Iceland

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Matkailuala on kasvanut merkittävästi viime vuosikymmeninä ja yksi sen nopeimmin kasvavista segmenteistä on ollut luontopohjainen turismi. Tällä tarkoitetaan matkailua, jonka ensisijainen tarkoitus on luonnon kokeminen, esimerkiksi valokuvaamisen tai vaeltamisen kautta. Luontopohjaisen matkailun kasvu on kuitenkin luonut painetta eri luonnonsuojelualueille lisääntyneen käviämäärän vuoksi. Tämä paine ilmenee luonnon kulumisena, kuten polkujen eroosiona. Haitat kertyvät usein hitaasti, mutta pitkällä aikavälillä ne voivat heikentää alueiden ekologista kestävyyttä sekä niiden arvoa eri toimijoille.

Näiden haasteiden torjumiseksi tarvitaan julkisen ja yksityisen sektorin yhteisiä toimia kestävän matkailun edistämiseksi. Tutkielma tarkastelee, miten luontopohjaisen matkailun nopea kasvu haastaa luonnonsuojelualueiden ekologista kestävyyttä ja millä tavoin julkisen ja yksityisen sektorin yhteistyö voi tukea kestävä matkailun hallintaa. Teoreettisena viitekehystenä työssä hyödynnetään instituutionaalista teoriaa sekä julkisen ja yksityisen sektorin kumppanuusmalleja (PPP), ja tarkastelun kohdemaan toimii Islanti.

Sektoreiden välisen yhteistyön onnistuminen edellyttää yhteisiä tavoitteita, selkeää vastuunjakoja ja ymmärrystä ekologisista rajoitteista. Keskeistä on, että molemmat tahot hyötyvät ja niiden menestyminen on riippuvaista luonnonsuojelualueiden kestävydestä. Kestävällä tavalla toteutettu yhteistyö voi vahvistaa luonnonsuojelualueiden pitkän aikavälin elinvoimaisuutta ja turvata matkailun edellytykset myös tuleville sukupolville.

Avainsanat: luontopohjainen matkailu, luonnonsuojelualueet, institutionaalinen teoria, Islanti, julkisen ja yksityisen sektorin kumppanuus (PPP).

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1 Introduction

1.1 Background

Tourism is one of the fastest-growing sectors and a valuable contributor to the global economy. Currently, the sector accounts for 10% of global GDP and supports 357 million jobs, representing approximately 1 in 10 jobs worldwide (World Travel & Tourism Council, 2025). The industry's growth has given many nations opportunities to expand their economies and create new businesses (Gupta et al., 2024, 1241). However, rapid tourism growth has driven a rising demand for nature-based experiences, creating new opportunities and challenges for nations (Wolf et al., 2019, 2). For example, the recent surge in tourism quadrupled the number of visitors to Iceland over one decade (Iceland Tourist Board, 2024). The long-term growth has been interrupted only by major external shocks, such as economic crises, pandemics, and geopolitical events. Figure 1 shows the rapid increase in visitor numbers to Iceland and the impact of COVID-19.

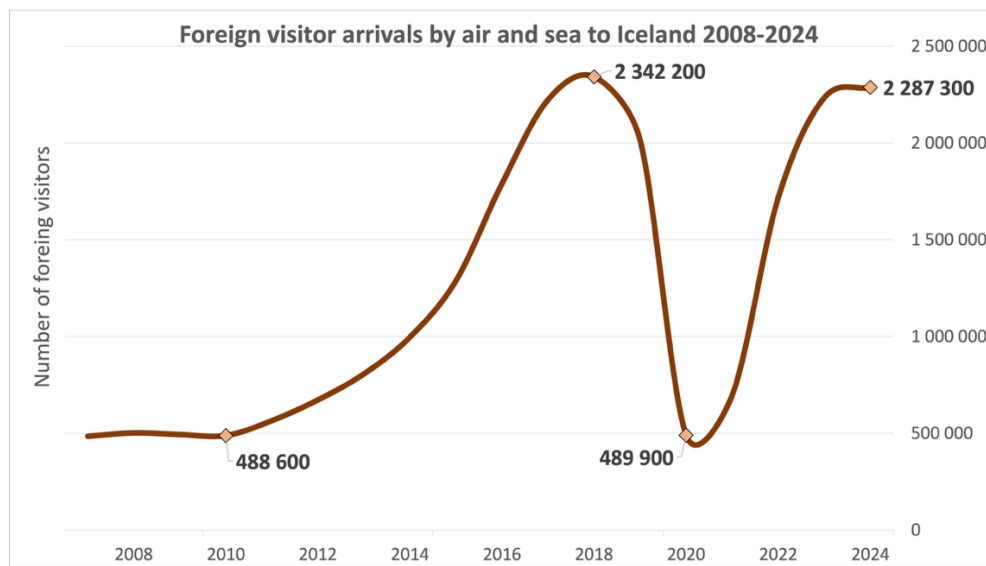


Figure 1. The number of foreign visitors by air and sea to Iceland, 2008-2024 (Icelandic Tourist Board, 2024).

Nature-based tourism is one of the sectors in tourism that has seen the most growth in recent years (Fredman & Margaryan, 2021, 14). It is commonly defined as travel in which nature itself is the main attraction and motivation (Wolf et al., 2019, 2). It involves visiting natural areas to experience and learn about nature through different activities such as hiking, sightseeing, or photography (Fredman & Margaryan, 2021, 15). This shift in travel preferences has substantially increased the value of ecologically unique destinations. The development of nature-based tourism is particularly relevant in Nordic countries, which are home to beautiful and unique natural landscapes with strong

economic growth potential. Moreover, it promotes and distributes tourism-related benefits to remote regions that depend heavily on nature-based industries, thereby strengthening local economies and supporting regional development (Fredman & Margaryan, 2021, 18).

Following the COVID-19 pandemic, the tourism industry has shifted its focus towards nature-based tourism. The pandemic led to a decline in international travel, making domestic tourism more popular globally during the lockdown. As travel resumed, many destinations saw heightened interest in nature-based activities (Fredman & Margaryan, 2021, 14). However, with the rise of tourism, nations face not only economic growth but also increased environmental demands (Gupta et al. 2024, 1241). With increased use of the environment, consumption and degradation are becoming more visible, leading to erosion and pressure on fragile ecosystems. This growing strain highlights the need for more comprehensive management approaches that balance visitor demand with long-term ecological sustainability (Fredman & Margaryan, 2021, 15).

Protected areas are the main attractions in nature-based tourism, defined as “national parks, wilderness areas, community conserved areas, nature reserves and so on.” (Wolf et al. 2019, 2). Protected areas hold great value for nations, not only for their ecological value but also for their economic and cultural importance, attracting tourism from around the world and generating revenue for local communities. The social value of natural resources has become increasingly apparent in recent decades, transforming protected areas into popular tourist destinations, which has created a situation where “- the environment is protected for, rather than from, humans and human needs.” (Pashkevich et al. 2016, 117).

Since the growth in nature-based tourism in recent years, the impact of tourism in protected areas is more noticeable now than ever before (Pashkevich et al. 2016, 117). As visitor numbers continue to rise, the increased use of fragile ecosystems becomes more apparent, putting them under pressure. These pressures accumulate gradually, making them easy to underestimate, yet they pose significant long-term risks to both the environment and the tourism sector that depends on it. These areas require greater attention from national authorities and local communities to remain ecologically sustainable and resilient to increasing visitor numbers (Schaller, 2014, 9).

To address the risks posed by tourism growth, knowledge and implementation of sustainable tourism is needed. Sustainable tourism refers to tourism development that meets current needs while maintaining the ecological, cultural, and social conditions on which future generations depend. As the concept has evolved, it has shifted from a narrow focus on minimising negative impacts to a broader understanding that tourism must balance environmental protection, community well-being

and economic viability. Rather than describing a specific form of tourism, sustainable tourism is now regarded as a long-term objective that should guide all tourism activities (Sutherland & Stacey, 2017, 19).

Building on this, sustainable tourism management focuses on the practical approaches needed to move destinations toward sustainability. It involves monitoring tourism impacts, applying sustainability indicators and relying on adaptive management to respond to changing conditions and uncertainties. Because tourism operates within complex social and ecological systems, effective management requires coordination among stakeholders and continuous policy adjustments to ensure that tourism growth does not undermine the long-term integrity of the destination (Lu & Nepal, 2009, 14).

The application of sustainable practices in nature-based tourism within protected areas poses many challenges that create tensions and issues among different actors. These challenges arise from conflicting objectives, limited resources, and institutional differences. As tourism grows faster than management systems can adapt, the capacity to implement sustainable practices becomes increasingly restricted (Jóhannesson et al., 2010, 294).

1.2 Objective of the thesis

The governance of tourism in protected areas is crucial to their protection and sustainable management. The most significant contributors to the governance of protected areas are the public sector, comprising ministries, environmental agencies, and other relevant public organisations, and the private sector, forming companies that operate in or near protected areas and those that impact tourism through their services, investments, and marketing activities (Wang & Ma, 2021, 244).

This thesis focuses on the effects of tourism on protected areas in Iceland and on how adverse side effects can be mitigated through collaboration between the public and private sectors. The objective of this thesis is to examine the following main research question:

- How do the public and private sectors address the challenges that tourism creates for protected areas?

In addition, the sub-questions in the thesis that aim to help answer the research questions are:

- How does the rapid growth of nature-based tourism challenge the ecological sustainability of protected areas?

- What types of public-private partnership models can facilitate effective tourism governance in Icelandic protected areas?
- What are the key institutional and governance challenges to achieving sustainable tourism management in protected areas?

At the beginning of the thesis, section 2.1 provides reasons why Iceland serves as an appropriate and relevant example for studying the pressures caused by nature-based tourism. Section 2.2 introduces the basis for the analysis by presenting public-private partnerships and institutional theory, which together offer a framework for understanding how different actors operate in protected areas. Section 2.3 shows different motivations for the public and private sectors to operate in the pursuit of sustainable nature-based tourism. Chapter 3 discusses the practical situation in Iceland by outlining the key challenges tourism poses to protected areas and by reviewing current policies and management practices. Chapter 4 presents the thesis's conclusions, summarising the main findings and assessing their implications for sustainable tourism management.

2 Foundations of sustainable tourism in protected areas

2.1 Development of nature-based tourism in Iceland

Iceland provides a relevant context for examining the governance of protected areas and sustainable tourism, given its growing reliance on international tourism. Protected areas are a significant part of Iceland geologically. Protected areas cover 26,677 km² of Iceland's total 103,000 km² land area (Icelandic Tourism Board, 2023), which means a quarter of the land mass of Iceland is covered by protected areas. These areas provide value in many ways for Iceland and its population, since they create social value for locals and in addition, tourism is heavily dependent on nature and nature-based activities.

Iceland is a suitable research context because its tourism sector is almost entirely reliant on natural landscapes, making ecological pressures highly relevant. Multiple studies show that unique natural attractions, such as geothermal areas, glaciers, waterfalls, and volcanoes, are the main reasons tourists visit Iceland. A 2023 survey by the Icelandic Tourism Board found that 98% of tourists arriving in Iceland are influenced to visit because of the country's nature, indicating that tourism is strongly dependent on Iceland's natural environment (Icelandic Tourist Board, 2023). Iceland has experienced one of the world's fastest increases in nature-based tourism, providing a clear example of how rapid visitor growth can influence nations' protected areas (Sutherland & Stacey, 2017, 7). This makes Iceland an illustrative case for understanding broader global challenges faced by protected areas under increasing tourism pressure.

In terms of economic growth, Iceland has seen significant gains from international tourism. Between 2008 and 2016, Iceland gained an "additional 300 hotels, and over 1000 new enterprises in the real estate and rental market. In addition, over 800 enterprises have entered the travel agency and tour operator sector." (Sutherland & Stacey, 2017, 15). Tourism accounts for a large share of Iceland's GDP (8.4% in 2019) and occupies substantial areas of land within protected areas.

Despite Iceland's extensive protected areas, tourism pressure is concentrated at specific sites. Þingvellir is a national park near Iceland's capital, Reykjavik, and is one of the most popular sites to visit in Iceland, attracting 1,173,540 visitors in 2016 (Tverijonaite et al., 2018, 4). Þingvellir has hiking trails, two campsites and other infrastructure such as coffee shops. Other places that experience large visitor flows include the southern regions of Vatnajökull National Park, with popular sites like Jökulsárlón attracting over 935,000 visitors and Skaftafell nearly 695,000 in 2019 (Siltanen et al., 2023 3).

Protected areas are vulnerable to the impacts of tourism, and their consequences can be severe and lasting. Especially land use associated with tourism, such as hiking, can lead to soil erosion, vegetation loss, and waste accumulation. These effects are most visible in locations that see large numbers of visitors. In Iceland, popular hiking trails such as those in Thingvellir have been eroded and degraded by the rapid increase in foot traffic (Sutherland & Stacey, 2017, 19). The Icelandic environment consists mainly of thin soils and slow-growing vegetation. As a result, even relatively small increases in visitor numbers can lead to ecological changes that accumulate over time. These characteristics help illustrate the mechanisms by which nature-based tourism pressures protected areas (Schaller, 2014, 15).

In addition to its direct impacts, tourism generates significant indirect effects through associated activities. Transportation, particularly aviation and road traffic, contributes to considerable pollution that can affect protected areas through climate change. Such effects can have long-term consequences for the well-being of the protected regions (Wolf et al., 2019, 2).

2.2 Theoretical foundations for tourism governance

2.2.1 Public-private partnerships in nature-based tourism

Sustainable tourism in protected areas depends on the combined efforts of the public and private sectors, as both sectors have essential roles in addressing the long-term impacts of nature-based tourism (Jóhannesson et al., 2010, 279). Public-Private Partnerships (PPPs) are “- referred to as a partnership in which public and private sectors are contracted to provide public services, sharing the resources, risks, responsibilities, and benefits.” (Ma et al., 2020, 1). Such partnerships are a foundation on which both sectors can align their strengths and contribute more effectively to the protection and sustainable use of natural areas.

A PPP is most commonly used in projects involving the public and private sectors across fields such as infrastructure, healthcare, and education. In these traditional contexts, the public authority typically defines the objectives, standards, and regulatory conditions. At the same time, the private partner contributes technical expertise, innovation, management capacity, and a share of the financial risk (Wang & Ma, 2021, 244). PPPs are used to finance, build, and operate essential public services and facilities, including roads, hospitals, and schools. In PPPs, shared risk creates strong incentives for both sides to deliver services efficiently and reliably.

In sustainable tourism, PPPs commonly involve the development, management, and maintenance of tourism-related infrastructure and services within protected areas. These projects include the

construction and upkeep of hiking trails, visitor centres, waste management systems, and renewable energy projects, as well as services such as low-impact transportation networks within protected areas. Through these projects, the strengths of each sector can be combined: the public sector offers legitimacy, regulation, long-term planning, environmental oversight, and financial resources, while the private sector contributes operational expertise, innovation, and additional financial resources. This synergy is significant because the public sector often lacks the agility to respond to rapidly changing market trends. In contrast, the private sector lacks the mandate to enforce environmental protection (Wang & Ma, 2021, 245).

Without effective PPP, nations face challenges in ensuring the long-term sustainability of protected areas. The relevance of PPPs becomes particularly clear in nature-based tourism, where the environmental impacts of visitor growth are concentrated in site-specific areas (Wolf et al., 2019, 2). The pressure on trails and fragile ecosystems often exceeds what public authorities alone can manage, especially when visitation increases rapidly or unevenly (Schaller, 2014, 9).

Recent developments have transformed the relationship between the public and private sectors, shifting towards more dynamic, complex partnerships (Sigurjónsdóttir, 2025, 8). Digitalisation has created new possibilities for partnerships, especially the sharing of data between industries (Fredman & Margaryan, 2021, 21). The private sector has vast amounts of information and statistics on tourism movements and behaviour, which the public sector would need to improve policies, infrastructure planning, and environmental monitoring. Enabling the use of such information and statistics would allow public actors to predict tourist flows to specific areas and tourist behaviour, and to create countermeasures based on the shared data (Wolf et al., 2019, 14). The private sector would benefit from improved planning, better infrastructure, and the long-term preservation of the natural environments on which its business depends (Sigurjónsdóttir, 2025, 17). Data has become an additional shared resource, alongside traditional funding and labour, supporting sustainable tourism governance.

For PPPs to be successful in protecting protected areas from the damaging effects of tourism, the partnership needs to involve more than the exchange of resources and information. They require both sectors to recognise the long-term sustainability of protected areas as a competitive advantage rather than an impediment. When sectors' motivations align, PPPs can function as a coherent governance framework that integrates environmental protection with tourism development and supports the long-term viability of nature-based tourism.

2.2.2 Institutional theory and sectoral behaviour in sustainable nature-based tourism

The institutional theory is strongly connected to the PPP theory in the context of nature-based tourism. It explains how organisations and actors behave within institutional environments, guided by formal rules, norms, and beliefs that shape their actions and decision-making processes. Institutional theory can be defined as the explanation of how the surrounding institutional environment shapes the behaviour of organisations and actors (Amenta & Ramsey, 2010, 15). These influences can affect both the public and private sectors, on conscious and unconscious levels, creating shared expectations and ground rules.

Institutional theory shows that businesses are not only guided by economic gain but are also influenced by the expectations, norms, and regulations set by surrounding institutions, which, in the context of sustainable tourism, shape what is considered legitimate, responsible, and acceptable behaviour. These institutional pressures influence how companies design their services, manage environmental impacts and communicate responsibility to visitors. As a result, both actors often adjust their practices not only to meet regulations but also to align with broader societal values and evolving sustainability standards (Estol et al., 2018, 3).

Institutional theory can be separated into three distinct core elements that structure organisational behaviour. The regulative pillar refers to formal rules, laws, monitoring systems and sanctions that guide or constrain behaviour. It shapes organisational action through compliance requirements and enforcement mechanisms, making certain practices obligatory or prohibited (Estol et al., 2018, 3). Laws regulating tourism and tourist taxes are examples of the regulatory pillar affecting sustainable tourism in Iceland.

The normative pillar comprises social norms, professional standards, and shared expectations that define appropriate behaviour. It influences actors not through legal obligation but through socially constructed ideas of what is desirable, responsible or acceptable (Estol et al., 2018, 3). In the context of sustainable nature-based tourism, the normative pillar holds that the natural environment should be preserved for future generations and that tourism operators should act responsibly.

The cognitive pillar concerns the taken-for-granted beliefs, shared worldviews and interpretive frameworks that actors use, often unconsciously, to understand their environment. These cognitive structures shape what is perceived as legitimate, realistic, or even imaginable for an organisation to do (Estol et al., 2018, 3). In tourism governance, these cognitive assumptions influence, for

example, how stakeholders interpret the role of protected areas, whether environmental limits are seen as negotiable, and what types of management interventions are viewed as natural or necessary.

In addition to these three, researchers Johnsen and Eliassen (2011) proposed a fourth dimension in institutional theory called the *natural* pillar, which consists of environmental and ecological conditions as a foundational element that influences how institutions operate. This addition helps in understanding the unique context of nature-based tourism, where ecosystems are dynamic systems that can force institutions to adapt rules, practices and behaviours in response to environmental change (Johnsen & Eliassen, 2011, 131).

Unlike the other pillars, which are social constructs, the natural pillar represents a physical reality that cannot be negotiated. Ecological limits are absolute, and when they are reached, they override economic goals and social desires, forcing an immediate response from the public and private sectors. The natural pillar makes the environment not only a passive resource but also an active institutional agent that dictates the ultimate boundaries of sustainable action.

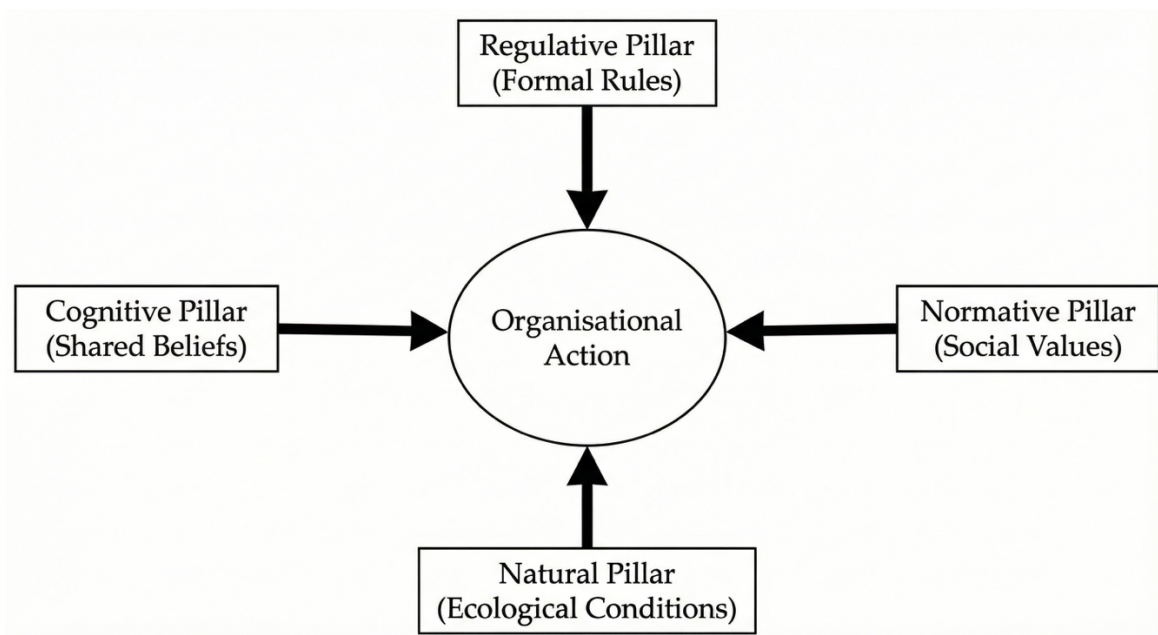


Figure 2. Institutional pressures on organisational action (Created with the assistance of Google Gemini).

These four elements explain how organisations and people make decisions and what institutional foundations those decisions rest upon. Together, they show that sustainable tourism governance is shaped simultaneously by legal mandates, social expectations, cognitive beliefs, and ecological realities.

2.2.3 Compatibility of theories

Public-private partnership (PPP) and institutional theory complement one another in explaining both the practical organisation of collaboration and the deeper forces that shape actors' behaviour within such arrangements. While PPP theory describes how cooperation is structured and how responsibilities are divided, institutional theory explains the underlying reasons, motivations, expectations and pressures that guide organisational behaviour (Wang & Ma, 2021, 246). A PPP is therefore not merely a contractual arrangement but a meeting point between two institutional cultures. The public sector operates in an environment shaped by legislation, accountability and long-term societal interests. In contrast, the private sector is guided by market competition, operational efficiency and the pursuit of economic returns.

Institutional theory offers a framework for understanding how these different logics influence the formation, functioning and outcomes of PPPs. The compatibility of these theories becomes clear when examining the institutional pillars that structure behaviour. From a regulative perspective, the public sector sets the legal framework within which tourism activity in protected areas must operate. Regulations, permits and environmental standards determine what is allowed and under which conditions private actors can provide services. These rules create the baseline within which companies can succeed without causing unacceptable ecological harm, but they also define the limits of organisational freedom, shaping how collaboration is negotiated.

Normatively, both sectors are expected to recognise the value of protected areas and work toward maintaining their condition. The private sector faces pressure from owners and customers to generate revenue and offer high-quality services. Yet, it must do so in ways that support the long-term viability of the environment on which its business depends. The public sector, while not driven by profit, must justify its decisions to citizens and stakeholders and therefore prioritise long-term environmental integrity. These differing normative expectations can create tensions within PPPs, but they also offer opportunities to align conservation goals with economic interests.

Cognitively, actors approach cooperation through shared assumptions about the role of nature, the purpose of protected areas and what constitutes appropriate management. Public actors may view protected areas primarily as spaces for conservation, whereas private actors may see them as operational environments that must balance environmental and experiential qualities. Such cognitive differences influence what each actor considers feasible or legitimate and may affect willingness to adopt new practices or share responsibilities.

The natural dimension further strengthens the link between PPP theory and institutional theory. Ecological conditions, such as erosion, vegetation sensitivity or changing climate patterns, can directly constrain governance options and require both sectors to adapt their operations. In this sense, protected areas are not only governed spaces but also active institutional forces that shape behaviour through their ecological limits.

Together, these institutional elements reveal why PPPs in nature-based tourism can be both necessary and challenging. They explain how sectoral motivations arise, why cooperation may succeed or fail and how governance structures respond to environmental pressures. The public sector derives its institutional motivation from legal mandates, accountability and the public good, while the private sector is driven by competition, efficiency and financial sustainability. For a PPP to support ecological sustainability in protected areas, these motivations must be aligned so that both sectors operate under a shared institutional logic that prioritises conservation alongside tourism development. This alignment forms the basis for long-term planning, effective governance and sustainable outcomes in nature-based tourism.

2.3 Public and private incentives for sustainable action

The pursuit of sustainable tourism in protected areas requires attention from both the public and private sectors. To get sectors interested, they need a motivation to pursue sustainable use of protected areas. Though both ultimately share the goal of ensuring the long-term viability of these natural assets, the public and private sectors have different incentives and drivers in pursuing sustainable use of protected areas. In addition, these motivations influence the form and quality of cooperation that develops among actors, as they determine where interests overlap and where collaboration becomes necessary to manage tourism pressures (Ma et al., 2020, 3).

2.3.1 Public sector motivations

The primary motivation for the public sector is the protection of nature and long-term environmental stability. Protected areas have significant economic, social and practical value for the nation, as nature-based tourism is focused on them (Sutherland & Stacey, 2017, 19). Consequently, public bodies are driven by a commitment to mitigate the negative impacts on protected areas, such as erosion and overcrowding, which threaten the very resources that attract visitors

In addition, the public sector is highly motivated by economic stability and the long-term viability of tourism revenue, which has become a significant part of Iceland's economy. In Iceland, a large share of GDP comes from tourism, and the long-term sustainability of the financial benefits from

protected areas is in the public sector's interest (Sutherland & Stacey, 2017, 11). The COVID-19 pandemic clearly demonstrated this vulnerability when tourism profits in Iceland dropped dramatically (Bjarnadóttir, 2021, 32). This economic pressure encourages the public sector to engage in collaborative arrangements with the private sector to ensure the tourism sector's financial stability.

The public sector is motivated and pressured by domestic and international frameworks, such as the United Nations, the OECD, and global environmental agreements, which are significant contributors and essential actors in creating a sustainable global tourism environment. One example of the most well-known global initiatives towards sustainable tourism is the UN's Sustainable Development Goals (SDGs). These frameworks are closely connected to various policies and funding mechanisms and therefore require measurable sustainability outcomes and encourage Iceland to strengthen its long-term planning and transparency (Sutherland & Stacey, 2017, 11).

2.3.2 Private sector motivations

The private sector is more interested in economic gain from protected areas compared to public actors. This stems from basic goals of generating revenue and creating shareholder value (Ma et al., 2020, 3). Private-sector actors operating within or in protected areas include tourism operators, accommodation providers, and activity companies. Since the natural environment is the core attraction of Icelandic tourism, maintaining the quality of protected areas directly supports private-sector businesses.

Financial incentives play a central role in making nature-based tourism sustainable. A common way to align private-sector behaviour with sustainability goals is through targeted financial instruments that encourage responsible practices in protected areas. This financial assistance could come from external organisations such as the UN, or from the public to the private sector (Sigurjónsdóttir, 2025, 18). Such programs operate with financial support or grants, often tied to environmental criteria, to encourage environmentally friendly operations within the local economy. Different funding programs aim to provide financial assistance to companies and nations that demonstrate responsible environmental management. This could make protecting protected areas an economically rational choice, as well as an ethical one.

2.3.3 Shared motivations and the basis for collaboration

Nations and companies benefit from having a positive social and environmental reputation, and protected areas play a vital role in building and maintaining this valuable capital. "It is widely

recognized that nature is by far the most prominent element in the image of Iceland as destination. The current tourism policy underlines the need to enhance and protect the image of pristine nature as it is the prime resource of the industry.” (Jóhannesson et al., 2010, 29). In countries like Iceland, which have a strong reputation for their natural beauty, the role of protected areas is greater than in other countries. Having a good reputation from protecting and maintaining protected areas benefits both sectors greatly by generating a positive image.

While the public and private sectors have distinct primary drivers, their interests converge on the long-term viability of the protected areas. The reputational logic in the private sector forms a strong motivation for private businesses to join collaborative protected area tourism management with the public sector (Jóhannesson et al., 2010, 289). Maintaining competitiveness supports long-term profitability and cooperation with the public sector; therefore, it becomes a way to secure the stability of the protected areas, on which most of the tourism business depends (Wolf et al., 2019). This alignment of interests means that private actors often support partnership models that ensure consistent management standards and provide predictable conditions for future business.

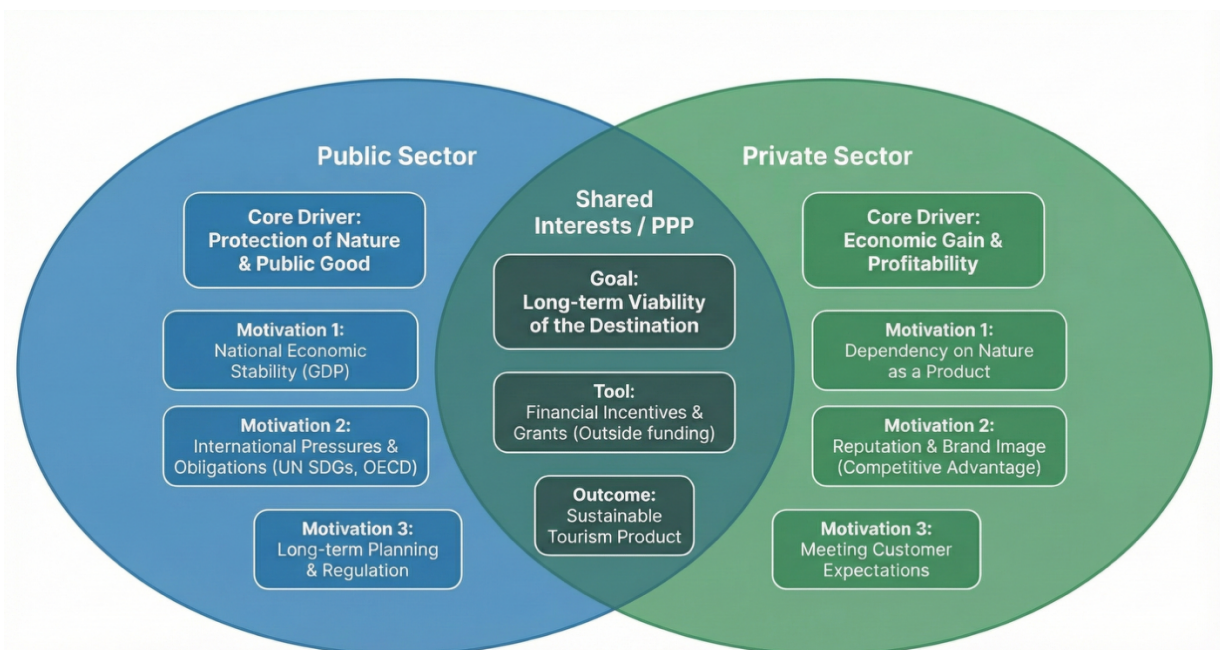


Figure 3. The convergence of motivations for the public and the private sectors (Created with the assistance of Google Gemini).

Joint interests create the foundation for PPPs. Public-sector motivations drive Icelandic authorities towards partnerships that support long-term ecological preservation, laying the foundation for PPP-based cooperation in protected areas. By collaborating with private actors, the public sector can leverage additional resources and operational capacity while ensuring that tourism development

aligns with national environmental priorities. Similarly, the private sector supports partnership models because they ensure consistent management standards and provide predictable conditions for future business. Together, both sectors benefit from the long-term sustainability of protected areas and recognise the risks of losing this asset.

3 Governance and management of protected areas in Iceland

3.1 Challenges in sustainable tourism management

The rapid growth of tourism has intensified the impacts of environmental pressures already present in protected areas. As the number of visitors increases, impacts such as soil degradation, vegetation loss and waste accumulation will intensify correspondingly. These pressures are highly concentrated in popular sites such as Þingvellir, where heavily used trails have experienced significant erosion and long-term surface damage (Sutherland & Stacey, 2017, 19).

The effects on protected areas aren't immediately apparent because environmental degradation often accumulates slowly over time. This makes it harder for companies to justify to their stakeholders not pursuing the most profitable choices. In the long term, if nature and protected areas aren't maintained, it will negatively impact every entity that depends on tourism (Sutherland & Stacey, 2017, 20). The delayed visibility of ecological decline increases the risk that negative impacts are addressed only after they have become extensive, making early preventive management difficult and increasing the likelihood of irreversible environmental damage.

The primary challenge facing both the public and private sectors is balancing short-term economic gains with long-term sustainability. While private operators often prioritise short-term profitability and market competitiveness, public authorities are responsible for ensuring long-term stability and protecting natural assets. This misalignment creates friction when tourism development and ecological limits intersect, making coordinated action difficult without a precise governance mechanism. As a result, the decision may favour immediate economic benefits even when long-term environmental costs are significant.

This also concerns PPPs: "PPP projects face specific sustainable risks as a result of conflicting public-private objectives, such as environmental sustainability versus high profits" (Ma et al., 2020, 3). Conflicts between the goals of different actors create tension and challenges in the tourism industry. Misaligned incentives are among the core reasons sustainability measures can be challenging to implement. These tensions can manifest as disagreements over investment responsibilities or the distribution of maintenance costs, thereby delaying necessary infrastructure improvements or environmental protection measures (Ma et al., 2020, 2).

In addition to conflicts of interest between public and private actors, many stakeholders make tourism governance difficult, "since nature protection, outdoor recreation, and commercial tourism

belong to different political areas and ministries, challenges remain on how to best balance them in practice.” (Fredman & Haukeland, 2021, 8). Stakeholders become relevant mainly because the large number of actors makes coordination difficult. The fragmentation of governance underscores the need for PPPs that clearly define responsibilities across organisations. The key challenge, therefore, is not the stakeholders themselves, but the absence of a shared partnership model that brings actors together and enables more coherent management (Wang & Ma, 2021, 250).

Different stakeholders have different goals, which create conflicts of interest between actors, and finding a balance is required. This fragmentation increases administrative complexity, slows decision-making and makes it harder to implement consistent management across protected areas (Sutherland & Stacey, 2017, 33). In addition, stakeholder cooperation is in many ways insufficient due to the large number of stakeholders operating in the tourism field, which slows and undermines coordination. The lack of unified procedures or communication channels further complicates the implementation of sustainable practices, especially in areas experiencing rapid visitor growth (Sutherland & Stacey, 2017, 33).

Scepticism and resistance towards sustainable development are among the significant factors that prevent stakeholders from committing to long-term environmental measures, according to the OECD report. Understanding the long-term benefits of sustainable use of nature, including protected areas, is often limited or overshadowed by short-term economic thinking. The resistance weakens the willingness of some actors to adopt sustainability requirements, resulting in inconsistent practices across the tourism sector (Sutherland & Stacey, 2017, 24). Educational measures and public awareness are necessary to tackle resistance towards sustainable development.

The lack of knowledge and human and technological resources around sustainable PPPs in protected areas is a significant challenge. Since the need for expertise in the sustainable use of protected areas has grown rapidly, knowledge and human resources haven't kept pace. Protected areas require specialised skills in environmental monitoring, visitor flow management, and long-term planning. However, the need for this expertise has grown as rapidly as tourism has in recent years, which is why demand far exceeds supply (Sutherland & Stacey, 2017, 30).

3.2 Existing measures and policy tools

Iceland has implemented several practical measures to manage the impacts of nature-based tourism and to improve sustainable development in its protected areas. These measures demonstrate both institutional governance and collaboration between public and private sectors. Overall, according to

the Travel and Tourism Competitiveness Index, Iceland ranks 30 out of 140 countries in sustainable development in the tourism sector (World Travel & Tourism Council, 2025), indicating that it is doing well at managing tourism more sustainably. Still, there is much room for improvement.

Most influences in the field of institutional theory come from the UN, the OECD, the Icelandic government and the Icelandic Tourism Board. Prominent institutions such as the UN create regulatory and normative standards that significantly influence how different actors operate. These external frameworks have increasingly shaped Iceland's policy direction and encouraged more structured governance. Its role reflects the regulative institutional pillar by setting rules and standards for tourism operators, while also shaping normative expectations about sustainability through guidelines and certification programmes.

The Icelandic Tourist Board is the national authority responsible for overseeing tourism development and ensuring the sustainability of tourism services. It was formed in 2006 to strengthen national coordination and to provide a central body for monitoring tourism, supporting businesses, and developing tourism policy (Icelandic Tourist Board, 2007). Currently, the Icelandic Tourist Board is the leading public-sector agent. Its role reflects the regulative institutional pillar by setting rules and standards for tourism operators, while also shaping normative expectations about sustainability through guidelines and certification programmes.

The Icelandic Tourist Board joined the Global Sustainable Tourism Council (GSTC) in 2024 to improve its policies and gain global support, thereby strengthening Iceland's alignment with international sustainability standards. The GSTC is an organisation that "establishes and manages global standards for sustainable travel and tourism." (GSTC, n.d.). GSTC is a large organisation with 558 members in 2023, including various governments, companies, and NGOs (GSTC, n.d.). Membership has helped Iceland reinforce shared sustainability norms across sectors and integrate them into domestic policy work.

Over the past two decades, in response to the rise in nature-based tourism, Iceland has made significant changes to its policies and legislation. Iceland's sustainable tourism framework developed significantly in 2011, when growth reached a point where a stronger, more coordinated governance system became necessary (Alþingi, 2011). That same year, Iceland's government introduced new legal frameworks, including the establishment of the Tourist Site Protection Fund (Ministry of Industries and Innovation and the Icelandic Travel Industry Association, 2015), which became one of the main financial tools for improving infrastructure and protecting sensitive natural sites. The Icelandic Tourism Board operates the fund. Over time, this fund has expanded its role and

now acts as a central mechanism for repairing trails and reducing erosion. The fund's increasing focus on erosion control reflects the natural institutional pillar, as ecological conditions and physical landscape degradation directly shape funding priorities and management interventions.

The country has developed long-term plans to guide the sustainable growth of its tourism sector. The *Road Map for Tourism*, a 5-year plan from 2015 to 2020, established the initial framework for improving coordination, infrastructure, visitor management, and environmental protection. Following the conclusion of this plan, Iceland introduced *Leading in Sustainable Development*, a national tourism strategy that continues and refines the principles set out in the previous roadmap. The new policy framework extends through 2030 and places greater emphasis on sustainability, long-term resilience, and the integration of international guidelines into national tourism governance. Together, these strategies represent Iceland's shift toward more systematic and long-term tourism planning. They also illustrate how cognitive institutional expectations evolve as sustainability becomes more deeply embedded in national policy thinking (Government of Iceland, 2019, 2).

The most well-known and praised sustainability certification in Iceland is Vakinn, established in 2012 by the Icelandic Tourist Board (Bjarnadóttir, 2016, 9). Vakinn is an Icelandic national quality certificate. The certificate is based on the New Zealand Qualmark model, which was adjusted to fit the Icelandic environment. The certificate aims to encourage companies operating in the tourism industry to adopt operational standards that promote the long-term benefits of sustainability in protected areas. Currently, 54 companies hold the Vakinn certification (Vakinn, n.d.). The issue with Vakinn stems from the large number of certifications; many customers can be confused about the relevance and purpose of the accreditations, leading some to ignore them entirely.

Therefore, the influence of the Vakinn certificate hasn't yet led to significant improvements in the company's popularity, but its most substantial benefit has been in internal development. According to a study, Vakinn helps companies to improve their internal operations and environmental awareness. The certification has been associated with improved staff engagement, more systematic sustainability work, and clearer ecological procedures (Bjarnadóttir, 2016, 33). Vakinn is an example of how norms can shift internal business practices even when external competitive advantages are limited.

Varða, also known as Sites of Merit, is a key programme connected to protected areas. Varða was created by the Ministry of Culture and Business Affairs in 2021 to address issues caused by the rapid growth of tourism at popular tourist sites. The program targets infrastructure development,

erosion control, safety improvements, and overall visitor management and education. The first national park included in the program, and the only one yet, is Þingvellir, which is one of the most heavily visited destinations in Iceland each year (Varða, n.d.).

Varða focuses heavily on PPPs across projects that aim to improve visitors' education and the longevity of the environment. It is one of the clearest examples of PPP-based site-level management in Iceland, integrating ecological assessments into its project selection. Varða is another example of the natural pillar influencing the governance of protected areas, as project decisions are directly shaped by ecosystem sensitivity.

In addition, Iceland participates in broader cooperation, such as the Sustainable Tourism in the North initiative, also known as NatNorth, which brings together Nordic and Arctic regions to address shared sustainability challenges in nature-based tourism. These collaborations provide additional expertise and comparative data, helping Iceland to improve its own planning and execution systems (NatNorth, n.d.). Such regional initiatives reinforce cognitive institutional frameworks by aligning shared understandings of sustainability across northern tourism destinations.

A practical example of financial cooperation is Islenski Ferðaklasinn (IF), which receives funding from the public sector, the European Union and private companies. Operating as a public-private innovation cluster, IF supports joint development projects, provides industry-wide training, and facilitates knowledge transfer between tourism actors. By coordinating resources from multiple levels of governance, IF shows how collaborative financial mechanisms can reinforce sustainability goals and ensure that protected areas receive the support they need. (Sigurjónsdóttir, 2025, 18).

The Sustainable Tourism Cluster (STC) serves as a key collaborative platform that illustrates how different public and private actors interact within PPP arrangements and how various partnerships operate in practice. Created by IF, it brings together the public bodies, private companies, municipalities, NGOs and other tourism stakeholders and shows the environment. Its main goal is to improve sustainability across the tourism sector by enabling companies to share practices and participate in joint projects and strengthening its position as a bridge between the public and private sectors. Because a significant portion of its funding comes from private members, STC is a great example of PPP-style cooperation in sustainability, and it also plays a key role in information exchange (Sigurjónsdóttir, 2025, 18). The platform supports normative alignment and cognitive learning among actors and, indirectly, reflects the natural pillar through its focus on ecological issues.

Fiscal policies and instruments are essential tools in managing tourism pressures. Iceland has increasingly relied on budgetary measures to address challenges posed by rising visitor numbers, particularly by revising taxes and fees in the tourism sector. Recent changes include the removal of certain VAT advantages previously granted to tourism services, as well as the introduction of new sector-specific charges to strengthen the financial capacity for environmental management. In the accommodation services sector, a lodging tax was implemented at the beginning of 2025, requiring hotels, guesthouses, and similar businesses to pay a fee per overnight stay (Iceland Revenue and Customs, n.d.). These fiscal tools are designed to generate targeted revenue for infrastructure, visitor management and environmental protection, ensuring that tourism contributes more directly to the costs it creates.

Together, these initiatives illustrate how Iceland's governance system increasingly relies on coordinated planning, shared financial responsibility, and cross-sector partnerships to address the growing pressures facing protected areas.

4 Conclusion

Nature-based tourism has become one of the most significant drivers of tourism worldwide, and its rapid growth is placing increasing pressure on protected areas. Studies have shown that rapid growth in nature-based tourism is putting increasing pressure on protected areas, such as national parks, leading to soil erosion and other impacts. While these impacts don't warrant immediate concern, they can have devastating effects on a nation's environment and economy in the long term. The way public and private sector actors address these pressures strongly influences how protected areas cope with increasing visitor numbers, as ecological sustainability is shaped not only by the environmental limits of the ecosystems themselves, but by how effectively governance systems anticipate and manage rising tourism activity.

Sustainable tourism in these environments depends on balancing the ecological limits with the economic importance of nature-based attractions, especially in countries where landscapes are the primary motivation for travel. Many destinations, like Iceland, have positioned themselves as global leaders in nature-based tourism governance and management, yet remain ecologically vulnerable if sustainability is not prioritised. Long-term ecological resilience, therefore, relies on steady, coordinated action across all levels of governance. The Icelandic case demonstrates this well: despite strong policies, the country's fragile ecosystems mean that even moderate visitor growth can trigger long-term degradation if not managed through systematic cooperation.

The interaction between the public and private sectors emerges as a central factor in how these pressures are managed and governed. Public authorities establish regulations, funding mechanisms, strategic plans, and institutional expectations that define sustainable tourism. Private actors shape the visitor experience, influence behaviour in protected areas, and make operational decisions that determine daily environmental impacts (Wolf et al., 2019, 15-16). Outcomes depend on how well these sectors align their motivations and coordinate responsibilities. Institutional theory clarifies why cooperation can be difficult, while public-private partnership frameworks offer practical structures to overcome these challenges.

Institutional theory clarifies the complex dynamics between public and private sectors by revealing the underlying forces that shape their interaction. Through its regulative, normative, and cognitive pillars, the theory explains how organisational behaviour is guided not only by economic rationality but also by legal frameworks, social expectations, and shared values. The theory helps in understanding how conflicting motivations can be reconciled within a collaborative governance

structure. In addition, the natural pillar serves as a foundational element for governance. The natural pillar extends the theory by framing the environment not merely as a passive resource but as an active institutional influencer that sets the boundaries for sustainable tourism action.

One of the most promising areas for future improvement is in information sharing and digitalisation. Access to information on tourism flows, behaviour, patterns and environmental conditions allows authorities to plan and prevent damage before it becomes irreversible. Private companies hold large volumes of operational data that currently remain underused in national planning. When both the public and private sectors base their decisions on the same data on visitor flows and ecological capacity, it reduces cognitive dissonance and aligns their operational logic.

Improved data cooperation would benefit both sectors by enabling more informed decision-making. Platforms like STC bridge the gap between actors, creating a channel for exchanging information and best practices, thereby operationalising the cognitive alignment required for data-driven governance. Broader international knowledge exchange further enhances this by allowing countries facing similar challenges to learn from one another.

Although Iceland performs well in global sustainability rankings, the country remains ecologically fragile. Strengthening cooperation between sectors is therefore essential for preventing environmental degradation and ensuring that development aligns with ecological limits. Recent initiatives in Iceland, including the Tourist Site Protection Fund, Varōa (Sites of Merit), Vakinn certification and regional projects such as NatNorth, demonstrate how PPP structures can support trail maintenance, erosion control, visitor education and long-term planning.

Processes in sustainable tourism governance depend on broad societal engagement. Education is necessary to inform visitors to behave more responsibly. Local perspectives can also support planning when appropriately integrated, but the primary emphasis remains on coordinated governance. Policy tools such as taxation and strategic infrastructure development highlight that sustainability requires both behavioural change and structural incentives. These measures also help bridge the gap between long-term public goals and short-term private motivations.

Nature-based tourism, with its rapid growth, is placing increasing pressure on protected landscapes, requiring coordinated efforts across sectors to maintain ecological integrity. Iceland relies almost entirely on the quality and integrity of natural landscapes, making their protection both an environmental and economic necessity. Effective governance depends on aligned institutional logic, shared motivations and continuous cooperation across sectors. Expanding PPP structures to create a

stronger foundation for protecting Iceland's protected areas is essential to ensuring that environmental considerations are integrated into tourism development and that responsibilities are shared more effectively between sectors.

References

- Alþingi (2011) Lög um Framkvæmdasjóð ferðamannastaða nr. 75/2011. Available at <https://www.althingi.is/lagas/nuna/2011075.html>, retrieved 4.11.2025.
- Amenta, E. – Ramsey, K. M. (2010) Institutional Theory. In: *The Handbook of Politics: State and Civil Society in Global Perspective*, eds. K. T. Leicht – J. C. Jenkins, 15–39. Springer.
- Bjarnadóttir, E. B. (2016) *Vakinn, the official quality and environmental system within Icelandic tourism*. Master's thesis. University of Iceland. Available at <https://skemman.is/bitstream/1946/25584/1/MasterthesisEddaBjarnadottirVakinn.pdf>, retrieved 25.10.2025.
- Bjarnadóttir, S. (2021) *How can Iceland reconceive its tourism industry in a more sustainable way after the Covid-19 pandemic?* Master's thesis. Uppsala University. Available at <http://www.cie.uu.se/>, retrieved 24.10.2025.
- Estol, J. – Camilleri, M. A. – Font, X. (2018) European Union tourism policy: An institutional theory critical discourse analysis. *Tourism Review*, Vol. 73 (3), 421–431.
- Fredman, P. – Haukeland, J. V. (2021) *Nordic perspectives on nature-based tourism: From place-based resources to value-added experiences*. Edward Elgar Publishing.
- Fredman, P. – Margaryan, L. (2021) 20 years of Nordic nature-based tourism research: a review and future research agenda. *Scandinavian Journal of Hospitality and Tourism*, Vol. 21 (1), 14–25.
- Global Sustainable Tourism Council (n.d.) About the GSTC. Available at <https://www.gstc.org/about/>, retrieved 6.11.2025.
- Government of Iceland (2019) Leading in sustainable development: Icelandic tourism 2030. Available at https://www.ferdamalastofa.is/static/files/ferdamalastofa/Misc/leading-in-sustainable-development_icelandic-tourism-2030.pdf, retrieved 3.11.2025.
- Gupta, R. – Mondal, M. E. A. – Janardhan, M. – Kumawat, H. – Shekhar, C. (2024) Sustainable Tourism Development: Balancing Economic Growth And Environmental Conservation. *Migration Letters*, Vol. 21 (S7), 1240–1253.
- Iceland Revenue and Customs (n.d.) Lodging tax. Available at <https://www.skatturinn.is/english/companies/tax-issues/lodging-tax/>, retrieved 4.11.2025.
- Icelandic Tourist Board (2007) *Icelandic Tourist Board*. Brochure. Available at https://www.ferdamalastofa.is/static/files/upload/files/Kynningarrit_enska.pdf, retrieved 18.10.2025.

- Icelandic Tourist Board (2023) International visitors to Iceland 2023. Available at <https://www.ferdamalastofa.is/en/recearch-and-statistics/visitor-surveys/international-visitors-to-iceland-2023>, retrieved 18.10.2025.
- Icelandic Tourist Board (2024) Foreign visitors to Iceland 1949–2024. Available at <https://www.ferdamalastofa.is/en/recearch-and-statistics/numbers-of-foreign-visitors/foreign-visitors-to-iceland-1949>, retrieved 8.12.2025.
- Jóhannesson, G. T. – Huijbens, E. H. – Sharpley, R. (2010) Icelandic tourism: Past directions - future challenges. *Tourism Geographies*, Vol. 12 (2), 278–301.
- Johnsen, J. P. – Eliassen, S. (2011) Solving complex fisheries management problems: What the EU can learn from the Nordic experiences of reduction of discards. *Marine Policy*, Vol. 35 (2), 130–139.
- Lu, J. – Nepal, S. K. (2009) Sustainable tourism research: An analysis of papers published in the Journal of Sustainable Tourism. *Journal of Sustainable Tourism*, Vol. 17 (1), 5–16.
- Ma, H. – Zeng, S. – Lin, H. – Zeng, R. (2020) Impact of public sector on sustainability of public–private partnership projects. *Journal of Construction Engineering and Management*, Vol. 146 (2).
- Ministry of Industries and Innovation – Icelandic Travel Industry Association (2015) Road map for tourism in Iceland. Available at <https://www.stjornarradid.is/media/atvinnuvegaraduneyti-media/media/Acrobat/Road-Map-for-Tourism-in-Iceland.pdf>, retrieved 18.10.2025.
- NatNorth (n.d.) About NatNorth. Available at <https://natnorth.is>, retrieved 5.11.2025.
- Pashkevich, A. – Stjernström, O. – Lundmark, L. (2016) Nature-based tourism, conservation and institutional governance: a case study from the Russian Arctic. *The Polar Journal*, Vol. 6 (1), 112–130.
- Schaller, H. (2014) *The Footprint of Tourism: Ecological sensitivity and hiking trail assessment at selected protected areas in Iceland and Hokkaido*. Rannsóknamiðstöð ferðamála. Available at <https://www.rmfi.is/static/research/files/1496326693-the-footprint-of-tourismpdf>, retrieved 18.10.2025.
- Sigurjónsdóttir, Á. K. (2025) *Footprints of Iceland Tourism Cluster 10 years*. Iceland Tourism Cluster. Available at https://static1.squarespace.com/static/66c71d90cc07564568c5d3e6/t/68c2b6984fbff51b8446df71/1757591192928/IF_TENYEARREPORT_2015-2025_ENG.pdf, retrieved 4.11.2025.

- Siltanen, J. – Petursson, J. G. – Cook, D. – Davidsdóttir, B. (2023) Evaluating economic impacts of protected areas in contexts with limited data; the case of three national parks in Iceland. *Journal of Environmental Management*, Vol. 342, 118085.
- Sutherland, D. – Stacey, J. (2017) *Sustaining nature-based tourism in Iceland*. OECD Economics Department Working Papers No. 1422. OECD Publishing. Available at <https://doi.org/10.1787/f28250d9-en>, retrieved 20.10.2025.
- Tverijonaite, E. – Ólafsdóttir, R. – Thorsteinsson, T. (2018) Accessibility of protected areas and visitor behaviour: A case study from Iceland. *Journal of Outdoor Recreation and Tourism*, Vol. 24, 1–10.
- Vakinn (n.d.) Certified companies. Available at <https://www.vakinn.is/en/certified-companies>, retrieved 29.10.2025.
- Varða (2021) Stefnuskjal Vörðu. Available at [https://uploads-ssl.webflow.com/62b0a4c1f0d58626d005b000/633c55c5b8ff03cc67661232_Stefnuskjal%20Vörðu_enska%20\(1\)%20\(1\).pdf](https://uploads-ssl.webflow.com/62b0a4c1f0d58626d005b000/633c55c5b8ff03cc67661232_Stefnuskjal%20Vörðu_enska%20(1)%20(1).pdf), retrieved 29.10.2025
- Wang, N. – Ma, M. (2021) Public–private partnership as a tool for sustainable development – What literatures say? *Sustainable Development*, Vol. 29 (1), 243–258.
- Wolf, I. D. – Croft, D. B. – Green, R. J. (2019) Nature conservation and nature-based tourism: A paradox? *Environments*, Vol. 6 (9), 104.
- World Economic Forum (2019) *The Travel & Tourism Competitiveness Report 2019*. Available at https://www3.weforum.org/docs/WEF_TTCR_2019.pdf, retrieved 10.10.2025.
- World Travel & Tourism Council. Available at <https://wttc.org/research/economic-impact>, retrieved 4.11.2025.

Appendices

Appendix 1 Use of generative artificial intelligence

AI was used in this thesis to support the research process. AI did not generate any text in this thesis, and all analysis and writing were done by me, the author. The AI platforms that were used are ChatGPT 5.1 and Google Gemini 3 Pro.

During my research, I used ChatGPT to find examples of sustainable tourism initiatives in Iceland, which I double-checked afterwards: NatNorth, Sites of Merit, STC, and information about taxation in this thesis were found through ChatGPT. I used Gemini to shape and refine my research questions and to ask for suggestions on structuring the thesis.

I used Google Gemini to create figures 2 & 3. I provided Gemini with the theoretical information from chapter 2 and asked it to make figures based on my text. The prompts used for:

Figure 2: “Luo selkeä ja kandiin sopiva kaavio englanniksi. Kaavion keskipisteenä on ympyrä, jonka sisällä lukee teksti Organisational Action ja ympärille on sijoitettu symmetrisesti neljä laatikkoa: yläpuolelle, alapuolelle, vasemmalle ja oikealle. Jokaisesta näistä lähtee nuoli, joka osoittaa suoraan kohti ympyrää, kuvaten organisaatioon kohdistuvia paineita. Yläpuolella olevassa laatikossa lukee teksti Regulative Pillar (Formal Rules). Oikealla Normative Pillar (Social Values) vasemmalla Cognitive Pillar (Shared Beliefs). Alapuolella Natural Pillar (Ecological Conditions). Kaavio visuaalisesti on pelkistetty.”

Figure 3:” Tee minun tekemän ajatuskartan pohjalta laajennettu versio jossa otat mukaan molempien sektoreiden yhteiset vaikutteet. Ensimmäiseksi tavoitteet ja niiden yhtenäisyys pitkäkestoisuudelle, rahalliset tuet, ja lopuksi vielä tämän lopputulos eli kestävän tavoitteen saavuttaminen”. In figure 3 I had already created my own version of the figure before that I asked Google Gemini to polish.

I verified that everything on the graphs is ideas I, the author, researched, and that the AI generated no new ideas.

In addition, I used the writing assistant software Grammarly only to improve spelling and language. No automated tool made substantive changes to the thesis's academic content.