

## Post-pandemic tourism in Longyearbyen

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**Running title:** Tourism transitions in Longyearbyen

**Abstract:** Tourism in Spitsbergen has become the largest employer and most rapidly growing sector, taking over from coal mining. Longyearbyen is a small urban center but it is the central hub where most tourism passes through. The goal of this study is to present the post-COVID behavior of tourists in Longyearbyen, Spitsbergen. Based on a sample of 256 international tourists who visited Longyearbyen in 2022, it was noted that the post-COVID tourists consciously chose this place guided by uniqueness of its nature. The respondents expressed their intention to travel, but factors related to safety and security appeared as key drivers affecting their travel decisions. Protected areas and nature-based tourism are the preferred destinations to visit after the COVID-19. This industry is an important basis for settlement and the number of tourists after COVID-19 is increasing. The study area is particularly vulnerable to environmental threats, the sources and causes of which are often connected with tourism. The presented results are a basis for discussions on the effective environmental tourism policy after COVID-19.

**Keywords:** Arctic, Svalbard, Spitsbergen, polar tourism, environmental impact, COVID-19.

## Introduction

In 2021, the sars-CoV-2 virus reached the remotest parts of the planet, including small communities in the Arctic and even Antarctica. On Spitsbergen, the limited health care infrastructure posed a particular challenge. The ability of regulators to improve the existing infrastructure with the speed the pandemic was rather limited (Sullivan 2020). While some countries have been able to construct hospitals for COVID-19 patients in a noticeably short amount of time, the regulatory approach, especially in the Arctic, has been different. Instead of trying to compensate for weaknesses, which are based on history, geography, economy and heritage in administrative settings, many Arctic communities have built on their strengths, such as flexibility, resilience, relative independence (Kolbert 2020). In general terms: “Arctic Tourism”, “Polar Tourism” are categorized as special interest tourism (Maher *et al.* 2014; Demiroglu and Hall 2020; Barik *et al.* 2022) and in the last two decades, Arctic tourism has come into the limelight due to the increasing demand among visitors.

Before the pandemic, the travel industry has become an engine of economic growth around the world, creating new jobs and earning opportunities by “selling dreams”. However, the COVID-19 pandemic has implemented unprecedented changes in the travel industry. It has been a breakthrough on a global scale, affecting the livelihood of millions of people. Before the pandemic outbreak in 2020, tourism became the top employer and fastest growing sector on Spitsbergen, replacing coal mining (Reymert 2013). Longyearbyen as a small urban center on Spitsbergen is considered a central transport hub which most tourists pass through. This speeding mechanism and the annual increase in visitors had a constant growth strategy until COVID-19. The pandemic outbreak, as well as the restrictions imposed by the Norwegian authorities to close the islands to foreigners for several months, have significantly slowed down the growth. Before the pandemic, Arctic tourism followed the European trends in expanding the tourism focused on nature (Bogerson *et al.* 2020), which was connected with the general interest in the Arctic region (Kugiejko 2021).

There are also signs of overtourism in the Arctic and it poses challenges in polar tourism management (Saville 2022). The COVID-19 pandemic halted tourism activity around the world (Gössling *et al.* 2020). Before the pandemic, tourism was one of the main branches of the economy, accounting for almost a tenth of the global economic market, as indicated by its share in the gross domestic product (GDP) and the direct and indirect employment creation (UNWTO 2020; McKibbin and Fernando 2021). Countries around the world have adopted various response measures, including travel restrictions (Chinazzi *et al.* 2020). Norwegian authorities

suspended all flights, halting tourism activities in Longyearbyen. This led to a strong closure on the international arena, and as a result, Svalbard became a very safe place epidemiologically. In 2021, a total of ten people were registered with a positive PCR test in Svalbard (Governor of Svalbard 2021). On 1<sup>st</sup> March 2022, the Norwegian authorities decided to lift most of the COVID restrictions (Regjeringen.no. 2023; Northern Periphery and Arctic Secretariat 2021), which significantly influenced the renewed interest of potential tourists. Without doubt, COVID-19 is the cause of the tourism demand crisis, changing the future paradigms of tourism (Hall *et al.* 2020). Although the pandemic has put the boom in Arctic tourism on pause, the long-term interest in tourism in the Arctic returned when public health boards allowed cruise vessels and planes to operate again (Kirchner *et al.* 2021). The pandemic has also highlighted ecological and environmental problems (Cohen and Kupferschmidt 2020), contributing to numerous discussions on how to solve them in a holistic way (Rastegar *et al.* 2021). The Arctic Council published an early report that highlighted multifaceted impacts of the COVID-19 pandemic on health, economy, culture, and society in Arctic regions (Arctic Council 2020; Petrov *et al.* 2021). This situation has affected the tourism sector in a brief period, providing an opportunity to change the business approach and take a step forward, setting a more sustainable path (Ioannides and Gyimóthy 2020). In the 1990s, developing tourism drew on some components of this approach. A large part of the „new” tourism involves wilderness, based on organizing individual trips to mysterious, risky exploration sites at the ends of the world (Zenker and Kock 2020). Spitsbergen fits this destination description well.

One of the fastest reports on the impact of the COVID-19 crisis on domestic tourism has been prepared by the Norwegian tourism organization NHO Reiseliv (2020). In fact, weekly survey data was published in March 2020. Till 5<sup>th</sup> March 2020 over 41% of travel companies registered cancellations and resignations, including hotels, campsites, catering, car rentals and air transport. Till 26<sup>th</sup> March 2020 over 65% of travel companies reported difficulties with profitability, however the worst situation was reported amongst restaurants (72%) and hotels (63%). During this time 90% of travel companies temporarily laid off staff and 78% of companies cut at least three-quarters of their workforce. The report confirms that tourism was hit particularly hard compared to other economic sectors in Norway. This situation also had its reference in the territory of Svalbard, where the statistics confirms a significant decrease in accommodation facilities' occupancy.

The main aim of this article is to present the post-COVID behavior of tourists in the Longyearbyen, main city on Spitsbergen. The intermediate goal is to check the interests of post-COVID tourists arriving to a particular destination. Furthermore, the following research

problems are identified: (i) what were the motives behind choosing this particular travel destination, including the level of awareness of factors related to safety and health care, (ii) the level of tourist awareness of overtourism that posed threats to the natural environment connected to exploring the area after pandemic, (iii) what are the perspectives of tourism development in the studied area.

## Svalbard and its tourism

The Svalbard Archipelago is the northernmost part of the European Arctic. It covers an archipelago of several islands, with Spitsbergen being the largest of them all, with the most intensive human activity (Kugiejko 2021). The settlement Longyearbyen is the administrative center and forms the seat of the governor of Svalbard. Unlike many Arctic areas of human settlement, Svalbard's population is non-indigenous but cosmopolitan and transient, including more than fifty nations other than Norwegian. Tourism infrastructure concentrates in Longyearbyen, the main city of the isle of Spitsbergen as a part of the Svalbard archipelago, which provides transport infrastructure, accommodation, and different tourism activities. It should also be noted that the attractiveness of this region is built by natural attractions (Kugiejko 2021), which are the elements of the natural environment.

Arctic tourism receives a continuous increase in attention. It is becoming more popular based on two basic reasons: first, the accessibility of regions above the Arctic Circle is increasing, and second, tourists aim for more individualized experiences and exceptional places to travel (Bystrowska and Dawson 2017). Moreover, accessibility is driven by improvement in infrastructure and increase in northern and Arctic cruises. Existing literature about Arctic tourism is manifold from a geographical, content related perspective or managerial aspects. What sticks out is a predominating discussion of Arctic tourism in the context of sustainability (Hall and Saarinen 2010; James *et al.* 2020; Lucarelli and Heldt Cassel 2020; Chen *et al.* 2021). Moreover, the change in destinations and source markets (Remer and Liu 2022; Vogler and Stoll 2024) provides a recognizable challenge but also an opportunity for Arctic tourism business.

This relates not only to packaged cruise travel, which enjoys the largest share in transported visitors, but also tourism "in the field". In this respect, the pandemic may be seen as a prelude for adaptation strategies (Chen *et al.* 2022), which are important considering both the large dependency on tourism and the preparation for a post-Arctic tourism in the Arctic (Varnajot and Saarinen 2021). These changes in many ways permeate the economy, governance, and outdoor recreation in Longyearbyen. Confirmation is in the Norwegian national Svalbard policy,

with long-term goals to transition Svalbard into a sustainable future without coal mining (Ministry of Justice 2016). The island of Spitsbergen, with its magnificent nature and relative accessibility, attracts visitors, tourists and researchers from around the world. Spitsbergen used this popularity as the most accessible place in the North. Over the past 20 years, tourism in Spitsbergen has grown rapidly. Before the pandemic, the number of visitors increased by more than 70% (Visit Svalbard 2021) and in 2023 a total of 1 907 699 guest stays (Statistics Norway 2016, 2023). Table 1 provides a four-year summary of incoming tourists' number, as well as a detailed breakdown by the number of nights provided or tourist offers realized. The new Longyearbyen is adapting to a situation where coal mining is gradually replaced by tourism, research, and education. Climate change impacts, development of new economic sectors and managing to increase the tourist attractiveness (Table 1) are the main factors driving change in Longyearbyen.

Table 1.

Longyearbyen's tourism sector statistics in 2019–2022.

Categories	Year			
	2019	2020	2021	2022
Guest nights	162 949	65 091	78 993	147 834
Overall number of visitors	77 136	25 546	29 664	68 038
Estimated number of Airbnb guests	4 311	2 031	1 799	3 538
Number of visits in attractions, <i>e.g.</i> museum	65 653	0	15 523	50 851
Number of visitors of the tourist information center Visit Svalbard	24 697	4 076	4 497	24 418

Longyearbyen has experienced a tourist boom in the past two decades. The tourism industry is, able to offer trips to areas that previously were inaccessible. Such locations are undoubtedly maritime areas that used to be covered by ice until the late spring months but now are accessible to ships/cruises year-round. This affects a significant increase in the number of people, tourists interested in cruises to the north. Cruise ships in recent years (2015–2021), have become much larger and carry more passengers than before (Newsinenglish 2020; Barents Regional Council 2022). The port of Longyearbyen received about 67 000 passengers in the 2023 summer season (Visit Svalbard 2021). Following two years of travel restrictions, 2022 was a bumper year for travel in Norway. Nowhere was that trend more noticeable than the Arctic archipelago of Svalbard. On the busiest days, the terminal building at Longyearbyen airport was overcrowded (Table 2). In the summer of 2022, twice as many flights landed at Longyearbyen than in the last 'normal' year of travel in 2019 (NRK 2023). In 2023, Airport operator has chosen to limit the number of aircraft able to use Longyearbyen to just six per day

(NRK 2023). Table 2 shows the number of passengers arriving in Longyearbyen in the past 5 years, highlighting the change regarding the high tourist season. Previously indicated as the summer months of June–July (Kugiejko 2021), increased arrivals are observed from early spring through September.

Table 2.

Monthly numbers of passengers arriving in the Longyearbyen Airport.

Month	2019	2020	2021	2022	2023
1	4642	4772	1791	3650	4036
2	6799	6441	2067	5039	5597
3	9366	2919	3460	7346	7135
4	9298	290	2906	8097	7577
5	8460	552	2645	8744	7782
6	12176	1691	2618	12984	10536
7	13470	4175	3907	10997	14063
8	10793	3904	5728	11691	9891
9	5992	2948	5067	5824	5901
10	4573	2913	4971	4743	5017
11	3514	1890	3527	3491	3337
12	3104	1595	2510	2904	3091
Total	92187	34090	41197	85510	83963

The tourism industry is sensitive to the need to develop and adapt the industry in socially and environmentally sustainable directions. Svalbard policies require the tourism industry to balance the development of their products against protecting the environment of the archipelago, including the town of Longyearbyen. The numerous tourist attractions in the city (museum visits, church visits), its surroundings (dog sledding, glacier hiking), or in the area of the nearby fjords (a trip to Pyramiden, photo safari) are realized with particular care for the natural environment. After the pandemic, we can expect to see changes in the Arctic tourism industry due to both the effects of the pandemic itself and changes in attitudes toward travel and environmental protection. The pandemic has brought greater environmental and sustainability awareness. Travelers can look for travel options that are more sustainable and have less impact on the environment, which corresponds to the strategy implemented on Svalbard. Arctic tourism should develop in the direction of greater flexibility, sustainability, and a focus on local natural experiences.

## Methods

Gathering data was conducted in 2022. The target population for this study were tourists who traveled to Svalbard after the pandemic. To reach the population, the author identified six different community groups, *i.e.*, (1) Spitsbergen/Svalbard and the whole Arctic travels, (2) Svalbard Travel Tips (3) Svalbard Pictures & Videos (4) Visit Svalbard, (5) Svalbard Wildlife Expeditions and (6) Svalbard - Greenland - Iceland -Travel Tips - Pictures & Videos, focused on tourism in Arctic or tourism on Svalbard on the social networking sites of Facebook. After obtaining permission to post the survey in each of these groups from group moderators, a link to the survey was posted on two separate occasions one month apart in June and July of 2022, to maximize coverage. Bearing in mind the acquisition of data from different places and from a wider group of respondents, the designed online survey form was also distributed to guests in accommodation facilities, *i.e.*, Mary-Ann's Polarrigg, Hotel Radisson Blu Polar and hostel Gjestehuset 102, and at the local tourist information center Visit Svalbard. Prior to the start of the survey, the author checked the possibility of conducting surveys in selected facilities. The questionnaire included 24 questions (Appendix 1). They were prepared and accessible both in print and in digital version (using QR codes) with multiple choice questions option. As a result, 256 correctly completed questionnaires were collected to capture motivation, impressions as well as some changes in post-COVID travel. Not all respondents' answers from the 24 survey questions were used in the text. The collected sample is treated as a case study. For a confidence level of 0.95, the statistical error is 1.1%. The respondents' statements were also subjected to text mining analysis to identify the most frequently appearing keywords. Their separation may indicate a general trend that dominates in the perception of the area, motivation, or changes in Arctic tourism after COVID-19. The analysis was performed using World-stat 7 software.

During the implementation of the research project, mixed research methods combine both qualitative and quantitative approach, at first utilizing quantitative data and then using qualitative data to provide additional context. The qualitative research carried out in July 2022 in Longyearbyen included interviews and participant observation. The possibility of staying in tourist destination and opportunity of direct contact with employees of the tourism sector contribute to conducted three interviews in a free (not categorized) manner, where the researcher had freedom in the way of conducting the conversation and asking questions. The interviewees were people working in the tourism industry - accommodation, tourist information and cruise industry. These interviews do not allow direct data comparison obtained from quantitative samples, but allow to obtain qualitative data deepening the knowledge of the state of tourism in the first tourist season after the pandemic in the polar regions. Most of the content from the interviews will be used in the discussion.

## Results and interpretation

The tourism and leisure industry were hit the hardest by the COVID-19 pandemic. In many cities, regions and countries, tourism plays a key role as a pillar of the economy's GDP. Until the COVID-19 pandemic, the European region was one of the main players in the global tourism industry, where 600 million tourists arrived every year (Abbas *et al.* 2021). Tourism in European countries contributes to *ca.* 48% of all travels and travel activities in the world. Recognition of the essence of tourism as the consumption of goods and services that are somehow unessential (Urry and Larsen 2011) has changed and, paradoxically, the COVID-19 pandemic has shown that tourism is an important industry sector integrated with global systems and trends. As one of the interviewees (tourism information resident) highlighted, "*tourism is the main industry, it has been since 2015. Besides it is more or less the only activity in Svalbard that actually brings tax income to Norway*". Observing the situation in the world and in Europe, the process of easing restrictive epidemiological regulations, a study was undertaken in Longyearbyen, Svalbard. The undertaken research criteria, including preferences during stays (safety, health care, motivation, choice of attractions, *etc.*) are important both for the preparation of the future tourist offer and for the management of tourism that implements the assumptions of sustainable development after COVID-19.

The pandemic had a significant impact on the behavior of tourists all over the world, who resigned from planned trips out of fear for health (Mamirkulova *et al.* 2020). One of the crucial questions in the questionnaire was about rescheduling travel to Longyearbyen, with 43% (n=109) confirming the reorganization due to the lockdown, but 57% (n=147) sticking to their original plans. Comparing these answers with the age of the respondents, where 64% were in the age range of 40–70, statistically older people changed their decision more often. This could have been influenced by the World Health Organization recommendations (WHO 2020) and paying attention to their health. The respondents were dominated by Poles (n=45), English (n=30), French (n=27), the Dutch (n=25), Germans (n=18), Swedes (n=14), Norwegians (n=10), as well as residents of the United States, Australia, Singapore and Japan. It should be noted that no differences were found between tourists' preferences related to their country of origin. Therefore, the following analysis does not distinguish between any nationalities. Of the respondents, 79% (n=202) arrived by airplane, 17% (n=44) by ship, 6% by yacht. Those using ships or yachts spent less time in the city, *i.e.*, fewer overnight stays in Longyearbyen. Complementing the issue of travel behavior during COVID-19, more than half (56%) of the respondents traveled, nonetheless. These were both domestic and foreign trips, during which



some of the activities changed. Regarding the choice of accommodation, using a restaurant or a tourist attraction, about 1/3 of the answers refer to contact restrictions and maintaining social distance (Fig. 1). Avoiding direct physical contact (takeaway food – 21%; e-tickets – 37%; separate apartments – 30%) fits into the scenarios of pandemic prevention models including limited mobility and gatherings ban (Gössling and Schweiggart 2022).

Tourism activities in Svalbard are embedded and inextricably linked to the dynamic context of global socio-environmental changes. Most Arctic tourism is currently focused on what is called “Last Chance Tourism” (Palma *et al.* 2019; Remer and Liu 2022, Łuszczuk *et al.* 2022). The research output of the sub-discipline of polar tourism tends to focus on cruise tourism, management, and climate change (Stewart *et al.* 2010). The main search criteria for a holiday destination included closeness to nature, unusual landscape (159 times; relevance 0.92) new culture, monuments (145 times; relevance 0.89) adventure or risk (92 times; relevance 0.46). However, the trip to the seventy-eighth latitude (78°13’N) was not just another stop but a dream-come-true for some of the respondents (43%, n=109). For 25% of the respondents, it was a spontaneous decision (“why not!”), 20% (n=52) considered it as another tourist trip to an interesting place, while 13% (n=34) of respondents indicated a different motive, *i.e.*, work-related, scientific, sentimental trips. The answers show that 63% (n=160) of people visited for the first time, 37% have been there before and 22% (n=40) visit often. As noted, there were no differences between the post-covid travel preferences of tourists related to their country of origin, but it was possible to notice differences in the choice of attractions between those who came for the first time and those who were already there for the second time. The length of stay usually oscillates over a week (47%) and 4–7 days (37%). City breaks (16%, n=40) to Longyearbyen and its immediate surroundings have become a kind of sub-market. Events such as Polar Blues, Polar Jazz, and the growing number of other events (Sun Festival, Svalbard Ski Marathon, Longyearbyen Literature Festival) attract weekend visitors (Visit Svalbard 2021).

The text mining procedure allowed the identification of 33 keywords related to the motive for coming to Svalbard from all 6977 words whose occurrence and significance for the entire text corpus was the greatest. The results were presented using a word cloud in which the font size corresponds to the frequency of occurrence of a given word. In addition, for a better visualization of the identified words, the data are presented in the graph (Fig. 2). The most frequent words were “nature” (184), “tourism” (98), “visit” and “trip”. What is more, other characteristic words related to the theme of travel were mentioned, which are often activities or tourist attractions of the area.

According to the gathered material, the main reason for traveling to the Arctic is its nature (Fig. 3). Tourists seek to observe wild animals in their natural habitats (main n=50; second n=44) and experiencing the beauty and solitude of natural areas (main n=43; second n=39). Then, there are the adventurous tourists (main n=46; second n=29) and cultural tourists who want to learn about the life and traditions (main n=16; second n=25).

In the study area, there is a high variability in the intensity of tourist traffic, i.e., seasonality, but also preferences in the selection of tourist attractions. Typical tourist activities include snowmobile tours, Northern Lights viewing, dog sledding tours, glacier hiking and ice cave exploration, as well as skiing and snowboarding (Visit Svalbard 2021). The summer season includes cruises and smaller expedition cruises (birdwatching, 12%; photo safari, 32%). Day trips by boat to approach the glacier face or kayaking. During the polar day, 24-hour daylight allows for long hikes (n=90, 35%), offering many opportunities for wildlife photography (Fig. 4). In addition, a year-round visit to the Svalbard Museum is popular with tourists (n=97, 38%). More than 55% (n= 141) of them responded positively to the idea of organizing individual trips during their stay in Longyearbyen town and in the nearby Isfjorden area (n=105, 41%). Whereas almost 45% (n=115) of respondents chose the offers of organized group trips in town, and 59% (n=151) out of the town. Considering the variation in the frequency of arrivals (first time, next time) versus interest and selection of tourist attractions, some differences can be identified. First-time visitors to the area 63% (n=160) cited a visit to Pyramiden, dog sled rides, mine tours, photo safari or the Museum as their first-choice destinations. Among those who had been there before (37%): photo safari, hiking expeditions and birdwatching was the dominant choice. Among the 22% (n=40) of respondents who frequently visit Longyearbyen, sightseeing, hiking trips, aurora borealis and birdwatching dominated.

Drawing from post-industrial tourism, recognized as a driver of sustainable development (Kuzior *et al.* 2021), one of the attractions is the use of mining infrastructure, i.e., a guided tour near Longyearbyen in Mine 3 (n=56, 12%). Bearing in mind the mining activities, it is worth mentioning the once key destinations for day trips, Russian settlements of Barentsburg and Pyramiden. Due to the Russian invasion of Ukraine, which began on February 24, 2022, relations between many western countries, including Norway and Poland, and Russia have cooled down. In the end, many tourists did not use the ready product, i.e., cruises to Pyramiden and Barentsburg, moreover, they also gave up accommodation in these places. The political situation also affected the conduct of the research, which was to take place in Pyramiden, Barentsburg and during the ferry trips. Due to the war and related violations of

international law and human rights, Visit Svalbard's extraordinary general meeting has decided that all products, tours, services, or other offers that have any relation to Russian state-owned enterprises in Svalbard were terminated (The Barents Observer 2022). This side thread is very important in further planning of historical and cultural tourism. Moreover, it is important for those who organize a new tourist offer what to propose as an alternative solution.

The study area allows both mass tourisms, *i.e.*, cruises, wildlife observations, cultural and historical sightseeing, and qualified tourism, *i.e.*, hiking expeditions, speleology and sailing. According to the cited statistical data and the analysis of the studies, the number of tourists visiting Spitsbergen is increasing. Today, the tourism industry is an important basis for settlement and business activity. One of the research questions concerned the term "overtourism". 69% (n= 175) respondents had heard about this phenomenon. They were also asked for their opinion on the presence of "overtourism" in the area visited, (yes 45%; n=116), no 55%; n=140) and whether there are problems with waste pollution (yes 52%; n=134), no 48%; n=122). The answers, however, could have been influenced by the fact that during the pandemic "overtourism" was naturally limited.

The content of all statements (n=256) concerning what attracts people to Svalbard was examined for the presence of key phrases (Fig. 5). The admissible number of words forming a phrase was defined as a range from 3 to 5, while the minimum number of cases in which a phrase occurred was set at 3. The most common phrases are polar bear (19), clean air (11), nature and wildlife (11), Arctic nature (10), untouched and wild (10). To better illustrate the relationship, a detailed analysis of links was used, based on the coefficient correlation (Fig. 5), where the relationship between individual words was expressed numerically, with the value 0 meaning that the words never appeared together in the document, and a value closer to 1, that they always appear together.

Figure 5 shows that the virtues of the natural environment play a unique role. The respondents emphasized that the pristine and austere nature of the Arctic makes it extremely attractive for modern tourism, placing Svalbard among top tourist destinations. Spitsbergen is often named the "Land of the Polar Bears". It is one of the best places in the world to observe these majestic creatures in their natural habitat. Apart from polar bears, Spitsbergen is home to large bird colonies, and in the surrounding waters, one can encounter seals, walruses, and several species of whales. As the respondents note (Fig. 5), Spitsbergen offers a sense of untouched wilderness that is increasingly rare in today's world. The landscapes feel raw and undisturbed by modern civilization, reflected by the mottos - untouched, wild nature, wildlife.

## Future outcomes

Most Arctic tourism is currently focused on what is called “Last Chance Tourism”. Due to climate change and Arctic amplification, many places in the Arctic are available for more visitors to sail through due to a reduction in sea ice cover. Going back to before the pandemic, the data from 2018 and 2019 confirm the steady growth of the number of tourists arriving in Svalbard. The figures from commercial accommodation facilities in Longyearbyen, besides Airbnb (from 156 241 in 2018 to 162 949 in 2019), as well as data from conventional and expedition voyages, confirm this increase from 72 544 in 2018 to 77 136 in 2019. Everything changed when the World Health Organization announced a global COVID-19 pandemic on 11<sup>th</sup> March 2020 (WHO 2020). As a result, unprecedented global travel restrictions for *ca.* 90% of the world population caused the most serious distribution to the global economy since World War II. Due to the international travel bans, tourism has ceased and the outlook for the future has been uncertain. The World Tourism Organization (UNWTO) speculated in 2020 that the number of international arrivals could fall by 20 to 30% compared to 2019. Within a few months, the framework of the global tourism system has gone from “overtourism” to no tourism (Rastegar *et al.* 2021). Tourism is an integral part of Svalbard and even after the pandemic situation when tourism has almost come to a halt, scientists are thinking about introducing solutions and concepts of restricting tourism in Svalbard. It is time to consider how to steer tourism in relation to wildlife conservation in view of the wider climate crisis. As shown in this research results, post-pandemic tourists reach Longyearbyen, hoping to encounter nature, wildlife and a small number of tourists. It can also be assumed that their decision to come was conscious and dictated by the desire to commune with nature as part of sustainable development, *i.e.*, essential to preserving its fragile ecosystem while allowing visitors to experience its pristine beauty.

There is consensus that the COVID-19 crisis should be a turning point to “build back better”, not going back to pre-pandemic “overtourism” (Gössling and Schweiggart 2022). The negative effects of tourism have a long history of research. The combination of tourism development strategies and the increasing mobility of both wealth and people are increasingly interconnected. There is an echo of concern about whether there is sufficient control over the current volume of tourism and how tourism management and increasingly rigorous environmental goals can be reconciled (Schwan 2019; Nunkoo *et al.* 2021; Saville 2022). Over the years, tourism in Svalbard has flourished through economic activities and accompanying professional tourism activities, thus entering permanent revenues for Norway. In 2020, new

guidelines for the development of tourism in Svalbard were prepared (Kugiejko 2021). As one of the interviewees (respondent from accommodation sector) pointed out, *“the specified capacity of beds limits the number of visitors to a maximum of 1000 at a time – which generally reaches in the season a minimum of 80% capacity utilization. In addition, visitors also arrive on boats and huge cruises what created a logistical challenge for residents”*.

The interviewer, who represents the cruiser tourist industry, which accounts for 1 out of 3 jobs in Longyearbyen, highlights that *“what happens at sea is a different topic, but here the Norwegian authorities have put forward a proposal that shall come into force in 2023, where the limits are to be 750 passengers with crew on the ships heading to Svalbard. We support this direction (...) There is a plan to slightly reduce the overall number of tourists – I am mainly talking about conventional cruise tourists”*. Almost half of the respondents stayed longer, *i.e.*, over a week, which is definitely a positive trend that contributes to the reduction of the number of tourists per year. By imposing stricter requirements on tourism industry, the uniqueness and exclusivity of the offer is emphasized, while complying with the regulations protecting its nature and supporting local business. One such action is the introduction of requirements for the certification of tourist guides (Regjeringen.no 2023).

The value of transformative and educational tourism experiences is another sector of tourism support. Raising awareness and educating tourists gives the opportunity to create ambassadors - post-tourists. The characteristics of a post-tourist is the awareness of global interdependencies, the causes and consequences of tourist behavior, and the self-awareness of being subject to commercial and ideological processes (Kazimierczak 2018; Łuszczuk 2020). According to the survey, post-COVID tourists consciously chose Svalbards guided by its uniqueness and what they pay special attention to, *i.e.*, nature. Often emphasizing the advantage of a small number of tourists, the proximity of nature, clean air or silence. For the respondents, safety was important, including health related to the ongoing epidemic and many restrictions. Assuming that only a conscious tourist travels responsibly and ethically, the inhabitants of the visited places are partners for them, subjects of the meeting – not holiday service or part of the background landscape. If they are treated as partners, this means that the tourist also bears part of the responsibility for the shape and character of the tourist meeting. This approach is inscribed in the principles of sustainable development, maintaining the balance of tourism with its environmental and socio-economic effects, as described by Saville (2022).

## Conclusions

Tourism in Spitsbergen before the pandemic has become the largest employer and most rapidly growing sector, taking over from coal mining. Longyearbyen is a small urban center but is the central hub where most tourists pass through. The goal of the article was to present the post-COVID behavior of tourists in Longyearbyen, the main city on Spitsbergen. The intermediate goal was to reveal the interests of post-COVID tourists to reach a particular destination. Based on an international sample, it was shown that the post-COVID tourists consciously chose this place guided by its unique nature (fig.2). The majority of Arctic tourism is now focused on so-called “tourism of last resort” taking advantage of the development and opportunities of cruise tourism. Respondents focused on proximity to nature, unusual landscape (n=159), cultural sights (n=145), adventure or risk in their main criteria for finding a vacation destination. The respondents expressed their intention to travel, but factors related to safety and security appear as key drivers affecting their travel decisions. Typical tourist attractions chosen by respondents were cruises, smaller expedition cruises (bird watching, 12%; photo safaris, 32%), glacier boat trips or canoeing. In addition, visited the Svalbard Museum exhibition (n=97, 38%) and realized guided hikes (n=90, 35%) in Longyearbyen and the nearby Isfjorden area (fig.4).

The COVID-19 pandemic has had a profound impact on the tourism industry worldwide, and it has led to several significant changes and adaptations in the way people travel and how the industry operates (fig.1). The pandemic has raised awareness of the impact of tourism on local communities and the environment. As a result, there is a growing emphasis on sustainable and responsible tourism practices, completely different from the phenomena of overtourism and waste pollution, such as micro plastic. However, it should be emphasized that various changes in traveler behavior will continue to shape the tourism sector in the post-pandemic era.

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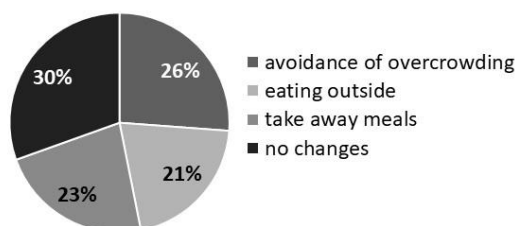
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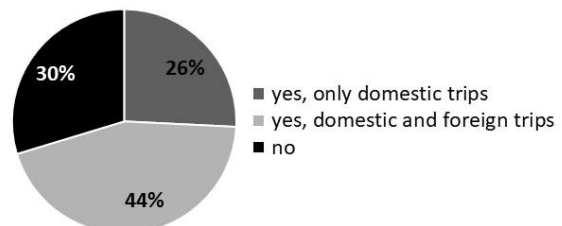
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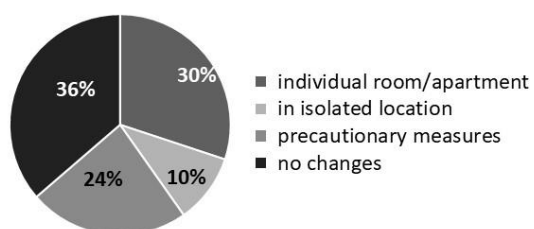
A Eating preferences



B Travel during the pandemic



C Accommodation preferences



D Preference for using attractions

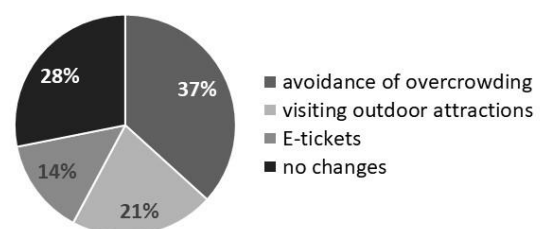


Fig. 1. The impact of the COVID-19 pandemic on tourists' decisions (n=256). The individual charts describe the impact of Covid-19 on vacation plans: (A) changes related to restaurant choices, (B) travel execution during the pandemic, (C) changes related to accommodation choices and (D) selection and enjoyment of tourist attractions

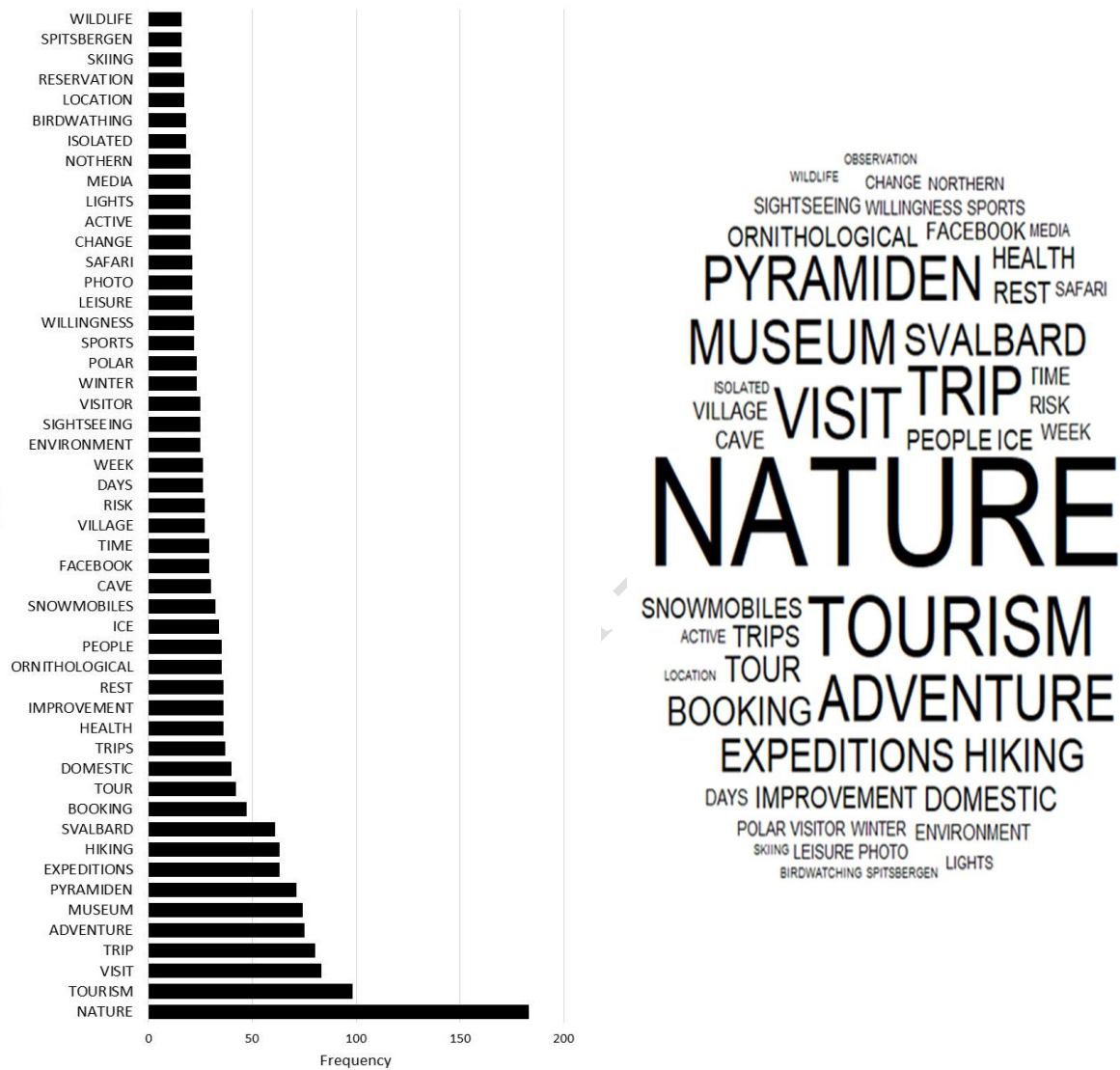


Fig. 2. Word cloud including motives for coming to Spitsbergen; frequency of motives for tourists to come to Spitsbergen and a graphical presentation of the frequency of these keywords.

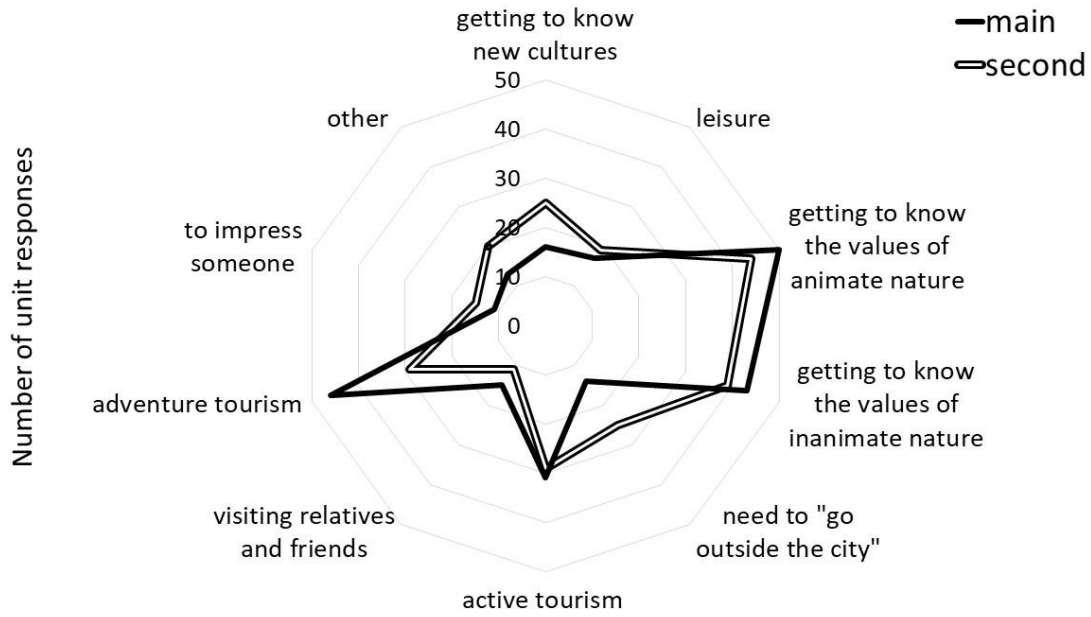


Fig. 3. The main motives for departure to Spitsbergen; frequency of the number of unit responses, the single line is the main motive, and the double line is the second motive of choice).

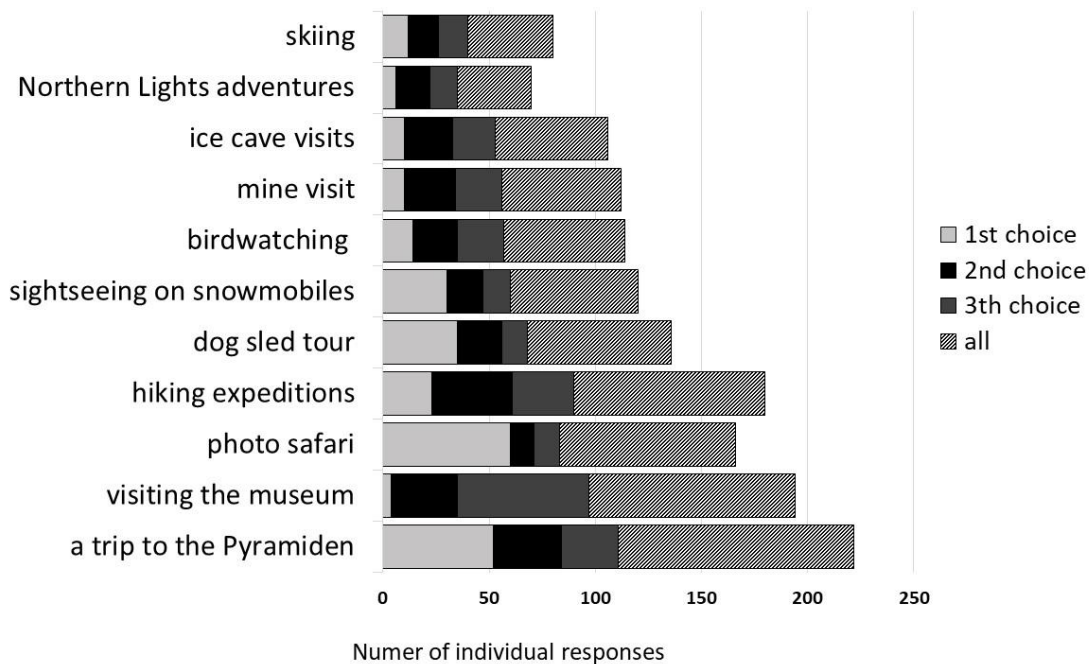


Fig. 4. Types of tourism activities during stay.

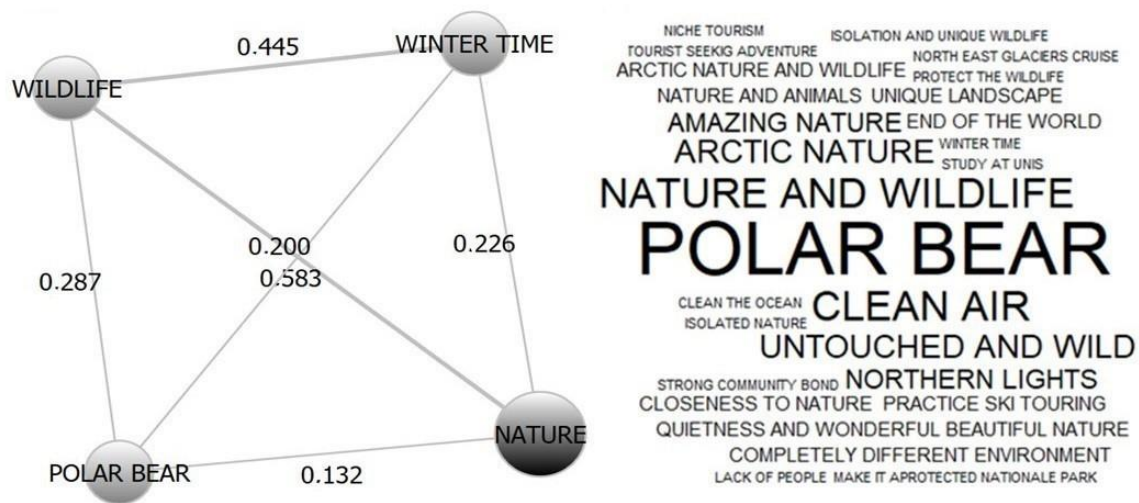


Fig. 5. Analysis of connections between words appearing in the statements on why it is worth coming to Spitsbergen; the frequency of word connections (0 – words never appeared together; 1 – always appear together) and a graphical presentation of the frequency of these connections.

#### Appendix 1. Tourism on Spitsbergen - survey questionnaire.

I am kindly asking you to answer the following questions. The survey is anonymous and its results will be used only for scientific purposes. Research project - Changes in post-covid tourist traffic and tourist behavior in the central part of Spitsbergen, Longyearbyen. Unless otherwise indicated, complete only one answer.

##### 1. Gender

- Male  
 Female

- Yes, only domestic trips  
 Yes, domestic and foreign trips  
 no

##### 2. Please select your age group:

- < 19 years old  
 20-29  
 30-39  
 40-49  
 50-59  
 60-69  
 >69 years old

##### 5. Covid-19 effect on vacation plans - changes specifically related to choice of attractions

- avoidance of overcrowding  
 visiting outdoor attractions  
 E-tickets  
 no changes

##### 3. Where do you come from? (country)

.....

##### 4. Did you travel during the pandemic COVID - 19?

##### 6. Covid-19 effect on vacation plans - changes specifically related to choice of accommodation

- individual room/apartment  
 in isolated location  
 precautionary measures

no changes

**7. Covid-19 effect on vacation plans - changes specifically related to choice of restaurants**

- avoidance of overcrowding  
 eating outside  
 take-out meals  
 no changes

**8. What is the main criterion for choosing your holiday destination in generally? (a multiple choice question - select 3 answers)**

- to meet new people  
 getting to know new cultures  
 closeness to nature  
 rest and improvement of health  
 visiting relatives and friends  
 willingness to doing sports  
 to impress someone  
 an adventure or risk  
 other

**9. Is it your first time in Longyearbyen, Spitsbergen?**

- yes, I am first time  
 no, I am here once-a-year  
 no, I am frequent visitor

**10. Is the trip to Spitsbergen:**

- "fulfillment of my dreams" (I always wanted to go there)  
 spontaneous decision - "why not!"  
 another tourist trip to an interesting place  
 other

.....

**11. Did you have to change the date of your trip to Spitsbergen because of the COVID- 19**

- yes  
 no

**12. Duration of stay**

- a one day  
 2–3 days  
 4–7 days  
 longer

**13. Who accompanied you during your trip?**

- family  
 spouse  
 friends  
 alone  
 other

**14. Where do you stay in Longyearbyen - accommodation facility**

- apartment  
 guesthouse  
 hotel  
 visiting friends & relatives  
 camping  
 yacht

**15. By what kind of transport did you reach Longyearbyen**

- plane  
 yacht  
 cruiser/ship  
 other

**16. What was the main and secondary motive for your departure to Longyearbyen, Spitsbergen? (please give only one answer)**

- getting to know new cultures
- leisure
- getting to know the values of animate nature - closeness to nature (e.g. vegetation)
- getting to know the values of inanimate nature (e.g. rock formations, glaciers)
- need to "go outside the city" (change of environment)
- active tourism (e.g. trekking)
- visiting relatives and friends
- adventure tourism
- to impress someone
- other  
 .....

**17. How did you find out about possibility of coming to Spitsbergen?**

- from the tourist office
- from the media
- from family and friends
- from work
- I choose the place completely spontaneously, without knowing it before

**18. Where did you find out information about accommodation, excursions, weather conditions, safety regulations etc. (a multiple choice question - select 3 answers)**

- Booking
- Facebook
- Instagram
- telephone contact
- e-mail contact
- from family & friends
- from the tourist office
- from the Visit Svalbard

- from the media
- using Google
- other

**19. Have you attended to organized trips offered e.g. travel agencies or Visit Svalbard?**

- yes
- no

**20. What activities did you do during your stay? (a multiple choice question)**

- photo safari
- sightseeing on snowmobiles
- dog sled tour
- a trip to the Pyramiden
- birdwatching - bird observation (ornithological tourism)
- mine visit
- ice cave visits
- Northern Lights adventures
- Skiing
- hiking expeditions
- visiting the museum

**21. Did you organize individual trips in/near the town?**

- yes
- no

**22. Did you organize individual trips out of the town?**

- yes
- no

**23. Have you heard about the phenomenon of overtourism?**

- yes
- no

**24. Do you think that the Spitsbergen is struggling with the phenomenon of overtourism?**

- yes
- no