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Enhancing Accessibility in Tourism & Outdoor Recreation:

A Review of Major Research Themes and a Glance at Best Practice

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Abstract

This report offers a brief overview of international research on accessible tourism with a focus on nature-based tourism, based on a search in the scientific database Scopus. International and Swedish policy reports are also reviewed in order to gain a holistic view on accessible, nature-based tourism.

The search in the Scopus database with the key words 'tourism OR "outdoor recreation"' in combination with the words 'disabilit*', 'handicapped', and 'disabled' resulted in a sample of 342 academic articles, conference proceedings and book chapters. This sample, however, was not only of accessible nature-based tourism, but of accessible tourism in general. The aim of this report is to specifically focus on accessible nature-based tourism, but we identified general themes within the topic of tourism for people with disabilities through titles and abstracts in order to deepen the understanding of research on accessible tourism. Additional literature was also identified through reference lists. The final sample of publications with specific reference to accessible nature-based tourism consists of 40 academic, peer-reviewed research papers, four conference proceedings and seven book chapters.

The results of our search has revealed nine major themes based on the 342 publications from the Scopus sample. These are in turn: employee attitudes towards people with disabilities; accessibility of tourism websites and tourism information systems; accessible transportation, accommodation and tourist attractions; technical solutions; experiences, motivations and constraints/barriers for people with disabilities in tourism settings; tourism for the families and caregivers of people with disabilities; tourism and leisure activities for older people; the accessible tourism market; and nature-based tourism and outdoor recreation. The most prominent themes with large numbers of publications appear to be accessible transportation, accommodation and tourist attractions together with experiences, motivations and constraints/barriers for people with disabilities in tourism settings. Research publications appear to mainly discuss accessible tourism from the perspective of the consumer, while far lesser attention has been paid towards the perspective of the tourism supplier.

Findings from the literature review show that a majority of the identified publications were published between 2010 and 2019, indicating an enhanced academic interest relating to accessible tourism. Moreover, there appears to be an increased interest in technical solutions, such as phone apps, that can enhance the tourism experience, as the number of studies on this topic has grown in recent years.

Within the overall topic of tourism for people with disabilities, accessible nature-based tourism appears to be a rather marginalized field of study. Nevertheless, evidence exists that spending time in nature has a number of health benefits. Results from international and Swedish policy reports indicate that accessibility in nature settings is a fairly new topic for authorities in management and planning, and that reports are technical and often relate to issues of design guidelines.

Svensk sammanfattning

Denna rapport är ett delresultat från forskningsprojektet "Tillgänglig och inkluderande naturturism" som finansieras av Besöksnäringens forsknings- och utvecklingsfond (BFUF) och medfinansieras av Östersunds kommun och Mittuniversitetet. Projektet pågår 2019-2021 och projektledare är Sandra Wall-Reinius. Syftet med projektet är att visa på goda exempel på universellt utformade miljöer och inkluderingsstrategier bland privata och offentliga aktörer. Projektet ska även identifiera och redogöra för förbättringsområden för att öka tillgängligheten bland naturturismföretag och offentliga organisationer som arbetar för att utveckla service och produkter för personer med funktionsnedsättningar. Rapporten vänder sig främst till forskare med inriktning på funktionsvariationer, policy och planering av universellt utformade miljöer, och inkluderingsstrategier, men även inom landskapsforskning, turism och rekreation. Rapporten vänder sig även till myndigheter och organisationer som förvaltar naturmiljöer, ger förutsättningar för naturturismen och arbetar med att planera och utveckla friluftsliv.

Författarna till denna rapport är Kristin Godtman Kling som är doktorand inom projektet "Tillgänglig och inkluderande naturturism" och som forskar om naturturism och social rättvisa, samt Dimitri Ioannides, professor i kulturgeografi och medarbetare i forskningsprojektet. Vi vill tacka Sandra Wåger, Märit Christensson samt Sandra Wall-Reinius för värdefull feedback och kommentarer.

Denna rapport ger en kort översikt över internationell forskning om tillgänglig turism för personer med funktionsvariationer, med ett särskilt fokus på naturbaserad turism. Rapporten baseras på en sökning i den vetenskapliga databasen Scopus. Även internationella och svenska policydokument har granskats för att ge en holistisk bild av kunskapsläget kring tillgänglig naturturism.

Sökningen i databasen Scopus med sökorden 'tourism OR "outdoor recreation"' i kombination med orden 'disabilit*', 'handicapped', och 'disabled' resulterade i ett urval av 342 vetenskapliga artiklar, konferenspublikationer och bokkapitel. Detta urval innehöll dock inte endast publikationer om tillgänglig naturturism utan bestod av publikationer om tillgänglig turism i allmänhet. Syftet med denna rapport är att specifikt fokusera på tillgänglig naturturism, men teman inom ämnet turism för personer med funktionsnedsättningar noterades genom titlar och sammanfattningar för att ge en fördjupad förståelse för forskning om tillgänglig turism. Ytterligare litteratur identifierades också genom referenslistor. Det slutliga urvalet av publikationer rörande tillgänglig naturturism bestod av 40 vetenskapliga artiklar, fyra konferenspublikationer och sju bokkapitel.

Resultaten visar på nio huvudteman inom ämnet tillgänglig turism baserat på de 342 publikationer som sökningen i Scopus gav, samt ytterligare identifierad litteratur. Dessa teman är anställdas attityder gentemot personer med funktionsnedsättningar, tillgänglighet på turismwebbplatser och informationssystem för turism, tillgängliga transporter, boende och turistattraktioner, tekniska lösningar, erfarenheter, motivationer och begränsningar/hinder för personer med funktionsnedsättningar i turistiska miljöer,

turism för familjer och vårdgivare av personer med funktionsnedsättning, turism och fritidsaktiviteter för äldre, den tillgängliga turistmarknaden samt naturbaserad turism och friluftsliv. De mest framträdande temana med stort antal publikationer tycks vara tillgängliga transporter, boende och turistattraktioner tillsammans med upplevelser, motivationer och begränsningar/hinder för personer med funktionsnedsättning i turism. Forskningspublikationer verkar huvudsakligen diskutera tillgänglig turism ur konsumentens (det vill säga besökarens och turistens) perspektiv, och mindre ur turismleverantörens perspektiv.

Resultat från litteraturöversikten visar att en majoritet av de identifierade publikationerna publicerades mellan 2010 och 2019, vilket indikerar ett ökat intresse för tillgänglig turism inom akademin. Vidare tycks det finnas ett ökat intresse för tekniska lösningar, som till exempel appar för smartphones, som kan förhöja turismupplevelsen. Antalet publikationer på detta ämne har växt under de senaste åren.

Tillgänglig naturbaserad turism verkar vara ett relativt marginaliserat forskningsområde inom turism för personer med funktionsnedsättningar, trots att det finns vetenskapliga bevis för att spendera tid i naturen kan innebära en förbättrad hälsa. Resultat från internationella och svenska policy-rapporter tyder på att tillgänglighet i naturområden är ett nytt ämne för myndigheter inom förvaltning och planering, samt att dessa rapporter är tekniska och ofta innefattar frågor som rör riktlinjer för design.

1 Introduction

1.1 Background

The Swedish national organization for people with disabilities, *Delaktighet Handlingskraft Rörelsefrihet* (DHR) clearly indicates that tourism, in all its manifestations, should be accessible to everyone (DHR, 2018). Further, this organization wishes to enhance the visibility of persons with disabilities as a consumer segment. Issues relating to accessibility must not be narrowly defined and, as such, should not be restricted solely to the provision of specialized forms of tourism. Rather, all forms of tourism, including nature-based tourism, must be accessible to everyone; this mean all persons with various types of disabilities. This perception has been reinforced by the recently published report "*Ett land att besöka - En samlad politik för hållbar turism och växande besöksnäring*" by the Swedish Ministry of Industry (2017). This report calls for the need to implement policy and guidelines regarding accessibility and universal design when planning for opportunities for outdoor recreation and tourism in natural settings.

It is this backdrop, which inspired the BFUF-funded research project "Accessible and Inclusive Nature-based Tourism: Promising Practices of Universal Design". The underlying purpose of the research project, which began in February 2019, is to determine the level of accessibility for recreational purposes of various types of Swedish outdoor environments. These include coastal, mountainous or forested areas but also winter versus summer venues as destinations for tourists with physical disabilities. The project aims to outline key aspects for improving the concept of accessible tourism strategies among outdoor recreation companies and public organizations. Moreover, the research seeks to enable an increasingly diverse range of people to visit natural areas throughout Sweden and participate in a broad range of outdoor recreational activities. The project's outcomes are relevant for both tourism suppliers and the public sector since, until recently, knowledge regarding the specific demands and preferences of individuals with physical disabilities has been limited. When it comes to natural area planning and management, public stakeholders in Sweden seldom consider universal design while goals of equal opportunity and social inclusion are not always fulfilled. More can be done do reduce barriers to participation and to reach the national goals on outdoor recreation and accessibility to natural and cultural environments (Swedish Environmental Protection Agency, 2015). In order for destinations to be innovative and competitive, both private and public actors need to provide and develop infrastructure that allows for accessibility on equal terms.

In this report, we use the definition of accessible tourism stated by Darcy and Buhalis: "Accessible tourism is a form of tourism that involves collaborative processes between stakeholders that enables people with access requirements, including mobility, vision, hearing and cognitive dimensions of access, to function independently and with equity and dignity through the delivery of universally designed tourism products, services and environments" (2011, p.10). Moreover, we follow the Guidelines for writing about people with disabilities provided by the Americans with Disabilities Act (ADA), where it is stated

that one should refer to the person first and the disability second (ADA, 2018). Therefore, in this report, we use the term 'people with disabilities' instead of 'disabled people'.

1.2 Barriers to accessing tourism

McKercher and Darcy (2018) argue that although studies on tourism and disabilities reveal several barriers, which restrict or outright prevent people with disabilities from participating in touristic activities compared to their non-disabled counterparts (see e.g., Buhalis & Darcy, 2011), much of this research is problematic. This is because it treats people with disabilities as a homogenous group. Indeed, it ignores the fact that there is a wide array of disability categories and, that to a large extent, whether or not something functions as a barrier depends on the personal circumstances of each individual and, importantly, that individual's support needs (Buhalis & Darcy, 2011; Michopoulou et al., 2015). This means that existing research has often adopted a "one-size-fits-all" approach when examining barriers and constraints to participation. In turn, this situation hinders a systematic understanding and resolution of the problems that people with different disabilities face in the context of tourism (Eichhorn & Buhalis, 2011).

Eichhorn and Buhalis (2011) have identified three broad categories of barriers to participation that the tourism industry should address: physical access constraints; attitudinal barriers and; lack of information. Limited physical access is considered a major barrier to people with disabilities. It includes, for example, inaccessible transportation systems, accommodation facilities and attractions. Attitudinal barriers relate to the negative attitudes non-disabled people have towards persons with disabilities when it comes to the latter's participation in tourism. Daruwalla and Darcy (2005) distinguish between personal and societal attitudes, where personal attitudes refer to individuals' opinions and beliefs and societal attitudes refer to widespread attitudes that society at large holds. Even more than physical barriers, attitudinal barriers are the most prominent constraint to participating in tourism for people with disabilities. However, both negative personal and societal attitudes can eventually change and become increasingly positive through education and training programs (Daruwalla & Darcy, 2005). The final barrier, suggested by Eichhorn and Buhalis (2011), is lack of information. This relates to negative attitudes, since tourism staff are often unable to provide correct information to people with disabilities. Thus, travel agencies can often act as travel inhibitors rather than facilitators. Since, generally speaking, people with disabilities require more detailed information about the destination they wish to visit compared to non-disabled travelers, a failure to provide them with reliable information could prove to be a major obstacle to travel (Wright, 2012).

Although the three categories of obstacles suggested by Eichhorn and Buhalis (2011) have resulted in much relevant work, there is a need for a more holistic framework of barriers to tourism participation that accounts for the wide range of disabilities people have (Nyanjom et al., 2018; Yau et al., 2004). Research tends to focus heavily on people with physical or mobility disabilities, and less on other types of disabilities such as vision and hearing impairments, families with children who have disabilities or even persons with intellectual disabilities. Thus, McKercher and Darcy (2018) developed a conceptual framework seeking to enhance the understanding of barriers of tourism participation that

people with disabilities face. This framework roughly consists of three parts, where the first refers to constraints experienced by all tourists (e.g., interpersonal constraints, lack of interest in travelling). The second part reflects issues that are common to all people with disabilities (e.g., being ignored, experiencing bad attitude from staff and other tourists, lack of information) and the third part focuses exclusively on individual types of disabilities (e.g., mobility, vision). Using a holistic framework of barriers to making tourism accessible increases the understanding concerning individual needs and helps managers and other tourism providers to move away from the "one size fits all" approach that continues to prevail in the tourism industry (Chikuta et al., 2019; Figueiredo et al., 2012).

1.3 Barriers to accessing outdoor recreation in natural settings?

The Swedish Environmental Protection Agency (SEPA, 2015) highlights the numerous benefits for individuals' health and well-being deriving from engaging in outdoor recreation (friluftsliv). Thus, being able to access natural areas is an overriding goal of outdoor recreation. Indeed, "accessibility has high priority in planning, information and management of the natural and cultural landscape and other areas of importance to outdoor recreation" (SEPA, 2015 p. 24, authors' translation). Nevertheless, SEPA (2015) also recognizes the existence of several obstacles to accessing nature, many of which have to do with infrastructure deficiencies and absent facilities.

In recent years, the social model of disability has had a major positive effect on people with disabilities given its role in shifting the blame away from these individuals who had long been led – because of the medical/individual approach - to believe that it was their fault they were witnessing discrimination and social exclusion. The social model of disability emphasizes that it is society itself that bears responsibility for the prevailing discrimination towards persons with disabilities since it tends, more often than not, to design and develop infrastructure and other facilities that will cater to conventional notions, which highlight able-bodied individuals as the norm (Oliver & Barnes, 2012). Nevertheless, despite the fact that the social model has introduced a breath of fresh air in the way we perceive disability it has not been easy to apply this framework from a practical standpoint (Tregaskis, 2004). A major problem, according to Tregaskis (20049, is that the social model itself is problematic because it indicates that it is society and persons without disabilities who cause the discrimination towards persons with disabilities. Rather, it seems to be far more beneficial if we adopt an interpretive approach that seeks to provide a range of explanations as to why persons with disabilities might witness exclusion. This, in turn, can be used to transmit to everyone who is not disabled why discrimination exists in the first place and to pursue collaborative efforts to overcome any obstacles that might be in place (Small & Darcy, 2010; Thomas, 2007).

Such an approach means that it is not only the persons with disabilities and their families who must deal with and challenge various structural problems in society but rather everyone becomes involved in this process (Curry et al., 2001). When it comes to outdoor locations, the social model constitutes a practical approach precisely because it no longer blames individuals (based on their disability) for the fact that they have poor access to a particular site. Instead, it perceives that through a collaborative effort that involves

planners, managers and persons with disabilities, opportunities for enhancing access for all can be developed and implemented (Lovelock, 2013).

Meanwhile, Burns et al. (2009) have argued that we must enhance our knowledge concerning the experiences of the outdoors by persons with disabilities. In their opinion, it is not enough to merely know about the barriers they are facing. We also need to dig deeper to understand why persons with disabilities wish to access the outdoors in the first place and how they go about doing so. Since, as we have already indicated, persons with disabilities are a very diverse group this also means that, just like their able-bodied counterparts, their reasons for engaging in outdoor recreation will vary considerably (Chikuta et al., 2017; Figueiredo et al., 2012). Unfortunately, the fact that persons who deal with persons with disabilities fail to understand them and take into account their diverse needs reinforces the obstacles the persons with disabilities face in accessing outdoor recreation. Clearly, there is a need for dialogue between managers and individuals with disabilities to better comprehend how accessibility can be enhanced for everyone. Thus, in final analysis, to provide better access for people facing disabilities we cannot only approach this issue only from a technical solution standpoint. Rather, it is imperative that societal attitudes and perceptions towards individuals with disabilities must also shift (Burns et al., 2009).

Tregaskis (2004) highlights that a commonplace approach by planners and managers to dealing with accessibility for persons with disabilities is to develop dedicated "disabled-only" facilities, which place considerable emphasis on the safety of the users. This means that, often, this infrastructure and facilities only allow these individuals to "sample" a fraction of the destination, compared to their able-bodied counterparts. Using the example of a certain natural area she points out how the dedicated access trail for persons with disabilities offered no opportunity to view the main attraction (in this case it was a gorge) since it was located in a wooded area. She called this situation "apartheid in facility provision" (Tregaskis, 2004, p. 607) pointing out that rather than wishing to embrace this sample token of an experience, persons with disabilities have many of the same reasons for wishing to visit a destination as the non-disabled. These include the need to spend time with friends and family, learn more about the natural environment, view the main sights and engage in outdoor recreational activities.

A similar conclusion was reached by Burns et al. (2013) who reveal that persons with disabilities feel victims of the prevailing attitudes that certain activities might prove to be far too dangerous for them. This means that these individuals feel that society imposes on them a stereotype of what they are able to do or are unable to do regardless of what their own abilities might actually be. Unfortunately, people who work in the outdoor recreation sector are also prone to treat persons with disabilities in this manner. This ignores the fact that a considerable number of persons with disabilities enjoy taking risks just as much (if not more) as their able-bodied counterparts. These individuals feel that participating in such activities allows them to develop their self-confidence, not to mention to overcome challenges that are imposed on them by prevailing societal perceptions and opinions about them.

Finally, Nyman et al. (2018) have discussed how the lack of accessible facilities for persons with disabilities translates into an issue of inaccessibility for an entire family or group that might be accompanying the person(s) with disabilities. For instance, they noted from a study conducted in Sweden that families with wheelchair-bound children tend to stay clear of ski resorts despite the fact that several members of the family might actually wish strongly to access such places.

Examples such as the above show that tourism for people with disabilities is a complex issue, and perhaps even more so in nature-based settings as the natural environment cannot be easily modified to accommodate a variety of preferences. The purpose of this literature review is to provide an overview of what the major research topics within accessible tourism are, with a focus on nature-based tourism specifically. In addition, the report aims to identify research gaps where more knowledge is needed. Although the purpose is to examine research on accessible nature-based tourism, the report also presents major themes identified within accessible tourism in general in order to obtain a broader understanding of the topic.

2 Methods

In this literature review we do not cover all that has been published on tourism and accessibility. Rather, we seek to identify certain prominent themes within the academic literature relating to this topic. More specifically, we wish to closely examine the scientific literature on accessibility in relation to nature-based tourism and outdoor recreation.

We conducted a search for literature on this topic in the Scopus database. Scopus is a multidisciplinary database and one of the largest abstract and citation databases for peer-reviewed literature (Scopus, n.d.). Therefore, we deemed it as suitable to use for this brief literature review. The keywords we used were 'tourism OR "outdoor recreation"' in combination with the words 'disabilit*', 'handicapped', and 'disabled'. We also tried to undertake a search including the term 'accessib*' but this failed to generate an increase in the number of articles since this word is implied in the other key search terms. We selected these keywords because they cover the topic of interest of this study and include variations of the theme.

The search was carried out during the period May to October 2019 and focused only on English language publications; this, of course is one of the study's limitations. Our search resulted in an initial sample of 342 articles, book chapters, research notes and conference proceedings in total. These publications were then screened in order to identify the ones that fit the purpose of the literature review, namely accessibility in relation to nature-based tourism and outdoor recreation. Eight of the identified publications that appeared to have a relevant abstract were not available in full-text, although efforts to obtain them through alternative channels such as Research Gate were made. In addition to the Scopus search, reference lists of the identified papers were reviewed in order to find relevant literature. This resulted in the addition of eight academic articles, seven book chapters and one conference proceeding to the final sample. The final sample included in this literature review thus consists of 40 academic, peer-reviewed research papers, four conference proceedings and seven book chapters. Although the search in Scopus aimed to identify publications on accessibility and nature-based tourism and outdoor recreation, general themes in the literature on tourism and disabilities were noted through titles and abstracts in order to broaden the overall understanding of topics included in research on tourism and accessibility.

Emerging themes were often overlapping and we, therefore, categorized the publications into larger groups, in order to obtain a more comprehensible overview of the topics. The identified categories are presented in the following section.

3 Results

3.1 Themes in accessibility research

Several general themes emerged after reviewing the 342 identified publications from the Scopus database search. We categorized the publications into groups, resulting in nine themes, which we assessed to be most prominent. Table 1 highlights the nine themes and offers examples of publications relating to each theme.

> **Employee attitudes towards people with disabilities.** People with disabilities experience a number of barriers when travelling, including physical, social and attitudinal. Studies on accessible tourism have identified the negative attitudes of employees working in the hospitality sector towards people with disabilities as a significant constraint for travelling with a disability (e.g., Adam, 2019; Bizjak et al., 2010). This category also includes a research article that examines shared service encounters between able-bodied and customers with disabilities in hotels. Results of this experimental study show that when abled-bodied customers were given textual information in advance about possible presence of customers with disabilities in the hotel, one third of the able-bodied customers were not willing to stay at an accessible hotel. This result shows that able-bodied customers attitudes towards sharing the service space with customers with disabilities need to be highlighted and discussed, and more education about people with disabilities is needed among the public in general (Tchetchik et al., (2018). Thus, the problem of negative attitudes toward people with disabilities in the tourism industry does not only stem from staff members but also from many able-bodied consumers who have a minimal understanding of the situation.

> **Accessibility of tourism websites and tourism information systems.** A category in which the number of publications appears to have increased in recent years is that of the level of accessibility in tourism websites. Accessible information for all is an important field, including to tourism and travelling. Website accessibility includes issues such as text alternatives, different presentations of content, navigability and compatibility of assistive technologies (e.g., Domínguez Vila et al., 2018; Zajadacz, 2014).

> **Accessible transportation, accommodation and tourist attractions.** A substantial share of the literature on travel and tourism for people with disabilities relates to practical issues of accessibility in various environments. In the field of accessible accommodation, Papamichail (2012) provides an extensive, hands-on guide on how accommodation facilities can be made more accessible in every step of the stay of customers with disabilities, based on the principles of Universal Design. Darcy (2010) researched preferences of accessible accommodation information provision among people with disabilities. Capitaine (2016) studied Québec hotel managers' willingness to develop their establishments into accessible hotels, but found that many were unsure of the economic value of the disabled market. These examples reflect the diverse nature of accessible accommodation, which captures a wide variety of topics.

Accessible transportation appears to focus heavily on air travel since many studies examine this mode of transportation. Darcy and Ravinder (2012) discuss the emergence of low-cost carriers (LCC), stating that although LCC have increased the opportunity for travel for many people worldwide, the opposite appears to be the reality for people with disabilities.

Specifically, LCC regularly impose barriers on people with disabilities by including discriminatory pricing. For example, these individuals are charged higher rates due to the need for assistance, more baggage, a flexible ticket and so on compared to able-bodied travelers. Other examples are in-flight services where some passengers may need to board the plane first or need assistance to their seat, but this is often neglected by the staff due to short time slots in the runway. This situation causes pressure on the staff to finish the boarding as quickly as possible. Low-cost airlines also generally operate small, densely-packed aircrafts, leaving little space for passengers with disabilities (Darcy & Ravinder, 2012). Wang and Cole (2014) study air travel from the service providers' perspective. Their findings suggest that in order to increase the possibilities of flight attendants to assist travelers with disabilities the physical accessibility of airplanes must be improved. In addition, crew members need to be better trained and more knowledgeable regarding the special needs of passengers with disabilities, since many feel insecure about how to best provide good service to this market segment. Although studies on air travel constituted a large share of literature on accessible transportation, topics such as accessible public transports for city-tourists with disabilities (Krpata, 2012) and coach buses for elderly tourists (Wang, 2011) were also included in this category.

A prominent topic within research on accessible tourist attractions is that of heritage sites and cultural attractions (e.g., Hooi & Yaacob, 2019; Mesquita & Carneiro, 2016; Sen & Mayfield, 2004). Poria et al. (2009) studied people who use wheelchairs or crutches, or are visually impaired, when they visited art museums in Israel. They found that people with disabilities do not obtain the full museum experience due to obstacles such as inadequate public transport to and from the museum, fewer aesthetic accessible entrances, counters which are too high thus preventing wheelchair-users to effectively communicate with museum staff, and the negative attitudes of museum staff. Naniopoulos and Tsalis (2015) discuss how to make archeological sites in Greece accessible without changing the characteristics of the site. Results from the study are drawn from a project aiming to realize a methodology for improving accessibility of archeological sites and monuments. They conclude that efforts to improve accessibility in these settings cannot be fragmentary. Rather, they must adopt a holistic approach that includes all aspects of the principles of Universal Design.

➢ **Technical solutions.** In recent years, there has been increasing research regarding technical solutions that aim to assist people with disabilities to fully participate in the tourism experience. Technical solutions include, for example, specific

wheelchairs that can be used in challenging outdoor environments (e.g., Baronio et al., 2017; James et al., 2018). Mobile applications can support people with disabilities in their tourist activities, and can do much more than simply provide general information (Ribeiro et al., 2018). For example, Mayordomo-Martínez et al. (2019) analyzed a phone app that contains detailed and updated information about accessible beaches in Spain. Their study supports the idea that information and communication technologies can contribute to making people with disabilities feel included in society and facilitate the use of beaches for these groups. Additionally, such mobile applications can also raise awareness among authorities to develop more accessible leisure and recreation areas.

➢ **Experiences, motivations and constraints/barriers for people with disabilities in tourism settings.** Several studies on accessible tourism relate to the experiences of travelling people with disabilities, their motivations for travelling and perceived constraints or barriers in tourism. An often-cited article is that by Yau et al. (2004), who studied individuals with mobility or visual impairments in Hong Kong and identified five different stages the individuals' experience when becoming travel active. The first is the *personal stage*, where participants accept their disability and what it means for tourism and travelling; the second is the *reconnection stage,* which represents an integration where the persons establish themselves in community life and confront the "role" of persons with a disability. The third stage is the *travel analysis stage*, where tourism becomes a possibility for the individual and practical concerns are addressed and the fourth is the *physical journey stage*, where the tourist with a disability is forced to make compromises and develop compensatory strategies to manage the experience. The final stage is the *experimentation and reflection stage,* where the individual reflects on the tourism experience and decides whether it is worth the effort to travel again.

The previously-mentioned article by McKercher and Darcy (2018) concludes that people with disabilities are a heterogeneous group that experiences barriers at different levels. These range from obstacles that are experienced by all travelers to issues that are unique to each individual. It is, according to the authors, crucial to keep the heterogeneity of this group in mind when discussing accessible tourism. Hersh (2016) studied deaf-blind travelers' experiences of tourism and found that important themes for better understanding the tourism requirements of this group include the use of sensory information, the representation of space, public transport and sole and accompanied travel. Results from a study in Denmark by Stilling Blichfeldt and Nicolaisen (2011) suggest that people with disabilities engage in tourism activities to, amongst other things, overcome self-doubt and become independent and build self-confidence. Results also show that people with disabilities who are active in their everyday life are likelier to go away on holiday, but the holiday decision-making process is far more complex than for people without disabilities as there are a lot more variables to consider and a great amount of information is needed in advance.

➢ **Tourism for the families and caregivers of people with disabilities.** There are also articles examining disability and tourism from a family perspective (e.g., Kong & Loi, 2017; Nyman et al., 2018). Tecau et al. (2019) identified the barriers families with children who have disabilities experience when travelling arguing that these are mainly attitude-related barriers (i.e., the way such families are perceived by the tourism and hospitality sector and physical barriers, such as lack of accessible parking or accessible buildings). An interesting study by Chung and Lee (2019) shows that the companion(s) who accompany people with disabilities are often not the companion(s) they really want to be with while on their trip. Moreover, Gladwell and Bedini (2004) explore the significance of leisure travel for informal caregivers, such as family members, for people with disabilities and the barriers that prevent caregivers from participating in tourism activities. Findings show that family members experienced a loss for leisure travel after becoming a caregiver, and that the motivation to travel changed from leisure to functional purposes. Caregivers also experienced a fear of the unknown when travelling with a family member who has a disability, but they also experienced fear when travelling without the family member in case something would happen while they are on holiday.

➢ **Tourism and leisure activities for older people.** A small number of studies examine tourism for the elderly and the ageing travel market. Morgan et al. (2015) conclude that tourism for elderly, economically disadvantaged people had a number of positive effects on their well-being, such as improved self-esteem, alleviation of marginalization and higher motivation to physical activity and social interaction. Patterson and Pegg (2011) focus on the ageing travel market and state that older people are today more adventurous than before and seek authentic experiences and 'soft' adventures that are less physically demanding. Travel companies, therefore, need to be aware of the preferences of older people as this market segment is likely to provide a number of business opportunities.

➢ **The accessible tourism market.** This category includes research on the tourism market for people with disabilities, such as the factors that make a destination competitive for the accessible tourism market (Domínguez Vila et al., 2015), the supply-side perspective on the accessible tourism market (Nicolaisen et al., 2012), and the business opportunity this market segment entails (Agovino et al., 2017). Many publications in this category stress the economic importance of the accessible tourism market and express the need for destinations, tourism operators and other stakeholders in the tourism industry to fully recognize its potential (Ambrose et al., 2012; Dwyer & Darcy, 2011; Rhodda, 2012). Lyu (2017) studied how Korean tourists with disabilities make decisions when choosing tourism products to maximize consumer satisfaction. Results from the study reveal that tourists with disabilities show the highest willingness-to-pay for accessible accommodation, but also on tour buses that are equipped with accessibility devices. Domínguez et al. (2013) conclude that tourists with disabilities have a higher average expenditure than non-disabled tourists when visiting Spain, and

they often travel with companion. This makes them an important target group in the tourism sector. However, tourists with disabilities generally take short holidays and it is, therefore, important to facilitate accessible tourism in order to encourage this group to stay longer at the destination.

This category also includes studies of the marketing of tourism opportunities for people with disabilities. A study by Cloquet et al. (2018) shows that the marketing of tourist attractions in Cornwall, England, generally avoids images of people with disabilities in the sections of websites that are not devoted to accessibility. Cloquet et al. (2018) suggest that tourism advertising often portray people with disabilities as only that; thus neglecting to include this group in a larger social context.

➢ **Nature-based tourism and outdoor recreation**. A prominent theme within this category is the recognition that spending time in nature and participating in outdoor recreation activities is connected to better health and an increased sense of well-being (e.g., Beringer, 2004; Roggenbuck & Driver, 2000; Wilson & Christensen, 2012). McAvoy et al. (1989) found that both persons with disabilities and those without who participated in a national wilderness trip program had similar positive experiences. Benefits included: increased confidence levels; development of leisure skills; an increased ability to approach new situations and; more positive feelings about self. In a study by James et al. (2018), findings show that users, staff and volunteers in an adaptive hiking program that includes the use of an all-terrain wheelchair all reported positive experiences from the program. Participants reported, amongst other things, joy over having the opportunity to return to the outdoors, forming friendships and exploring places that were inaccessible without the all-terrain wheelchair. Taylor and McGruder (1996) studied persons with spinal cord injuries that engaged in sea kayaking, establishing that this activity had benefits such as relaxation, the feeling of accomplishment and self-sufficiency, coping with the sense of loss, and promoting a healthy life-style. Freudenberg and Arlinghaus (2010) researched health benefits and constraints from recreational fishing among people with and without disabilities. Results from the study reveal that people with disabilities who engaged in this activity showed higher social and self-improvement benefits than those without. However, people with disabilities experienced significantly more constraints to participation in recreational fishing than did able-bodied anglers. On a similar note, research shows that people with disabilities are not always able to participate in the outdoor activities they desire. Kastenholz et al. (2015) conducted a study in Portugal where they researched the activities people with disabilities desired to do and what they actually carried out, and found discrepancies. Participants of the study had high-level desires to engage in activities such as in cross-country rides/tours, paintball, horse-riding tours, hiking and canoeing. However, the activities they did engage in were calmer and more passive, such as going to the beach, having picnics outside, visiting museums and cultural attractions, and attending theatre plays.

Studies also discuss constraints to participation in nature-based activities for the whole family. Burns and Graefe (2007) researched visits to National Forests in the U.S, establishing that 60 % of the respondents whose household included a person with a disability experienced constraints in levels of outdoor recreation participation.

Travel motivations for people with disabilities to engage in nature-based tourism is also a theme within the literature. Chikuta et al. (2017) found that people with disabilities who visit national parks in South Africa have similar travel motivations as people without disabilities, such as enjoying nature, spending time with family and escaping everyday life. In relation to this, a significant aspect to consider is that studies have shown that people with disabilities have very similar preferences regarding natural area settings as people without (Brown et al., 1999; Moore et al., 1996). McAvoy et al. (2006) studied a wilderness experience program, suggesting that people with disabilities want the natural surroundings to be just as challenging and pristine as do people without. Even so, McAvoy et al. (2006) recognize the inherent contradiction this entails and acknowledge the challenge managers of wilderness areas face regarding balancing an access-for-all-policy and simultaneously preserving the quality of wilderness for future use. It is interesting to note that few studies discuss this balancing of interests between accessibility and the so-called 'untouched' nature. One of the studies that addresses this issue is by Donlon (2000), who discuss the discrepancy between the Americans with Disabilities Act (ADA) that guarantees equality of access to all groups in society and the public land set-asides such as Wilderness Areas. He argues that completely acting on the ADA would highly affect the notion of wilderness, or perhaps even destroy it since facilitating access would require substantial changes to the surrounding environment. Neglecting to undertake such efforts, however would exclude many citizens who could benefit from visiting natural areas.

Table 1. Examples of articles identified within themes[1]

Employee attitudes towards people with disabilities	1. Adam, I. (2019). Accommodators or non-accommodators? A typology of hotel frontline employees' attitude towards guests with disabilities. *International Journal of Hospitality Management, 82*, 22-31. 2. Sy, M. & Chang, S. (2019). Filipino employees' attitudes toward tourists with disabilities. *Asia Pacific Journal of Tourism Research, 24*(7), 696-709. 3. Darcy, S. & Pegg, S. (2011). Towards Strategic Intent: Perceptions of disability service provision amongst hotel accommodation managers. *International Journal of Hospitality Management, 30*(2), 468-476. 4. Collins, A. B. (2008). Opportunities and obligations in dealing with the disabled staff and customers in hospitality industry. In P. R. Chang (Ed.), *Tourism Management in the 21st Century* (pp. 157-178). Nova Science Publishers, Inc. 5. Schitko, D., & Simpson, K. (2012). Hospitality Staff Attitudes to Guests with Impaired Mobility: The Potential of Education as an Agent of Attitudinal Change. *Asia Pacific Journal of Tourism Research 17*(3), 326-337.
Accessibility of tourism websites and tourism information systems	1. Domínguez Vila, T., Alén González, E., & Darcy, S. (2018). Website accessibility in the tourism industry: an analysis of official national tourism organization websites around the world. *Disability and Rehabilitation, 40*(24), 2895-2906. 2. Kołodziejczak, A. (2019). Information as a factor of the development of accessible tourism for people with disabilities. *Quaestiones Geographicae, 38*(2), 67-73. 3. Dattolo, A., Luccio, F.L., & Pirone, E. (2016). Web accessibility recommendations for the design of tourism websites for people with autism spectrum disorders. *International Journal on Advances in Life Sciences, 8*(3-4), 297-308 4. Michopoulou, E., & Buhalis, D. (2013). Information provision for challenging markets: The case of the accessibility requiring market in the context of tourism. *Information and Management, 50*(5), 229-239. 5. Darcy, S. (2011). Developing sustainable approaches to accessible accommodation information provision: A foundation for strategic knowledge management. *Tourism Recreation Research, 36*(2), 141-157.
Accessible transportation,	1. Randle, M., & Dolnicar, S. (2019). Enabling people with impairments to use Airbnb. *Annals of Tourism Research, 76*, 278-289.

[1] The articles are publications observed within each theme, and should be viewed as illustrative examples of research on accessible tourism. They were not chosen due to number of citations or year of publication, but serves to offer the reader a sample of publications resulting from the Scopus database search.

accommodation and tourist attractions	2. Tutuncu, O., & Lieberman, L. (2016). Accessibility of hotels for people with visual impairments: From research to practice. *Journal of Visual Impairment and Blindness, 110*(3), 163-175. 3. Sanmargaraja, S., & Wee, S.T. (2015). The need of accessible accommodation in Malaysian tourism sector: Case study in Endau-Rompin and Ledang Hills National Parks. *International Business Management, 9*(1), 139-144. 4. Darcy, S. (2012). (Dis) embodied air travel experiences: Disability, discrimination and the affect of a discontinuous air travel chain. *Journal of Hospitality and Tourism Management, 19*(1),e8, 91-101. 5. Pegg, S., & Stumbo, N. (2012). Accessing heritage tourism services. In D. Buhalis, S. Darcy & I. Ambrose (Eds.) *Best Practice in Accessible Tourism. Inclusion, Disability, Ageing Population and Tourism* (pp 285-296). Bristol: Channel View Publications.
Technical solutions.	1. Díaz-Vilariño, L., Boguslawski, P., Khoshelham, K., & Lorenzo, H. (2019). Obstacle-aware indoor pathfinding using point clouds. *ISPRS International Journal of Geo-Information, 8*(5), 233. 2. Ribeiro, F., Metrôlho, J., Leal, J., Martins, H., Bastos, P. (2018). A mobile application to provide personalized information for mobility impaired tourists. *Advances in Intelligent Systems and Computing, 746*, 164-173. 3. Kang, K., Jwa, J., & Park, S.E. (2017). Smart audio tour guide system using TTS. *International Journal of Applied Engineering Research, 12*(20), 9846-9852. 4. Lauría, A. (2016). "The Florence Experience": A multimedia and multisensory guidebook for cultural towns inspired by Universal Design approach. *Work, 53*(4), 709-727. 5. Gruner, L., & Buchroithner, M.F. (2010). A bilingual geo-information system for barrier-free cross-border tourism in two adjacent National Parks. *Kartographische Nachrichten, 60*(6), 321-325.
Experiences, motivations and constraints/barriers for people with disabilities in tourism settings	1. Zhang, Y., Gao, J., Cole, S.T., & Ricci, P. (2019). Beyond accessibility: empowering mobility-impaired customers with motivation differentiation. *International Journal of Contemporary Hospitality Management, 31*(9), 3503-3525. 2. Gassiot, A., Prats, L., & Coromina, L. (2018). Tourism constraints for Spanish tourists with disabilities: Scale development and validation. *Documents d'Analisi Geografica, 64*(1), 49-71. 3. Pagán, R. (2015). The contribution of holiday trips to life satisfaction: the case of people with disabilities. *Current Issues in Tourism, 18*(6), 524-538. 4. Eichhorn, V., Miller, G., & Tribe, J. (2013). Tourism: A site of resistance strategies of individuals with a disability. *Annals of Tourism Research, 43*, 578-600.

	5. Card, J.A., Cole, S.T., & Humphrey, A.H. (2006). A comparison of the Accessibility and Attitudinal Barriers Model: Travel providers and travelers with physical disabilities. *Asia Pacific Journal of Tourism Research, 11*(2), 161-175.
Tourism for the families and caregivers of people with disabilities	1. Freund, D., Cerdan Chiscano, M., Hernandez-Maskivker, G., Guix, M., Iñesta, A., & Castelló, M. (2019). Enhancing the hospitality customer experience of families with children on the autism spectrum disorder. *International Journal of Tourism Research, 21*(5), 606-614. 2. Lehto, X., Luo, W., Miao, L., & Ghiselli, R.F. (2018). Shared tourism experience of individuals with disabilities and their caregivers. *Journal of Destination Marketing and Management, 8*, 185-193. 3. Jakubec, S.L., Carruthers Den Hoed, D., Ray, H., & Krishnamurthy, A. (2016). Mental well-being and quality-of-life benefits of inclusion in nature for adults with disabilities and their caregivers. *Landscape Research, 41*(6), 616-627. 4. Kim, S., Lehto, X.Y. (2013). Leisure travel of families of children with disabilities: Motivation and activities. *Tourism Management, 37*, 13-24. 5. Huh, C., & Singh, A.J. (2007). Families Travelling with a Disabled Member: Analysing the Potential of an Emerging Niche Market Segment. *Tourism and Hospitality Research, 7*(4), 212-229.
Tourism and leisure activities for older people.	1. Thangaraj, M., & Gomathi, K.S. (2019). Design and development of MDOE for virtual tourism management for elderly people. *International Journal of Recent Technology and Engineering, 8*(2), 3558-3562. 2. Colley, K., Currie, M.J.B., & Irvine, K.N. (2019). Then and Now: Examining Older People's Engagement in Outdoor Recreation Across the Life Course. *Leisure Sciences, 41*(3), 186-202. 3. Sedgley, D., Haven-Tang, C., & Espeso-Molinero, P. (2018). Social tourism & older people: the IMSERSO initiative. *Journal of Policy Research in Tourism, Leisure and Events, 10*(3), 286-304. 4. Rowiński, R., Morgulec-Adamowicz, N., Ogonowska-Slodownik, A., Dąbrowski, A., & Geigle, P.R. (2017). Participation in leisure activities and tourism among older people with and without disabilities in Poland. *Archives of Gerontology and Geriatrics, 73*, 82-88. 5. Wang, Y. (2011). Ageing travel market and accessibility requirements. In D. Buhalis & S. Darcy (Eds.) *Accessible tourism: Concepts and issues* (pp. 191-200). Bristol: Channel View Publications.

The accessible tourism market.	1. Chiarelli, B., Garofolo, I., & Novak, V. (2018). Tools to upgrade facilities for all: How to improve business dealing with tourism. *Studies in Health Technology and Informatics, 256*, 265-276. 2. Porto, N., Rucci, A.C., & Ciaschi, M. Tourism accessibility competitiveness. A regional approach for Latin American countries. *Investigaciones Regionales, 2018*(42), 75-91. 3. Dickson, T.J., Misener, L., & Darcy, S. (2017). Enhancing destination competitiveness through disability sport event legacies: Developing an interdisciplinary typology. *International Journal of Contemporary Hospitality Management, 29*(3), 924-946. 4. Sandøy Tveitan, B. (2012). VisitOSLO, Norway: Supporting accessible tourism content within destination tourism marketing. In D. Buhalis & S. Darcy (Eds.) *Accessible tourism: Concepts and issues* (pp. 297-309). Bristol: Channel View Publications. 5. Ozturk, Y., Yayli, A., & Yesiltas, M. (2008). Is the Turkish tourism industry ready for a disabled customer's market? *Tourism Management, 29*(2), 382-389.
Nature-based tourism and outdoor recreation	1. Fialová, J., Kotásková, P., Schneider, J., Žmolíková, N., & Procházková, P. (2018). Geo-caching for wheelchair users: A pilot study in Luhacovské Zálesí (Czech Republic). *Moravian Geographical Reports, 26*(1), 27-41. 2. Janeczko, E., Jakubisová, M., Woźnicka, M., Fialova, J., & Kotásková, P. (2016). Preferences of people with disabilities on wheelchairs in relation to forest trails for recreational in selected European countries. *Folia Forestalia Polonica, Series A, 58*(3), 116-122. 3. Jakubec, S.L., Hoed, D.C.D., & Ray, H. (2014). 'I can reinvent myself out here': Experiences of nature inclusion and mental well-being. *Research in Social Science and Disability, 8*, 213-229. 4. Lovelock, B., & Lovelock, K. M. (2013). *The Ethics of Tourism*. Oxon: Routledge. 5. Walsh, C., Haddock-Fraser, J., & Hampton, M. P. (2012). Accessible dive tourism. In D. Buhalis & S. Darcy (Eds.) *Accessible tourism: Concepts and issues* (pp. 180-191). Bristol: Channel View Publications.

4 International and Swedish Reports and Policy Documents

In addition to conducting the review relating to scientific literature concerning the situation and challenges that individuals with disabilities face when traveling or participating in outdoor recreation activities, we also selected a handful of reports by various national or super-national organization. We did this in order to obtain a better picture as to how these entities address accessibility issues for persons with a variety of disabilities when it comes to their access to outdoor recreation and/or to nature areas. On an international level, the UN Convention on the Rights of Persons with Disabilities (CRPD) was adopted in 2006. As articulated in the UN Convention on the Rights of Persons with Disabilities, people with disabilities must be included in all parts of the society. Article 30 of the convention states clearly that this includes access to tourism services and venues, as well as to recreational activities (CRPD, n.d.).

4.1 Evidence from the United States

Background:

The US National Park Service (NPS) has been around since 1916. Its mission has always been to "preserve unimpaired the natural and cultural resources and values of the NPS for the enjoyment, education, and inspiration of this and future generations" (quoted in Charitan, 2019, pp. 1-2). Until this day, the NPS has sought to make its many lands accessible. Nevertheless, what is meant by "accessible" is open to interpretation since there is a broad diversity of circumstances in each of the parks and, in any case, the concept of accessibility differs enormously from one individual to the other. The NPS estimates that almost 30 million visitors with disabilities arrive in its sites each year so there is a broad recognition that this segment is extremely important. Despite being compliant with several legal instruments relating to accessibility for disabled persons (e.g., the Architectural Barriers Act of 1968, the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990), the NPS did not have a specific body to deal with the issue until 2012 when it created its Accessibility Task Force.

The underlying theme that this Task Force tries to address is that disability affects each individual differently and, therefore, what is accessible and what is not is hard to define. Charitan (2019) describes how one individual with a disability and who uses a wheelchair, is an extremely active individual who skis, hikes, rock climbs, kayaks and camps. However, she is often frustrated in terms of reaching her intended destination to engage in one of these activities since the path for her wheelchair is not appropriate for its use (e.g., too narrow or too steep). Furthermore, in situations where motorized vehicles may be prohibited this may have the side-effect of keeping out persons who use motorized wheelchairs. Then there is always the problem that the trails that are specifically designed to accommodate persons with disabilities cover only a very short distance. This means that more active individuals with disabilities will be dissatisfied for not being able to experience the outdoors to the fullest of their expectations. The report described below explains in

more detail how the Task Force has set about creating a 5-year strategic plan to address accessibility issues in American national parks.

National Park Service – US Department of the Interior (2014). ALL IN! Accessibility in the National Park Service 2015-2020:

The point of departure of this report is that the National Park Service belongs to all Americans. As such the aforementioned Accessibility Task Force aims to improve accessibility throughout all of the properties under NPS control. The task force has developed a strategic plan laying out how each and every park will improve its accessibility in the period 2015-2020. The argument is that although the NPS has for 40 years viewed itself as a leader when it comes to providing accessibility to persons with disabilities, often the system has failed in its goals. For instance, the report laments the fact that numerous national parks nationwide lack fundamental services such as accessible restrooms or entrances while various paths are not set up to be accessible by those facing mobility impairments. It also states that materials, for instance for those with visual impairments are lacking (e.g., exhibits that do not have Braille interpretation). Then, mirroring what we already have discussed from the academic literature review, the NPS states that many staff members have little or no training on how to handle people with disabilities (for example they may not allow persons with guide dogs to enter a certain venue).

Nevertheless, despite such challenges, there is also an acknowledgement that any improvement to the conditions will take substantial investments and this is hard to achieve in a climate of economic austerity. This leads the NPS to state that "The combination of limited resources and strong need within the service requires that we work smarter and more efficiently, prioritizing some actions over others, while keeping our overall mission and long-term responsibilities in mind. It is important that accessibility knowledge is embedded at every level of the National Park Service, and that we work within our funding and staffing limitations to achieve results" (p. 5).

Recognizing that a very large portion of the population has some form of disability the NPS argues that it is important to encourage a "culture of inclusion" (p. 7) by adhering to three overarching goals, which drive the 5-year strategy. The first is to ensure that people with disabilities - but also those accompanying them - will always feel included and that their concerns are addressed from the time they plan their visit an NPS site to the actual visit and their post-trip experience. The second is to ensure that all facilities and programs are fully inclusive and accessible to individuals with disabilities by adopting universal design standards. Finally, the aim is to improve and retrofit existing facilities offered by the NPS to improve their accessibility to persons with disabilities.

The report ends by recommending that although accessibility is both a challenge but also an opportunity for the NPS that everyone involved in the agency must actively involve themselves in order to ensure that the proposed strategy succeeds. Among the actions that need to be taken for this to happen are the following: "Develop an action plan to implement this strategy" and "create an annual progress report on implementation of this strategy" (p. 14).

United States Department of Agriculture (US Forest Service) Accessibility Guidebook for Outdoor Recreation and Trails (2012):

It is not only the National Park Service that controls trails and other outdoor recreation facilities in the US. In addition to the NPS there are state agencies controlling thousands of state parks (including trails) around the country. Moreover, the US Forest Service (which is housed in the US Department of Agriculture) is in charge of numerous outdoor recreation sites and trails. This specific document is a technical report that begins from the premise that everyone has the right to access the outdoors and proceeds to give a history of how the guidelines came to be developed and enforced in the United States. The report makes clear that there are actually two sets of guidelines, namely the Forest Service Outdoor Recreation Accessibility Guidelines (FSORAG) and the Forest Service Trail Accessibility Guidelines (FSTAG). Both these sets of guidelines apply to lands controlled by the National Forest System and are, strictly speaking, addressed towards professionals charged with designing, constructing and maintaining various projects. There is an emphasis on proactively integrating accessibility concerns from the beginning of every project as opposed to seeking to address past mistakes. The report advocates the principles of universal design, stating that this is aimed at "simply designing programs and facilities to be usable by all people, to the greatest extent possible, without separate or segregated access for people with disabilities" (p. 7). Thus, since the beginning of the 1990s all of the Forest Service's projects have adhered to universal design principles. Further, the US Forest Service emphasizes the need to "provide nonjudgmental information about programs and facilities so that visitors may choose the areas, activities, and facilities that best meet their interests and needs." (p. 5).

Referring specifically to trails, the US Forest Service clearly states that the FSTAG guidelines apply to those meeting the following three criteria: the trail must be new or have undergone recent renovations; the trail must be designated as a hiking or pedestrian path and; the trail must connect either directly to a trailhead or it must connect to another trail that is compliant with all the guidelines. It is especially important to mention that although there is an emphasis on increasing accessibility this must be done while acknowledging the need to protect the "natural setting, level of development, and purpose of each trail" (p. 81). Thus, while FSTAG do not apply to existing primitive long-distance trails, the guidelines will apply to new segments in developed areas. Naturally, there is no point in applying FSTAG to a new remote trail that is extremely hard to access in the first place (and whose accessibility cannot realistically be improved).

An important point made in this report is that we must not confuse trails with outdoor recreation routes. The latter are for pedestrian use in order for individuals to access various aspects of a recreational area like the camping grounds, the picnic sites, the trailheads, etc. Conversely, the US Forest Service designates a trail "as a route that is designed, constructed, or designated for recreational pedestrian use or provided as a pedestrian alternative to vehicular routes within a transportation system. A trail is not an outdoor recreation access route and is not subject to the requirements for outdoor recreation access routes" (p. 81).

The US Forest Service also presents a section where it argues that FSTAG are contingent on the realities of the outdoor environment and, therefore, it is not always possible to meet accessibility requirements. There are four cases where an exception can be granted (although the report goes to some length to explain that even in cases where exceptions are granted, these may be applicable to only a small part of the trail). The first of the exceptions has to do with the terrain and the fact that it might not be reasonable from a technical standpoint to expect that an accessible trail could be provided. The second has to do with situations whereby if FSTAG were going to be applied the ensuing changes would negatively affect the overall setting. Thus, paving a primitive trail in a remote setting would be considered unacceptable partly because the whole purpose of a trail like this is to provide their users with certain challenges (e.g., if obstacles such as boulders are removed then the trail as a challenge to the user would lose its purpose). The third situation where FSTAG can be exempt is when the terrain is such that any attempt to improve the accessibility would require the use of heavy machinery despite the fact that it would be extremely hard and unrealistic to bring in this type of equipment. Finally, the FSTAG does not apply to situations where there are protected cultural, historic or natural resources (for example, in archaeological sites).

4.2 Evidence from Europe

Access for People with Disabilities to Culture, Tourism, Sports and Leisure Activities (2015):

This report, which was prepared for the Council of Europe is an action plan pertaining to the issue of access of persons with individuals to culture, tourism, sporting and leisure activities. Among others, it provides best practice examples relating to this issue from a variety of members states. The report is not specific about the outdoors but departs from the point that all persons (with disabilities or not) have the right to access all of the aforementioned activities.

Page 24 of the report maintains that persons with disabilities can only remain or become independent when having the right to as "complete life" as possible. Among others, stakeholders involved with tourism and related activities must enhance their awareness of disabilities while the individuals with disabilities should be in a position to communicate their needs to the providers.

There are several examples of good practice though a number of them deal with issues like access to cultural activities. In the case of Austria, several of its national parks have adopted measures to eliminate obstacles to visitor facilities. In Germany there has been a nationwide process aimed at training persons in the tourism industry "to deal correctly with persons with a disability and reduced mobility" (p. 54). Unfortunately, none of the best practice examples appear to relate to issues such as trail access in the outdoors for recreational purposes.

Guidebook for Accessible Nature Trails: Design Guidelines and Evaluation System (from an INTERREG study between Greece and Bulgaria on "reinforcing protected areas capacity through an innovative methodology for sustainability" (2019):

This particular report was an outcome of an INTERREG project for improving eco-trails and birdwatching trails in Bulgaria and Greece. Its main aim was to make such trails accessible to "as many visitors as possible, including persons with reduced mobility" (p. 5). The report is divided into two parts. The first provides guidelines for making these trails accessible while the second provides an evaluation system for evaluating accessibility after the implementations that the project recommends have been implemented. The idea is that designated inspectors can examine such trails and, among others, note any persistent negative effects on the accessibility of persons with disabilities and propose ways to overcome these problems.

This guidebook is especially comprehensive, compared to other international documents we inspected. In addition to including a comprehensive glossary of several key terms, it provides a brief list of mistakes when designing for accessibility and defines what is meant by persons with disabilities (including persons with various forms of intellectual disabilities). This section is succeeded by a very detailed description of design regulations for enhancing accessibility especially for individuals using various types of wheelchairs, and for persons who are visually or hearing impaired. Details on how to make eco-trails and associated facilities accessible to everyone are provided, including information on ways to enhance the effectiveness of signage for a variety of users.

The evaluation part of the document discusses procedures for carrying out inspections of trails that have been designated accessible to see if, indeed, they meet all requirements. Following the inspection, if the trail meets the requirements then it is designated as compliant.

4.3 Evidence from the UK

The one report from the United Kingdom we examined, namely the so-called *Landscapes Review* (2018), constitutes a commissioned review by the government as part of its 25 year Environment Plan. This was a diverse analysis of the country's national parks and areas of outstanding natural beauty (AONBs) by an independent review panel. The report is broad, touching only briefly (in one section) upon the topic of access to such areas by disabled persons. This is done in conjunction to the need to enhance accessibility of the outdoors to a variety of "excluded" populations including immigrant groups and especially children in these groups, the elderly or persons with low incomes and deprived backgrounds. Indeed the report laments that the "the groups which visit the countryside least are those aged 65 and over, members of the black, Asian and minority ethnic population and residents living in the most deprived areas of England" (p. 69).

Under Proposal 10 of this report, which states that there is a goal to use landscapes around the UK for improving the "nation's health and wellbeing" (p. 88) it is stated that these areas must increase their accessibility to persons with disabilities. The argument is that although

there are numerous persons around the country with disabilities who would love to have wider access to outdoor areas, these individuals are often inhibited from doing so because of badly designed or non-existent infrastructure to accommodate their needs. In particular efforts should be made to "develop a network of accessible hard-surface, stile-free paths that are disabled and wheelchair friendly, deploy gates with RADAR keys[2]and provide all-terrain mobility scooters and routes.

To illustrate how accessibility for people with disabilities could be improved, the report briefly describes an effort to make one AONB (RSPB Leighton Moss) - a nature reserve - more accessible by funding and providing an all-terrain scooter known as the Tramper. The idea is that through this vehicle, people would be able to better enjoy what this landscape has to offer.

The problem with the efforts described from the British context is that they are narrowly focused only on persons who are mobility disabled. There is no discussion concerning persons with visual or other impairments. Also, there does not seem to be a clear and comprehensive nationwide policy (at least yet) to address the issues of improved accessibility for individuals with disabilities who wish to make better use of the outdoors and/or the thousands of kilometers of trails around the country. Indeed, most trails (which rely heavily on a comprehensive system of rights of public access) are not set up to cater to individuals with various disabilities.

4.4 Evidence from Sweden

In Sweden's case one of the reports we examined was by Skogsstyrelsen. The document, has the title *Access to the forests for disabled persons* (Lundell, 2005). Its emphasis is on urban woodlands and the fact that persons with disabilities are often unable to access these either because of various physical barriers or simply because of a lack of knowledge. The main audience for this document are the professionals who deal with the management of wooded areas in order for them to have a better idea about accessibility-related issues when it comes to persons with disabilities. The focus is primarily on people with mobility impairments or visual problems while there is acknowledgement that because of the ageing of Swedish society this issue will become increasingly urgent in the near future.

The point of departure of this report is the Handicap Policy of 2000, which was approved by the Swedish parliament. This policy's aim is "to build a Swedish society where people with disabilities have similar rights and possibilities as other citizens" (p. 3). Moreover, Sweden adheres to the Standard Regulations for people with disability of the United Nations, which aims to enhance participation and equality for people with disabilities throughout the country.

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[2] These are keys that people with disabilities in the UK can use to access toilets or for unlocking door or gates that are usually not accessible to the general public.

The Skogsstyrelsen report (Lundell, 2005) offers a brief section where the terms "impaired vision" and "impaired mobility" are defined while the topic of mental disabilities is also discussed (albeit extremely briefly). Recognizing that these individuals are among a large group of people facing varying difficulties in terms of accessing forested areas, the report emphasizes the need to change "the standard for what is normal, e.g., planning of a recreation area, . . . so that it can be done with consideration of all people (p. 8). The rest of the document focuses on issues such as planning and legislation for balancing the needs to improve accessibility for persons with disabilities while ensuring that actions to achieve this goal do not compromise environmental or aesthetic considerations. Furthermore, there are recommendations, among others, relating to improving information for users who have disabilities (such as tactile maps for the visually impaired or well-placed information boards and signposts that can be easily interpreted). The report specifically gives guidelines concerning the design of footpaths and trails (in terms of prescribed surface materials, slope, width and safety issues). It also recommends the placement of resting places, lighting and waste disposal facilities. Finally, there are recommendations as to the (wide range of) types of activities that persons with disabilities can engage in on the trails. Figure 1 shows an accessible trail leading in to a nature reserve.
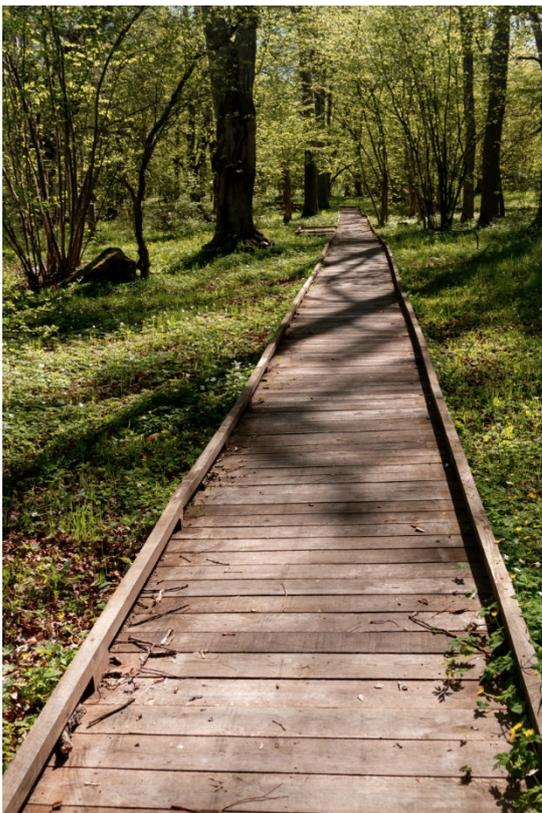

Figure 1. Accessible trail.   Photo: Birgitta Sjöstedt

The Archipelago Foundation: Archipelago for all (n.d.):

The Archipelago Foundation (Skärgårdsstiftelsen) is a public organization that owns and manages about 12% of the Stockholm archipelago and has as its purpose to manage the islands to preserve natural and cultural values, provide opportunities for tourism and outdoor recreation, provide services such as fresh water, toilets, waste disposal etc. for visitors (The Archipelago Foundation, 2019). Their report "Archipelago for all" provides a guide for people with disabilities concerning the varying degree of accessibility of the islands and facilities in the archipelago, and the accessibility of public transport boats to the islands. It is, however, interesting to note that while the guide provides tips for those who plan a trip to the archipelago, it also states that it is necessary for the visitors to remember that the archipelago is highly busy during holidays and summer weekends. This means that boats and other facilities can become overcrowded. Thus, it recommends that, if possible, if one has a disability she would find it easier to travel during other periods of the year (Archipelago for all, n.d.). A statements such as this is problematic and points to the importance of being more sensitive in developing such publications.

Swedish Environmental Protection Agency (SEPA) Accessible nature- and cultural areas. A guide for planning and implementing accessibility measures in protected outdoor environments (2013):

This document highlights a clear political will for Swedish society to become more accessible for all. This signifies the expectation that both nature-based but also cultural environments can be accessed by everyone. Swedish public authorities have a particular responsibility towards meeting this objective. This is especially because several national, political goals regarding, for example public health, outdoor recreation, disability policies and integration have raised the need for enhanced accessibility.

The report is published by SEPA in collaboration with the National Heritage Office (Riksantikvarieämbetet) and the Authority for Participation (Myndigheten för delaktighet), and has been developed as a handbook for facilitating progress towards making protected natural and cultural environments more accessible. Thus, the target group is primarily planners and managers of such areas. Importantly, it is stated that even though it is unrealistic for every single protected natural and cultural environment to be made accessible for *all* visitors, every effort should be made to designate portions that are always accessible for *more* visitors.

The goal of enhancing accessibility in protected areas is regarded as a never-ending process for improving conditions for inclusive natural and cultural environments. Thus, the report consists of two parts. The first focuses on how to prioritize between protected areas, how areas can be mapped from an accessibility perspective, how to set objectives, but also highlights the importance of evaluating, monitoring and managing such objectives. It also describes legislative frameworks that affect actions in protected areas. Moreover, this part discusses how to balance divergent interests between enhancing accessibility versus other priorities. The second part of the document provides practical guidance and suggestions

for solutions to increase accessibility. Suggested actions include the need to address how to make information more useful (user-friendly) while also emphasizing the necessity to conceptualize accessibility not as isolated efforts but rather as a holistic chain of measures.

Regarding the balancing of interests of accessibility with other priorities (such as the need to protect wilderness areas from infrastructural developments that seriously alter the environment) the report emphasizes the need to foster collaboration between actors. It also stresses that adequate planning and good intentions are prerequisites for finding solutions for increasing accessibility while preserving natural and cultural values. Further, it highlights the importance of primarily choosing solutions that entail minimal impact on the surrounding environment (e.g., not placing impermeable surfacing in sensitive areas) while it also calls for actions that are easily reversible if the need arises.

A particularly interesting aspect that the report brings up is that conflicts regarding experience values often result from the unfulfilled expectations the visitor has about a particular site. This situation can be prevented by providing upfront adequate information about the site, so that people who, for example, seek a true wilderness experience can avoid the areas where significant efforts have been made to enhance accessibility. The report concludes that both a solution-oriented approach and a willingness to compromise are necessary in order to foster a successful outcome in planning and management of nature- and culture areas.

5 Discussion

We remind the reader that this literature review does not claim to be comprehensive and cover all that has been published on accessible tourism. Rather, it points narrowly to themes within research on accessible tourism that emerged from a search in the Scopus database. Nevertheless, the results from the search and literature identified from other sources indicate a range of research topics within the field of accessible tourism, while pinpointing where research gaps remain. Overall, it is important to note that the categories we identified in the search are often overlapping and should, therefore, be seen as illustrative examples of where research on accessible tourism stands. For example, a paper on motivations to travel for families with a member with disabilities were placed in the category relating to "Tourism for the families and caregivers of people with disabilities", and not in the one relating to "Experiences, motivations and constraints/barriers for people with disabilities in tourism settings". Likewise, a book chapter on accessible dive tourism could have been categorized as a publication concerning the accessible tourism market, but instead we placed it in the nature-based tourism/outdoor recreation category. This was because the setting where the tourism activity take place happens to be a nature-based resource.

Results from the search in the Scopus database reveal several scientific articles on accessible tourism, many of which have appeared in recent years. Of the 342 articles, conference proceedings and book chapters identified in the search, 244 were published between 2010 and 2019. The remaining 98 publications were published between 2009 and 1982. This could, of course, be a result of more publications being available online today, but it could also point to an increased interest in accessible tourism research.

Many studies stress the fact that with an ageing population with resources to travel and with more people with disabilities being active in society, the demand for accessible holiday opportunities is likely to increase (e.g. Devile & Kastenholz, 2018; Nyanjom et al., 2018; Porto et al., 2019). In 1990, Michael Oliver published his pioneering book *The Politics of Disablement* where he argues that the issue of disability has not been given the attention it deserves within academia apart from in the disciplines of medicine and psychology. He calls for disciplines such as sociology, history and anthropology to take this matter seriously. In the second edition of the book, Oliver and Barnes (2012) state that scholars, both disabled and non-disabled have risen to the challenge and there is now a field within academia that can be described as disability studies where people from various disciplines publish their work in growing numbers. Moreover, many universities now offer courses in disability studies while professorial chairs have been established and research centers have been developed (Oliver & Barnes, 2012). Evidence also suggest that the increased academic interest in disability issues across disciplines has also spilled over to tourism studies, judging by the large number of publications on this topic in the last decade.

Another finding from our review of these articles is that research on technical solutions has increased in recent years. Publications on phone apps and website accessibility that can enhance the tourism experience for people with disabilities is becoming more common within the academic literature. This is perhaps unsurprising given that technical solutions

to various issues in society in general are increasingly developed. However, it also could point to a higher interest in enhancing the tourism experience for people with disabilities. Assistive technology can help people with disabilities improve their independence and self-esteem when travelling (e.g., Asghar et al., 2019; Mayordomo-Martínez et al., 2019). Thus, evidence suggests that the number of publications on this topic will continue to rise.

The reviewed publications reveal that most of the research focuses on tourism and disability from the consumers' perspective, and not so much from the suppliers' viewpoint. Although information from both the demand and supply side of tourism is essential in developing an accessible tourism product (Nicolaisen et al., 2012), most studies seem to focus heavily on the consumer's experience. This is somewhat surprising since we might expect that the growing recognition of the importance of people with disabilities as a tourism consumer group (e.g. Porto et al., 2019; Dwyer & Darcy, 2011) would imply a greater interest in those providing the required tourism product. This finding perhaps suggests a discrepancy between the demand for accessible tourism and what the market is currently able to provide in terms of accessible tourism products. For example, Ozturk et al. (2008) suggest that although Turkish hotel managers and travel agencies recognize the potential of going after the accessible tourism market, the Turkish tourism industry remains unprepared to cater to people with disabilities. Sandøy Tveitan (2012) underlines the importance for actors in the tourism industry to address the issue of accessible tourism in order to gain a leading position in an emerging market. It could, therefore, be argued that further research is necessary on the supply side of the accessible tourism market, in order to support businesses that aim to develop tourism offers for people with disabilities.

The focus of this brief literature review is nature-based tourism and outdoor recreation for people with disabilities. Results from the Scopus search and identified additional literature show that accessibility and nature-based tourism remains an under-researched area, despite the fact that nature-based experiences appear to have positive effects for people with disabilities. This ongoing research gap relating to nature-based tourism for people with disabilities is interesting, especially when we account for the fact that nature-based tourism is one of the fastest growing forms of tourism (Newsome et al., 2013; UNWTO, 2017; Wolf et al., 2019). While we would have expected that this growth would also be reflected in publications on accessible nature-based tourism, this does not appear to be the case.

Several studies have also put forward a call for increased knowledge about the nature-based tourism experiences of people with disabilities (e.g. Burns et al., 2009; Chikuta et al., 2019), which further strengthens the incentive for research to focus on accessible nature-based tourism. In the case of accessible tourism in wilderness areas, it is, however, important to consider that studies have shown that people with disabilities have very similar preferences regarding natural area settings as people without disabilities (Brown et al., 1999; Moore et al., 1996). McAvoy et al. (2006) studied a wilderness experience program, suggesting that people with disabilities want the natural surroundings to be just as challenging and pristine as do people with no disabilities. This is interesting, as results from Burns et al. (2013) reveal that people with disabilities are sometimes denied access to the outdoors because of the miss-perceptions that they will encounter high risk if they

participate in certain activities. This indicates a lack of knowledge among outdoor managers and planners regarding the preferences of people with disabilities in outdoor settings. Thus, further research on this topic can prove beneficial for both groups. In relation to this, a significant aspect to consider is the inherent contradiction that lies in the tension between ecological sustainable use, nature conservation, visitors' experiences, and accessible nature-based tourism. Few academic studies have researched the somewhat contradictory stance between providing accessible nature for all and conservation efforts (Pearn, 2011). Donlon (2000), who discuss the discrepancy between the Americans with Disabilities Act (ADA) that guarantees equality of access to all groups in society and the public land set-asides such as Wilderness Areas, raises an interesting point illustrating this contradiction. He argues that completely acting on the ADA would highly affect the notion of wilderness, or perhaps even destroy it since facilitating access would require substantial changes to the surrounding environment. Neglecting to undertake such efforts, however would exclude many citizens who could benefit from visiting natural areas. The exclusion of people with disabilities from remote and wilderness areas due to the physical difficulties in such terrains is increasingly being challenged by both individuals and interest organizations (Lovelock, 2010), but even so, only two scientific publications in the identified literature focused on this topic. The report from SEPA (2013) also addresses this issue and provides some practical advice on how to balance interests of providing access for all to protected nature areas and preserving ecological values as well as considering visitor experiences. However, literature on the topic appears to be scarce in policy documents.

The brief overview of various national and international reports relating to nature based and trail accessibility for persons with disabilities indicates that this is a topic that public authorities as well as various organizations (including non-profits) have only recently began grappling with. The reports from the US, for example, where there is a long tradition of enhancing accessibility to persons with disabilities tend to be technical relating to design guidelines. There is an understanding, however, that not only should design principles be overhauled to ensure that accessibility is for everyone – including persons with various disabilities – but that it is also imperative to eliminate the ignorance and misperceptions that these individuals (and those who accompany them) continue to encounter on a regular basis. Moreover, as the INTERREG report from Greece and Bulgaria indicates, it is not enough to merely address the design principles for making trails and the outdoors in general more accessible. Rather, it is also vital to ensure that these trails are subject to a constant monitoring process to ensure that they continue to be accessible to everyone. In the event that this procedure reveals that new problems have emerged then the mechanism must be in place to quickly and smoothly rectify the situation.

To summarize, we have seen through our overview of research on accessible tourism that there appears to be an increased interest within the academia on this topic, and that research interests are becoming more diverse. However, an interesting finding from the review is that accessible nature-based tourism appears to be a somewhat under-researched field, even though there is scientific evidence of the health benefits of spending time in nature. Moreover, literature on how to balance accessibility and values such as nature conservation and visitor experiences is particularly scarce.

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