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Biodiversity, leadership, and resilience in a national sustainable tourism program

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ABSTRACT
This study addresses the complex relationship between biodiversity, leadership, and resilience in the tourism industry. We apply case study methodology to examine the potential of Visit Finland's Sustainable Travel Finland program to increase the resilience of the Finnish tourism sector concerning sustainability challenges. The qualitative research data consists of interviews and secondary data analysed with content analyses. According to the results, the program offers support and proactive leadership to the Finnish tourism industry in meeting the rising sustainability demands on biodiversity protection. However, the first biodiversity steps have been small-scale and instrumental, corresponding to a narrow perception of nature's value. Therefore, the program does not yet fully meet the scale and scope of current biodiversity challenges. Although it is a good start, biodiversity-respectful leadership and resilience building require a strategic approach that also recognizes intrinsic, relational, and ecosystemic biodiversity values accruing broadly to tourists, nature, and humankind.

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Sustainable tourism; biodiversity; resilience; leadership; certification

Introduction

According to the World Economic Forum (2023), the most critical long-term threats are environmental risks: climate action failure, extreme weather, biodiversity loss, and ecosystem collapse. Biodiversity is the variety of living species on Earth, including plants, animals, bacteria, and fungi (UNEP, 1992) – simply life in all its forms. Thus, biodiversity loss means the loss of life on Earth due to human actions; based on recent estimates, a million species are at risk of extinction within the next decades (IPBES, 2019). The relationship between tourism and biodiversity is multifaceted: the tourism industry depends on biodiversity (Hall, 2010), but it also contributes to biodiversity loss through, e.g. urbanization, habitat loss, and accelerating climate change (IPBES, 2019). Moreover, the tourism industry is likely among the economic sectors most impacted by such changes (Gössling &

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Hall, 2006). Fortunately, tourism can also contribute to biodiversity protection – at least locally – while retaining business opportunities and providing well-being benefits for the guests (Hall, 2010; Tolvanen et al., 2020; WTO, 2010).

The tourism industry has thus far considered the relevance of biodiversity mainly from its own perspective as a direct resource for business (Christ et al., 2003; WTO, 2010); this is particularly evident in nature-based tourism, where nature functions as an attraction and arena of activities (Lundmark & Müller, 2010). This narrow perception excludes the dependence on ecosystem services providing the preconditions for all human activities. *Provisioning services* (e.g. providing food, water, and timber), *regulating services* (e.g. controlling for instance the climate, floods, and water quality), and *supporting services* (e.g. soil formation, photosynthesis, and nutrient cycling) are vital for tourism in addition to the *cultural services* directly related to recreation, health, and the well-being benefits of nature (Millenium Ecosystem Assessment, 2005). Moreover, the tourism industry has not fully recognized the broader relational and intrinsic values of biodiversity arising from tourists' interaction with the natural environment (cf. IPBES, 2022). As tourism accelerates biodiversity loss through over-consumption and profit-oriented business models, it should also be involved in developing solutions (Dasgupta, 2021; Diaz et al., 2019).

For a long time, climate change has dominated research on sustainable tourism with CO_2 calculations, carbon offsetting, and other climate-related actions being examined as possible solutions. Biodiversity's importance in tourism has been acknowledged at the strategic level (https://www.unwto.org/sustainable-development/biodiversity), but operative company-level actions to sustain and promote local biodiversity are still largely lacking, even though biodiversity protection is considered at least as important as climate change mitigation in tourism (Hall, 2010). Moreover, these two phenomena are not separate but must be addressed together as they form a complex ecological bundle threatening the future of both nature and humanity (Pörtner et al., 2021). Furthermore, biodiversity concerns have increased in recent years also in other areas of business and the wider society; for example, the Global Risks Report ranks biodiversity loss and ecosystem collapse as the fourth biggest threat over the next decade immediately after climate change concerns (World Economic Forum, 2023).

From the perspective of the tourism industry and individual companies, climate change and biodiversity loss call for resilience building – the cultivation of capacity to sustain development in the face of unexpected and surprising changes (Folke, 2016). Most research on resilience in tourism focuses on recovering destinations from short-term natural hazards as well as health-, economic-, and security-related shocks (Amore et al., 2018; Berbés-Blázquez & Scott, 2017). More recently, however, resilience has been considered an essential factor for enhancing the overall sustainability of tourism destinations at the business and the community levels (Bertella, 2022). Resilience-building amid ecological crisis requires leadership, e.g. in the form of innovative governance approaches and management interventions (cf. IPBES, 2019). This need is emphasized in Scandinavia, where nature is vital to tourism (Fredman et al., 2021). The relevance of nature depends on the type of tourism business as some companies directly depend on high-quality nature (e.g. those offering activities in nature) while for others (e.g. hotels and restaurants), the surrounding nature is more like an addition to their service. This difference in meaning is reflected in their motivations and readiness to contribute to conservation (Mäntymaa et al., 2019). Hence, the tourism sector should identify

different ways to expand its corporate responsibility regarding biodiversity protection and environmental values in general.

This study aims to increase our understanding of the complex relationship between biodiversity, leadership, and resilience in the tourism industry. This relationship is examined in Finland, which aims to become the most sustainable tourist destination in the Nordic countries by 2028 (Ministry of Economic Affairs and Employment of Finland, 2022). A specific Sustainable Travel Finland program (STF) has been tailored to reach this goal and create a new, sustainable normal for the Finnish tourism industry. This program provides a voluntary roadmap, training, and a certification system for tourism firms and destinations striving to improve their sustainability. We apply a case study methodology to examine the STF program's potential to increase the resilience of the Finnish tourism sector concerning sustainability challenges. The research data consists of interviews with Visit Finland's sustainable tourism professionals and analysis of secondary data related to the program. Visit Finland's biodiversity principles, guidelines, and measurement indicators are identified through qualitative content analyses. Based on them, we examine Visit Finland's leadership role in advancing the Finnish tourism sector's sustainability and the resilience.

Literature review

Resilience and tourism

The term resilience, originating from engineering and ecological research, refers to the intrinsic ability of objects, places, and people to absorb and recover from external stressors (Amore et al., 2018). During the past decades, the concept has gained momentum in various disciplines and research streams aimed at understanding complex adaptive systems. Furthermore, this concept is a platform for interdisciplinary and transdisciplinary research emphasizing social-ecological systems (Levin et al., 2013).

The wide use of resilience has resulted in several and sometimes even conflicting definitions (Amore et al., 2018; Meerow et al., 2016). The so-called "engineering" approach (Norris et al., 2008) defines resilience as an outcome or process resulting from a triggering event whereby the affected entity returns to its original state. The "ecological" or "socio-ecological" definitions, in turn, emphasize the constituents of resilience and their intrinsic abilities to maintain, resume, or adaptively change in the face of external disturbances (Holling & Gunderson, 2002). Indeed, the latter approach highlights that socio-ecological systems are embedded in the biosphere, i.e. the thin and fragile layer of life around planet Earth (e.g. Folke, 2016).

In the context of tourism, Hall et al. (2017) identified individual or psychological resilience, organizational or business resilience, and destination or community resilience. Due to the widespread use of resilience in human health, the individual level is likely to be the most studied resilience in general but the least explored by tourism scholars. On an organizational level, most studies have focused on crisis management – a popular topic in business management. The destination-level resilience, in turn, suffers from the inexplicit definitions of tourism destinations. However, according to Amore et al. (2018), a destination is resilient when stakeholders (i) are aware of the vulnerabilities and impacts of potential hazards; (ii) embark on redevelopment paths that benefit the

local community at large; (iii) engage in networked and collaborative forms of destination planning; (iv) reframe the meta-governance of destinations; (v) operate predominantly at a regional and local scale; and (vi) are reflexively and willing to learn from previous crises to reduce destination vulnerability in the future.

Biodiversity and tourism

Tourism's adverse environmental impacts have mainly been scrutinized from the perspectives of general environmental protection and global climate change. However, the relevance of biodiversity loss is increasing (Christ et al., 2003; WTO, 2010). The Global Assessment Report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019) reviewed over 15,000 scientific publications and identified four key messages. First, nature and its contributions to people are deteriorating due to human actions. Second, drivers of change have accelerated over the past 50 years, and biodiversity is declining faster than ever. Third, current trajectories, meaning business as usual, cannot meet conservation goals and foster sustainable use of nature; therefore, a transformative change is urgently needed. Fourth, nature can be conserved, restored, and used sustainably through promoting transformative change – a fundamental, system-wide reorganization across technological, economic, and social factors, including paradigms, goals, and values (Diaz et al., 2019; IPBES, 2019).

Due to the growing concerns about biodiversity loss, arguments for a broader valuation have been raised (IPBES, 2022). Biodiversity should also be acknowledged for its own sake and the benefit of humankind as intangible human–nature relationships and instrumental but non-commercial ecosystem services, such as providing oxygen and drinking water and pollinating cultivated plants. This view recognizes the full spectrum of biodiversity values and stipulates their inclusion in all decision-making to secure the long-term resilience and sustainability of not only one sector of industry but life on Earth in general – including the well-being of humans. This transformative change is metaphorically depicted as *living in, with, and as* nature instead of merely *living from* it (IPBES, 2022, p. 12).

IPBES (2019) identifies tourism as a focal human activity affecting biodiversity loss while also acknowledging its contributions to biodiversity conservation. Tourism affects all the main drivers of biodiversity loss: changes in land and sea use that cause habitat degradation and loss, direct exploitation of species, acceleration of climate change and pollution, and introduction of invasive alien species (ibid.). The last-mentioned driver also comprises biosecurity issues concerning the spread of disease agents and pathogens (FAO, 2008; Hinchliffe & Bingham, 2008). While IPBES considers the impacts of invasive alien species on native species and ecosystems via predation and ecological competition (IPBES, 2023), the biosecurity of tourism also comprises disease, pests and alien species that harm farming, livestock, and human health. Moreover, the biosecurity and the management of alien species in tourism are exacerbated by the efficiency and rapidity of air travel in transmitting diseases globally (Hall, 2011) as evidenced during the COVID-19 pandemic, which was caused by a specific coronavirus.

Thus, tourism needs changes and requires management interventions on various levels. A need exists to create incentives for environmental responsibility and increase cross-sectoral cooperation. Tourism institutions and businesses should take pre-

emptive actions to stop nature's deterioration, make effective decisions regarding resilience and uncertainty, and enact stronger environmental laws and policies (Diaz et al., 2019; IPBES, 2019). The IPBES management interventions target eight keys to transformative change that directly or indirectly impact biodiversity maintenance or enhancement. The first four are related to consumption: lowering total consumption and waste, creating a good life not based on material consumption, relinquishing outdated values, adopting new social norms for sustainability, understanding that the current consumption level has significant impacts, and reducing inequalities that undermine individuals' abilities for sustainability. Fifth, inclusive and fair decision-making and benefit-sharing in biodiversity conservation is needed. The sixth key – internalizing externalities and telecouplings – means bearing global responsibility as consumption and production harm nature near and far. Finally, supporting technological and social innovations and investments that facilitate the transformation and promote education and knowledge regarding nature, conservation, and sustainable use (IPBES, 2019).

Towards biodiversity-respectful leadership in sustainable tourism development

Until recently, business research has kept its distance from the natural environment and rarely discussed the biodiversity crisis, although the environmental awareness of clients has steadily risen. The media's attention to the IPBES (2019) report reviewing the state, causes, and implications of biodiversity loss and Dasgupta's review (2021) outlining the economics of biodiversity awakened researchers and businesses. Biodiversity loss is also considered "one of the fastest deteriorating global risks over the next decade" and ranked 4th on the list of long-term global risks immediately after climate change concerns (World Economic Forum, 2023, pp. 6–7). Tourism experts increasingly share an imperative need to improve the sustainability and responsibility of products and services (Haukeland et al., 2023), and many public stakeholders have already addressed the issue; e.g. Parks and Wildlife Finland has established the Principles of Sustainable Tourism in Finnish national parks.[1]

Previous research argues that transformative change requires innovative governance approaches (Diaz et al., 2019) to reform global economic systems, steering away from the prevailing paradigm of economic growth and over-consumption to penalize actions that deteriorate biodiversity and reward sustainability (Dasgupta, 2021). Nevertheless, despite such calls, these innovative governance approaches have rarely been discussed concerning the biodiversity crisis (Hallinger & Suriyankietkaew, 2018). While there is knowledge of "what" to do to pursue transformative change, no clear understanding exists of "how" to lead the change toward mainstreaming biodiversity-respectful activities. In the current study, the term biodiversity-respectful refers to living in harmony with nature, which Dasgupta (2021) described as balancing nature's supply and humanity's needs, respecting biodiversity, and safeguarding the well-being and viability of ecosystems and socio-ecological systems.

In recent decades, tourism destination research has advanced from destination management to governance and leadership (Volgger et al., 2021). Destination management asserts the need for coordinating tourism destinations to optimize outcomes for everyone involved in providing tourism services; therefore, destination management focuses mainly on operative hands-on activities. Destination governance takes a more strategic

approach that better recognizes the diversity of actors and the complexity of actor relations in tourism destinations (Baggio et al., 2010). Thus, it also encompasses biodiversity on the local and regional levels and calls for the tourism sector's involvement in discussions with local stakeholders regarding the management and sustainable use of natural resources (Kurttila et al., 2019). Finally, destination leadership directs attention toward influencing collective behavior to achieve coordination without hierarchical processes and solidified command and control structures (Pechlaner et al., 2014). This leadership approach coincides with Visit Finland's role in promoting the sustainability of the entire Finnish tourism sector through a voluntary sustainability program and certification system offered to companies and destinations.

Sustainability has become a central issue in tourism management (e.g. Gössling et al., 2012) and governance (e.g. Saarinen & Gill, 2018), but according to the authors' knowledge, the leadership approach has more rarely been addressed (e.g. Kaefer, 2022). Thus, we utilize the strategic leadership-enhanced organizational resilience framework (Ho et al., 2022) to examine Visit Finland's actions related to biodiversity loss and its leadership role in making sustainability the new norm in the Finnish tourism sector (Ministry of Economic Affairs and Employment of Finland, 2022). The framework builds on strategic leadership as the key driver and pre-eminent factor in the entire resilience procedure. The functions crucial for organizational resilience include (i) creating a vision, (ii) strategic decision-making, (iii) stakeholder engagement, (iv) resource management, (v) information management, (vi) empowerment, (vii) motivating and influencing, and (viii) social and ethical issue management (Samimi et al., 2022). Besides strategic leadership, the framework includes factors prerequisite for a series of resilience actions, including prior knowledge base, resource availability, social resources, and power and responsibility (Ho et al., 2022). As an organizational resilience framework, it applies to individual companies and destinations and the entire Finnish tourism sector, the community resilience of which rests on its members' resilience (cf. Hall et al., 2017).

Case study description – Visit Finland's Sustainable Travel Finland program

Sustainability aspects are recognized as a competitive advantage in tourism marketing. Therefore, Visit Finland – the national tourism promotion organization – has taken an active leadership role in enhancing the sustainability, and thereby the competitiveness, of tourism in Finland: "Taking sustainable development into account is increasingly important, even essential, for the continued growth of our tourism and for maintaining our competitiveness." (Visit Finland, 2023). The ambitious goal is to transform Finland into the most sustainable tourist destination in the Nordic countries by 2028 (Ministry of Economic Affairs and Employment of Finland, 2022). Thus, in 2019, Visit Finland launched a national sustainability program, Sustainable Travel Finland (STF). This program comprises information materials, online tools, and training to promote the sustainability of tourism companies and destinations. This case study examines STF's biodiversity-respectful leadership role and resilience-building potential. Particular focus is on biodiversity's role as a new dimension of ecological sustainability alongside the well-established climate change and general environmental protection issues.

The Finnish STF program provides a practical roadmap for tourism firms and destinations toward sustainability, consisting of general sustainability principles and criteria, concrete indicators, training, and evaluation that help tourism providers identify and adopt sustainable practices for their everyday business. After completing the program, applicants are recognized with the Sustainable Travel Finland label as well as granted incentives and marketing support by Visit Finland (Business Finland, 2022). During the investigation (October 2023), 359 companies had completed the STF program, and 1081 were working towards acceptance. These pioneering 1440 companies represent 5% of all Finnish tourism companies.[2] Finland's focus on sustainability is concordant with the neighboring Scandinavian countries; Sweden has launched the Nature's Best eco-certificate for accommodations and tourist experiences (https://www.naturesbestsweden.com/en/), Norway has the Sustainable Destination scheme (https://www.visitnorway.com/), and responsible tourism in Iceland is distinguished by the Vakinn certificate (https://www.vakinn.is/en). Furthermore, Denmark, although lacking a specific label, stresses sustainability in its destination marketing (https://www.visitdenmark.com).

The STF program is based on the UN's Sustainable Development Goals (SDGs) and international criteria for sustainable tourism (ETIS, 2023; GSTC, 2023) but it is tailored to national needs. The process, depicted as the STF Trail, includes self-study materials and training organized by the Visit Finland Academy to support the application processes of individual businesses and destinations (Business Finland, 2022). The STF Trail begins with the principles that outline the philosophy of sustainable travel and function as a pledge (Figure 1). Thus, by signing the principles, the applying company or destination commits itself to sustainable development. The sustainability criteria and indicators offer concrete measures for different dimensions of sustainability. The self-study materials, online tools, and education and training events support the applicants throughout the process, culminating in the final evaluation and approval (or rejection). Participation in the program is voluntary.

Methodology

This study aims to provide a holistic understanding of a specific phenomenon, thus taking an intensive single-case study approach (Eriksson & Kovalainen, 2016) to examine Visit Finland's role in enhancing the resilience, sustainability, and biodiversity-respectful activities of the Finnish tourism sector. The case study is based on two sources of information:

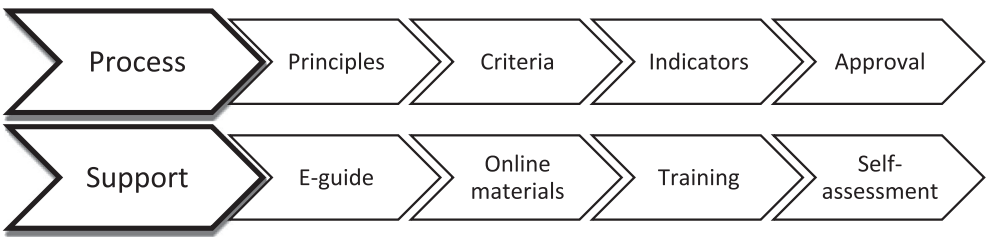

Figure 1. The main elements of the Sustainable Travel Finland program.

STF program documentation and interviews with the key experts. The analysed STF documentation – written materials and online tools – comprised the following[3]:

- STF Principles of Sustainable Travel
- STF Criteria
- STF Indicators for Companies
- STF Indicators for Destinations
- STF Trail to Sustainability
- STF E-Guide to Applicants
- STF Training Materials

These naturally occurring secondary materials underwent qualitative content analysis using ATLAS.ti software. The coding of items was data-driven and inductive to retain the richness of the material (Schreier, 2014). All aspects of sustainability – economic, socio-cultural, and ecological – were represented in the materials. However, we focus only on the ecological dimension and the role of biodiversity conservation as part of it.

The secondary materials were complemented by interviewing the responsible Visit Finland staff members who manage and develop the program and the external experts who hold the training events (Table 1). While the above-mentioned documentation provides the framework, criteria and indicators for the STF program, sustainability is operationalized in the training events. Thus, the training perspective allowed seeing biodiversity and leadership in action through the eyes of the trainers and program managers. The interviews with the trainers were qualitative, semi-structured, and conducted 1:1 (Kvale & Brinkman, 2009). Following the aim of this research, the interviews examined the role of ecological sustainability and biodiversity in STF, the participants' awareness of and attitude toward these issues, and the weight of biodiversity in the process. Two researchers interviewed the two STF managers together. Their interview focused on the overall aims and trustworthiness of STF, its leadership role, and the challenges of determining and measuring biodiversity activities on the company and destination levels. The interviews were conducted online and recorded with Microsoft Teams, apart from one telephone interview, which was documented by taking notes. The discussions' main points were transcribed and analysed with traditional content analysis using a data-driven and inductive approach (Schreier, 2014).

Table 1. Collection of primary data by interviewing Sustainable Travel Finland managers and trainers.

Interviewee	Role	Date
STF manager 1	Program development	15 Mar, 2023
STF manager 2	Program development	15 Mar, 2023
STF trainer 1	Execution of training events	1 Mar, 2023
STF trainer 2	Execution of training events	1 Mar, 2023
STF trainer 3	Execution of training events	7 Mar, 2023
STF trainer 4	Execution of training events	8 Mar, 2023
STF trainer 5	Execution of training events	30 Mar, 2023

Findings

Visit Finland's leadership role in enhancing sustainable tourism

By launching the Sustainable Travel Finland program, Visit Finland took an active lead in developing and guiding the Finnish tourism industry towards sustainability. The aim was to offer the industry a usable and credible sustainability program that implements Visit Finland's new sustainability strategy and realizes its goal of developing Finland into the most sustainable tourist destination in the Nordic countries. The STF program was a proactive response to pressures on the industry regarding its adverse ecological, social, and cultural impacts:

> There was increasing public pressure on the tourism industry as a result of its negative impacts. Moreover, some critique was presented to this type of hedonic consumption in general. (STF Manager 1)

Government-level policies underpinned the need for increased sustainability, but demands also came from the industry itself:

> International travel agencies and tour operators called for more attention on sustainability issues; simultaneously, some of the local entrepreneurs expressed their need for support to address the topic. (STF Manager 2)

The program was tailored to match the Finnish circumstances and suit Finland's specific tourism needs by considering sustainability a core contributor to the resilience and competitiveness of companies and destinations and, ultimately, the entire tourism sector. Based on the interviews with STF trainers, the program seems to have a good acceptance within the industry; none of the trainers working in direct contact with the companies and destinations reported any criticism from the field. On the contrary,

> the tourism industry seems to respect Visit Finland and the company representatives I have met in the trainings have not questioned the STF program. (STF Trainer 2)

The role of biodiversity in the STF program

Ecological sustainability, central to the STF program, includes three dimensions: general environmental protection, climate issues, and biodiversity. General environmental protection focuses on conventional topics such as waste management, water usage, and resource efficiency while climate issues refer to reducing CO_2 emissions to mitigate global climate change. Biodiversity has emerged alongside these traditional environmental concerns, which is evident in STF, where it is acknowledged as the most recent dimension of ecological sustainability. However, biodiversity has not yet reached the level of the more established general environmental protection and climate issues due to its relative novelty and unfamiliarity to the tourism industry. Nevertheless, the biodiversity attitudes of companies and destinations are positive, and the field recognizes biodiversity's growing significance.

STF principles

The Sustainable Travel Principles document provides an overarching framework and presents general measures to improve the sustainability of Finnish tourism. This document includes ten principles ranging from caring for nature and recognizing climate issues to

respecting cultural heritage and promoting human rights and equality. Principle 2 – "We look after nature" – explicitly mentions biodiversity:

> We protect the environment, landscape, and biodiversity. Instead of exceeding the carrying capacity of nature, our operations guarantee the prerequisites of a good life and the preservation of a clean environment …

Climate change and environmental protection are considered in Principle 7 – "We take notice of climate issues":

> We make good climatic choices and reduce our carbon footprint. We follow the environmental impacts of tourism and pursue more efficient use of energy and other resources by active measuring.

The plural "we" phrasing reflects the pledge role of the principles; by signing these pledges, a company or destination commits itself to the STF Program and takes the first step on the STF Trail toward sustainability. Hence, the candidates explicitly commit themselves to protecting biodiversity from the beginning of their STF process.

STF criteria and indicators

The STF criteria are intended to facilitate adopting sustainable practices into everyday business. The criteria for ecological sustainability comprise 14 topics, 11 of which concern general environmental protection. Two criteria address climate change, whereas biodiversity is mentioned only once and on a general level: "contribution to biodiversity conservation." (Table 2).

The biodiversity actions of companies are evaluated by 12 indicators that range from strategic planning and capacity building to concrete grassroots-level activities and financial support to biodiversity protection. Ecosystem-level biodiversity indicators include restoring of endangered habitats and garnering financial support for restoration projects. The species level is addressed by feeding birds and providing nesting boxes for them, removing invasive alien species, and installing bug hotels. Conservation activities

Table 2. Criteria for ecological sustainability and the biodiversity indicators of the Sustainable Travel Finland program (abbreviations: BD = biodiversity, CC = climate change, and EP = general environmental protection).

Topic	Criteria for ecological sustainability	Biodiversity indicators
BD	Contribution to biodiversity conservation	The company has a biodiversity program
CC	Climate change mitigation / carbon footprint calculation	Regular biodiversity training of staff
CC	Reduction of fossil fuels	Litter collection
EP	Sorting waste, recycling, and reducing produced waste	The restoration of cultural habitats, water systems, bogs and/or forests
EP	Reduced energy consumption	Financing the restoration of the former habitats
EP	Environmentally friendly provision of services and leave no trace -philosophy	Provision of nesting boxes for birds and other animals
EP	Reduced water usage	Construction of a green roof
EP	Implementation of an environmental management system	Combatting alien species and/or financing such activities
EP	Environmental training for staff	Feeding birds
EP	Reduced food waste	Funding nature conservation ngos
EP	Increased use of organic and vegetarian food	Provision of bug hotels
EP	Use of environmentally friendly detergents	Provision of diverse habitats for fauna and flora
EP	Environmental protection training for staff	
EP	Adoption of circular economy principles	

on the ecosystem and species levels may also indirectly contribute to the third level of biodiversity, i.e. genetic diversity. Moreover, the program includes intangible organizational activities regarding planning and training. As all indicators are not relevant to all applicants due to their different operating environments and business models, Visit Finland is considering a more targeted selection of indicators that also considers the business type and additional biodiversity indicators may also be considered (STF manager 1). The indicators are evaluated on a normative Yes / No scale, and at least two biodiversity actions are required to qualify as an "active contributor to biodiversity." This minimum threshold may be raised in the future (ibid.). In addition to the self-evaluation, the STF program requires the applicant to have an environmental certificate based on an external audit (e.g. the EU Ecolabel, Green Key, or another sustainable tourism label following ISO 14024).

STF training

All the interviewed STF trainers and managers emphasized STF's role as a loose sustainability framework and training program that rests on the applicants' own commitment, voluntary capacity building, reflexivity, and self-imposed sustainability work. Thus, STF's main drivers are motivation, positiveness, encouragement, and support. The online guide, self-evaluation tools, and sustainability trainings organized by the Visit Finland Academy support the applicants' sustainability processes. The training events introduce the sustainability field:

> The training lasts only for one day, so there really is no time to delve deeper into any topic … it's more like an overall presentation of sustainability, its relevance in tourism and the available STF tools. Much of the work is based on the participants' own, internal problem-based learning, tackling concrete issues that emerge in their daily business. (STF Trainer 2)

According to the interviewed trainers, the applicants' biodiversity awareness and knowledge levels vary significantly. This issue may be crucial for some specialized nature-based tour operators and destinations, while others hardly even recognize the topic:

> Biodiversity is an almost unknown issue for most participants. Therefore, my approach is very concrete and I avoid sophisticated terminology. Everyday spoken language and grass-roots examples work best. (STF Trainer 3)

> The biodiversity awareness of most participants is very limited. However, a few forerunners are very devoted to biodiversity conservation, and they have even done biodiversity mapping. (STF Trainer 1)

Therefore, the basic training focuses on explaining the topic and raising the participants' awareness to encourage them to take their first biodiversity steps. Advanced training modules targeting specifically carbon reduction and mitigating biodiversity loss are being planned (STF Manager 2). In addition to direct capacity building, the training events provide participants with networking opportunities and direct peer support by acquainting them with like-minded colleagues.

Discussion

STF as a tool to enhance biodiversity-respectful activities in tourism

The STF program has been initiated in response to the increasing sustainability pressure and demands on the tourism industry. Consequently, the program is industry-driven and

targets the needs of tourism providers; it considers biodiversity challenges and resilience from the companies' and destinations' perspectives focusing on foresight and risk management to safeguard the tourist experience and perceived consumer value that are essential for a successful business. Although STF consists of specific criteria and indicators that eventually result in formal approval, it is a firsthand support framework and training program. From start to finish, the entire process rests on the applicants' initiative, self-imposed activities, and self-evaluation instead of imperative top-down requirements. This process engages the participants, supports their active self-reflection, and promotes the implementation of suitable sustainability measures.

As far as biodiversity is concerned, tourism companies and destinations face two types of external challenges. First, changes in the surrounding nature influence tourism directly (Christ et al., 2003); for example, the decline of wildlife automatically affects a safari tour operator's business, and many holiday resorts depend on the quality of the surrounding natural landscape. Second, in addition to physical changes in the natural environment, changes also occur in the minds of the tourists as biodiversity loss has caused growing environmental awareness that is reflected in tourists' values, preferences, and decision-making. STF addresses the abovementioned challenges by encouraging concrete actions that directly benefit the local flora and fauna and emphasizing the communication of these positive achievements to address the tourists' preferences and changes in their consumer behavior.

STF's evaluation of biodiversity-respectfulness is based on indicators that are consistent with the tourism industry's guidelines (ETIS, 2023; GSTC, 2023; WTO, 2004). Indicator-based approaches are commonly used because they are concrete and easy to implement and understand. Moreover, they can be assessed using the established rating criteria for sustainable tourism indicators (e.g. WTO, 2004, pp. 40–41: relevance, clarity, credibility and reliability, feasibility, and comparability). The indicators perform a dual function: they represent an indicative checklist that guides the applicants in identifying, evaluating, and improving key issues and also document the actual biodiversity performance. Therefore, the indicators balance between being small-scale and concrete to address the participating companies and destinations; however, they should also be meaningful regarding actual biodiversity loss. STF addresses this small versus big dilemma by including indicators representing different levels – from planning and training to concrete hands-on activities and financial support – to achieve the required breadth and depth (Table 2).

Compared to other sustainability schemes for tourism in Scandinavia, STF's biodiversity indicators are comprehensive and concrete. The Norwegian Sustainable Destination scheme mentions biodiversity as a dimension of environmental sustainability, but its indicators are general and managerial, focusing on the availability of undisturbed nature and visitors' access to it (Innovation Norway, 2022). Biodiversity measures are not explicitly mentioned in Iceland's Vakinn certification system either, although several of the system's nature conservation activities may also contribute to biodiversity protection: land revegetation, support for environmental research, support for nature NGOs and education, and combatting invasive plant species (https://www.vakinn.is/en). The criteria for Swedish Nature's Best certification system include biodiversity on a general level and three specific actions: combatting alien species and subspecies, using local species in plantation and restoration works, and facilitating land management that secures

biodiversity (www.naturesbestsweden.com). Denmark, lacking a specific program, promotes sustainable tourism by highlighting sustainable activities and places to visit in a more marketing-oriented manner that omits biodiversity issues (https://www.visitdenmark.com). Hence, the STF program emphasizes biodiversity more than respective programs in Scandinavia.

While the STF indicators are clear and concrete, biodiversity is a complex and broad phenomenon: it describes the richness of all existing life forms, spanning from entire ecosystems and habitats to the numbers of different species living in them and even the microlevel genetic diversity within a single species. Due to this complexity and the topic's relative novelty, objective biodiversity indices are still lacking (cf. carbon footprint or the amount of waste produced). Therefore, establishing biodiversity-respectful leadership on a limited number of predetermined indicators is understandable but simultaneously challenging. The primarily small-scale and stand-alone concrete actions are ideal as first steps that signal the companies' or destinations' biodiversity-respectful attitudes and raise awareness among staff and tourists, but their significance remains limited. In practice, consider the relevance of a bug hotel, green roof, or bird feeding compared to the scale of adverse biological impacts tourism causes. This juxtaposition does not underrate these reasonable measures per se but stresses the scale's importance. Hence, initial small steps should be followed by other measures with greater effectiveness to achieve true biodiversity-respectfulness.

Another shortcoming is the missing quantification of biodiversity actions and the lack of information on how different activities influence biodiversity. STF's normative scale for the indicators (Yes or No) is easy to use but fails to disclose the scale of the implemented activities. Instead of a mere "Yes" to bog restoration, reporting how many hectares have been restored would offer more profound insight. Tourism companies have different levels of ambition in protecting biodiversity, and those allocating more resources to it would benefit from quantifying the activities. Quantitative scales also reduce the subjectivity of normative self-evaluations; however, they require more effort in data collection and reporting. Moreover, implementing quantitative measures becomes even more burdensome when the focus is shifted from the practical means to the desired ends. Instead of reporting that nesting boxes have been installed for birds, telling how many endangered species have nested in them and how many fledglings they have produced would be more informative. This type of goal-oriented reporting would require far more resources, but it would more transparently and credibly communicate the actual biodiversity accomplishments.

Overall, the business and biodiversity relationship is a topical issue in Finland, and concrete targets and measurement of biodiversity actions are demanded (Pantsar, 2023). A consensus regarding biodiversity's relevance exists among tourism companies and destinations despite the topic being relatively unfamiliar and still overshadowed by traditional environmental and climate issues. This positive attitude and the STF program's do-it-yourself nature are reflected in STF's leadership role and recommended biodiversity actions.

Transformative Change Toward Biodiversity-respectful Tourism

The STF program considers biodiversity challenges and resilience from the companies' and destinations' perspective, which is consistent with the organizational resilience

model (Ho et al., 2022), the prevailing guidelines for tourism and biodiversity (WTO, 2004, 2010), and the principles of sustainable tourism (ETIS, 2023; GSTC, 2023; World Economic Forum, 2022) that all represent the human perspective. For example, sustainable tourism is defined as "Tourism which meets the needs of tourists, the tourism industry, and host communities today without compromising the ability of future generations to meet their own needs." (ETC, 2023, Toolkit 2A, p. 3). Also, the relationship between biodiversity and tourism is instrumentally portrayed from the business perspective: "Because ecosystem services and biodiversity are vital for tourism, it makes sense for destinations and the tourism sector to protect them as valuable assets that contribute to the long-term success of tourism" (WTO, 2010, p. 2). Hence, the primary concern is to satisfy the tourists' needs and ensure the industry's success despite growing environmental uncertainty. This resilience logic is based on anticipating, coping with and adapting to changes in the operating environment (Ho et al., 2022). It represents a narrow anthropocentric worldview that regards biodiversity and ecosystem services as useful resources (Christ et al., 2003; WTO, 2004). A more holistic, ecocentric approach recognizes the broad spectrum of biodiversity-related values, both instrumental and intrinsic. Its baseline is respectful cooperation with nature that regards humankind as an integral part of it rather than an external and unattached utilizer of Mother Nature's offerings (cf. IPBES, 2022).

Furhermore, the consumer perspective emphasizes a broader outlook that acknowledges the multidimensionality of biodiversity-dependent values. Tourism represents experiential consumption, the perceived consumer value of which is mainly emotional (Holbrook & Hirschman, 1982). Tourist experiences are multidimensional, encompassing also aesthetic, hedonic, eudaemonic, ethical, and spiritual dimensions in addition to instrumentality (cf. Holbrook, 1999). Moreover, the health and well-being benefits of nature are increasingly acknowledged as nature's key contributions to people (Tyrväinen et al., 2023). Sustained biodiversity is necessary for these intrinsic value types – as their direct source or indirectly by contributing to the overall experience.

Using separate operative measures to target biodiversity loss represents an instrumental problem-solving approach, the effectiveness of which is limited to the predetermined activities and their measurement. The resulting resilience – on the company and destination levels – is superficial, transient, and ineffective in dealing with new challenges. Moreover, determining a standard set of indicators for the entire tourism sector with the participants' varying local circumstances, knowledge, ambitions, and resources is impossible. Alternatively, tailor-made indicators for different circumstances are laborious. In contrast, applying a strategic approach that embeds respect for biodiversity as a cross-cutting guideline to all business operations evades the problems of universal one-size-fits-all measures or case-by-case customization. Mainstreaming respect for biodiversity in the business model as a norm allows anchoring individual activities to this foundation and identifying the most urgent local needs. This endeavor promotes more systematic and goal-oriented measures, increases relevance and credibility, and builds resilience that adapts to upcoming challenges. Especially when considering STF's role as an activator, supporter, and catalyst of the participants' own voluntary actions, a holistic biodiversity strategy holds more potential than standard detached activities. It also contributes to the natural environment and humanity's well-being more effectively than individual

actions. This broader effectiveness also facilitates credible external communication as discrete measures often fail to compensate for the scale of adverse impacts, commonly causing greenwash accusations.

Conclusions

Biodiversity loss poses a growing threat to life, ecosystems, and, ultimately, human well-being. This decline is human-induced, and the tourism industry is not innocent either. We examined the complex and often controversial tourism-biodiversity relationship by applying a biodiversity-respectful leadership approach to the Sustainable Travel Finland program (STF). Ho and colleagues' (2022) organizational resilience framework was used to assess the program's potential to promote biodiversity in Finnish tourism in order to contribute to the industry's resilience.

STF represents a good start for increasing biodiversity-respectfulness among Finnish tourism companies and destinations. However, due to its instrumental approach, the small scale of most biodiversity activities, and lack of their quantification, the program's resilience-building capacity is still limited to the local level. However, the construction of tourism infrastructure and traveling to and from the destination have considerable negative impacts on biodiversity; the combined effects of habitat destruction, pollution, resource consumption, introduction of alien species, and acceleration of climate change often exceed that of local operative actions. Therefore, proceeding from small-scale local instrumentality to embedding respect for biodiversity as a cross-cutting strategy in all tourism business would provide greater resilience for the industry, effectiveness in biodiversity protection, and increase the trustworthiness of marketing communication. This could advance transforming tourism in Finland by supplementing the present anthropocentric stance with greater ecocentricity and a broader valuation of nature and biodiversity, thus operating in, with, and as nature instead of shortsightedly profiting from it (cf. IPBES, 2022). STF has the required leadership to determine how seriously biodiversity-respectfulness is incorporated in the Finnish tourism sector, how its resilience develops, and whether the goal of developing Finland into the most sustainable travel destination in the Nordic countries is achieved.

Limitations and future research

This case study investigated a single country, Finland, characterized by close human–nature relationships, respect for nature in the business world, and up-to-date environmental legislation. The findings have, however, been generalized to allow their transferability to other tourism contexts. Despite our limited focus, it seems likely that the same challenges and pitfalls concerning the scale and scope of biodiversity actions in tourism are common. Therefore, further research on the tourism-biodiversity relationship in other contexts and the industry's possibilities for promoting biodiversity are welcomed. Given the seriousness of the ongoing biodiversity decline, its consequences on tourism, and the overall well-being of humankind, this should be a priority area of sustainable tourism research.

Notes

1. https://www.metsa.fi/en/responsible-business/nature-tourism-and-sustainability/principles-of-sustainable-tourism/
2. Approx. 29 000 companies (https://www.businessfinland.fi/suomalaisille-asiakkaille/palvelut/matkailun-edistaminen/tutkimukset-ja-tilastot/tutkimukset-ja-tilastot-lyhyesti)
3. https://www.businessfinland.fi/en/for-finnish-customers/services/travel/vastuullisuus/sustainable-travel-finland

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