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## Some aspects of tourism and transport in the COVID-19 pandemic time

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### Wybrane problemy turystyki i transportu w czasie pandemii COVID-19

#### Streszczenie

Artykuł ma na celu opisanie związku między turystyką a transportem widzianym w perspektywie pandemii COVID-19. Opiera się na krytycznym przeglądzie i analizie różnych dostępnych obecnie materiałów (metoda SDA), takich jak: literatura, dane statystyczne oraz raporty UNWTO, UNWHO, regulacje prawne i działania podejmowane przez rządy i instytucje międzynarodowe (opublikowane w latach 2020–2021). Tak zgromadzony materiał (dane wtórne jakościowe i ilościowe) umożliwił przegląd najważniejszych zagadnień, które wpłynęły na turystykę w czasie kryzysu pandemii. Wybuch pandemii spowodował wprowadzenie szeregu ograniczeń sanitarnych, mających na celu kontrolę rozprzestrzeniania się wirusa. W przypadku destynacji turystycznych

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silnie uzależnionych od dochodów związanych z turystyką zablokowanie i zawieszenie transportu stały się poważnym problemem i kryzysem gospodarczym. Podwójna rola transportu i turystyki w kryzysie COVID-19 jest bardzo szczególna: transport przyczynia się do rozprzestrzeniania wirusa na całym świecie, a jednocześnie jest sektorem gospodarki najbardziej dotkniętym negatywnymi skutkami tej pandemii. Zdajemy sobie sprawę, że ze względu na obiektywne ograniczenia niniejsza praca nie może zapewnić kompleksowego i głębszego wglądu w kwestie związane z turystyką, transportem i kryzysem COVID-19. Jednakże, ponieważ transport turystyczny w perspektywie pandemii jest wciąż rzadko poruszany tematem w tekstach akademickich, mamy nadzieję, że niniejszy artykuł może okazać się przydatny jako prezentujący problematykę turystyki w tej nowej perspektywie. Artykuł kończy się refleksją i dyskusją na temat zrównoważonego rozwoju sektora transportu w okresie po pandemii, kiedy ruch turystyczny może się ożywić.

**Słowa kluczowe:** turystyka, transport, pandemia COVID-19, ożywienie turystyki.

## Abstract

This paper is aimed to describe the association between tourism and transport, seen in the perspective of the COVID-19 pandemic. The dual role of transport and tourism in the pandemic crisis is very special: it spreads the virus around the world and at the same time is mostly impacted by the pandemic negative consequences. The research was based mainly on the critical review and analysis of the secondary data (SDA method), such available resources as literature, statistic data and reports, actions taken by governments, international institutions and law regulations (published in 2020-2021). This approach allowed deep insight and overview of the most important issues of transport that have influenced tourism in the pandemic crisis. The final result of the study showed that for destinations highly dependent upon tourism-related revenue, the lockdown and transport suspension became a great concern and resulted in economy crisis. We acknowledge that due to the objective limitations, this paper cannot provide a comprehensive insight in tourism, transport and crisis issues. However, as this topic is a rarely discussed theme in academic texts, we hope that this paper could be found useful as it explores approaches to tourism from this new perspective.

The paper ends with some reflections on sustainable development of the transport sector in the post-pandemic time, when tourism is expected to recover.

**Keywords:** tourism, transport, sustainability, COVID-19 pandemic, tourism recovery.

## Introduction

Transport could be defined as the movement of humans, animals or goods from location 'A' to location 'B'. Means of transport include riding animals and vehicles (wagons, automobiles, bicycles, buses, trains, trucks, helicopters, watercrafts such as ships, ferries, boats and sails, as well as space crafts and aircrafts). The very special means of transport are human-powered devices using human muscle-power (cycling, walking, running, swimming, kayaking, rowing) and animal-powered transport (horse, elephant and camel riding, coaches, sledges) – considered in the 21<sup>st</sup> century rather as a tourist attraction, pass time and physical exercises than means of transport.

Transport requires infrastructure such as roads, railways, airways, waterways, canals and terminals for passengers (airports, railway stations, bus stations, ferry terminals, yacht ports and marinas, seaports) [6, 9, 11].

Transport is one of tourism pillars, as essential as lodging and gastronomy: without transport tourism development is impossible [6, 11]. There are several modes of transport (air, land and water-based), however in tourism-fuelled modes of transport the following dominate: motorized transport for domestic destinations and aircraft for international travels.

The transport – tourism relationship can be seen from two perspectives:

- a) Travel to and from a destination, which could incorporate one or more modes of transport (air, land-based transport, water transport),
- and
- b) Recreational travel, within a region of destination, which could incorporate for example heritage transport (historic railway), cycling, horse riding, camel riding, elephant riding, sailing, cruising, etc., making transport (travelling) visitors' experience and attraction.

The aviation sector is one of the most important transport branches for international tourism development, as in most countries tourists arrive by plane (almost 80% of visitors in France, Spain, Italy, Egypt, Greece, Turkey). Flights at the beginning of the 21<sup>st</sup> century became more available, also for low-budget middle class members [18]. In 2019, before the pandemic crisis, there were as many as 1200 major international airports worldwide, serving 4 billion passengers per year. Before 2019, about 5000 airlines operated, having around 40 million flights annually [10, 18].

The Asian region was believed to be the most progressive, with a significant increase in the number of domestic passengers (mainly in China) [10]. The aviation sector of transport is regarded as the safest form of travel [23] [Table 1].

**Table 1.** Comparison of safety level of various means of transport (measured by a number of fatalities per journey, per hours or per kilometres of travel)

	Means of transport	Journeys	Hours	Kilometres
1	Bus	4.3	11.1	0.4
2	Rail	20	30	0.6
3	Air	117	30.8	0.05
4	Ship	90	50	2.6
5	Van	20	60	1.2
6	Car	40	130	3.1
7	Walking	40	220	54
8	Bicycle	170	550	45
9	Motorcycle	1640	4840	109

Source: Department of the Environment, Transport and the Regions (DETER), 2000 [archive.official-documents.co.uk, 2000].

Unfortunately, dense air traffic causes several problems to the environment sustainability.<sup>1</sup> Before the outbreak of the pandemic, tourists used to take long-haul flights with too little regard for potential negative side effects [9]. In the last decade, most of the scholarly disputes on tourism transport were focused on climate change and how tourism and transport threaten the environment and endanger sustainability (climate change, noise, air pollution, land take), as it is mainly based on fossil fuels and specific infrastructure. These issues were also considered in the context of the UN Paris Climate Agreement (2015 Chart) and the UN Sustainable Development Goals (1992 Chart).<sup>2</sup>

Therefore, in the context of sustainable tourism development, consequently the desirable transport development scenario was a theme of academic disputes and scientific researches, undertaken to deal with a demand for reducing carbon emissions and finding some satisfactory strategies of less destructive forms of transport [5, 6, 8, 11, 12].

It is to be underlined that above all the question of long-haul international trips was highlighted as in the last decade in Europe alone these represented almost a doubling of the volume of travels. Studies undertaken by many academic institutions and scholars, e.g. by Peeters [12], Page [11], Lumsdon [8], Hall [6] and many others, have provoked a wider debate on tourism-transport relationship and recommended less destructive and more environment friendly modes of transport.

Finally, broader discussions on tourism and transport were launched and resulted in several projects such as 'The Green Key Initiative', i.e. eco-label awards to hospitality establishments [5, 8, 17].<sup>3</sup>

In March 2020, the UN WHO declared the outbreak of the COVID-19 pandemic. The governments across the world restricted movements and closed down numerous hospitality establishments [18,19]. The outbreak of the pandemic placed transport at the forefront of many governments' sanitary restriction agendas in aim to control the spreading of the virus. Transport, the growing hypermobility of societies worldwide (the global increase in the number of passengers in the last decade was 137%) and the quick spread of the disease

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<sup>1</sup> In 2020, the outbreak of the COVID-19 heavily affected air transport, as a significant number of flights were cancelled to prevent the highly contagious virus from spreading. The damage to the air transport industry resulted in a large number of airline companies gone bankrupt [10].

<sup>2</sup> The 2015 UN Climate Agreement conference in Paris (COP) adopted the 'Paris Agreement', a new global accord on dealing with climate change. The Agreement is a part of UN Framework Convention on Climate Change (UNFCCC), established in 1992 to prevent dangerous climate change.

<sup>3</sup> The 'Green Key Initiative' certificates are eco-labels, which could be awarded to hotels, restaurants and local tourist attractions (as heritage railways), establishments meeting a set of high environment standards [17].

(human – to – human transmission) – these correlations are very well scientifically proved [9].

The negative consequences of mobility limits, lockdown and sanitary restrictions were immediate and caused an economic crisis (measured by the drop of revenue) in regions highly dependent on tourism [14].

## **Research methods and material**

This paper is aimed to explore and describe the association between tourism and transport seen from the perspective of the COVID-19 pandemic.

The research method was planned and developed on the ground of measurements of descriptive study ('desk research') needs. The research study was based mainly on the SDA method and tools (Secondary Data Analysis), meaning a critical review and analysis of various available resources (secondary data, published resources) such as literature, scientific articles of other researchers, law regulations, statistic data, UNWTO and UNWHO reports, as well as actions taken by governments and international institutions to control and limit the spreading of the virus (qualitative and quantitative data). The collected materials were published mainly in 2020–2021, presenting the main outcomes of surveys conducted by researchers from various prestigious scientific institutions of international recognition. The data analysis methods depended on the type of collected material. For quantitative data the statistical analysis methods were used to compare the relations between variables, averages and correlations. For qualitative data mainly thematic analysis was used to interpret patterns and meanings of collected data, given that a given researcher's judgement was to be objective and their choice of assumptions carefully made.

This approach could allow for an objective insight and overview of the most important issues that have influenced tourism and transport in the pandemic crisis. However, what should be noticed is the fact that it had several shortages as the study was based on a limited collection of research material. In particular, the presented paper covers the results of studies on the following issues:

- the meaning of the transport sector for the tourism industry,
- consequences of pandemic restrictions on transport and tourism,
- travellers and transport staff infection risk,
- governmental and international actions to reduce pandemic risk,
- the role of sanitary regime principles introduced in the transport sector in reducing the virus transmission,
- possible recovery of the tourism industry and changes expected in the post-pandemic time.

To present the main outcomes, this paper is organized as follows:

- a) Introduction that shows the meaning of transport in tourism, transport sustainability, the pre-pandemic and current situation in the tourism transport sector,
- b) Research materials and methods,
- c) The Polish government and international actions (UN WTO, UN WHO) to mitigate the negative impacts of the pandemic,
- d) Reflection and discussion on possible recovery trajectories of the transport sector in tourism and changes expected in the post-pandemic time,
- e) Summary and conclusions.

This paper ends with some reflections and discussion on sustainable development of the transport sector in the post-pandemic time, when the tourism industry is expected to recover.

### **Tourism and transport: COVID-19 consequences**

At the end of September 2021, the COVID-19 virus had already infected about 150 million of people around the world and caused more than 3,000,000 of deaths globally [19]. In each of the countries its government (and local authorities) had a different approach to deal with the pandemic crisis. While some countries introduced strict lockdown measures (China, South Korea), others did not have such a clear strategy for restrictions in order to mitigate the consequences of the economic crisis and maintain their financial stability (Brazil, US) [14]. In 2020 and 2021, most governments of EU countries introduced differentiated lockdown measures that even varied regionally (Germany, Italy, Poland, Scandinavian countries), in response to the pandemic situation.

In EU countries, a significant reduction of COVID-19 cases in the summer months of 2020 and 2021, allowed for limiting the restrictions and re-opening of hospitality establishments. This strengthened the confidence among tourists, and a periodical recovery of tourism (significantly, mainly domestic tourism) was possible.

In Poland at present (November 2021), despite the vaccination campaigns, we faced the fourth COVID-19 wave, and some variants of the virus spread out. Again, the pandemic has brought significant changes to the way we live, work and travel.

Recent changes of preferences in passenger transport developed as a response to the pandemic crisis are visible in everyday routines. A number of studies were conducted to understand changes in people's approach to transport during the COVID-19 pandemic. For example, the researchers found out that in Europe, in 2020 and 2021 people felt safer walking, using a bike, a moto bike or

using their own car rather than public transport [14].<sup>4</sup> It is to be highlighted that cycling and walking are compatible with the physical distance rules and are sanitary safe. Moreover, active mobility like walking or cycling (at least 30 minutes per day), is a good change in transport patterns as it helps to reduce the risk of long-term conditions such as coronary heart disease, stroke, cancer, obesity (contributing to a lower Body Mass Index) and diabetes. It can reduce a threat of the cardiovascular disease by around 30%, and all-cause mortality by 20% [1, 7]. Hopefully these forms of physical activity will be still carried out after the pandemic for as long as possible, being part of healthy lifestyle activities, strongly recommended by UN WHO [19].

It is to be noted that any transport pattern change requires several new investments in urban and sub-urban infrastructure, along with persuasion and education (as free cycle training courses to improve skills and confidence) and free bicycle use service. Local authorities, schools, health and sports institutions (cycling clubs) have an important role to play to develop these opportunities [1].

In Poland, as the researches found out, people who reduced the use of public transport, in 40% cases pointed to the fear of being infected as their main motive [13], believing that airplanes and buses are the most dangerous means of transport, followed by subway, trams and trains.<sup>5</sup>

Not only in Poland, but globally, one can notice a large shift from public transport to walking, cycling, moto cycling and using private cars [14]. In most surveys the two reasons are highlighted as leading motives of low confidence in public transport:

- a) risk to be infected,
- b) mandatory facemask wearing and physical distancing, reluctance to follow mandatory measures (the latter described by psychologists as a 'corona fatigue' symptom) [2, 7].

However, in Poland due to the so-called 'corona fatigue' symptom (people are becoming more and more frustrated, often reject obeying restrictions and do not follow regulations), the most recent lock-down measures (November 2021) were much lighter (less strict) than during the previous COVID-19 waves. It was a consequence of an increasing and strong pressure of different business

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<sup>4</sup> In UK, confidence in public transport dropped dramatically: a survey shows it is only about 40% (in 2019 – 69%), in China – even less – only 20% (in 2019 – 73%), as people consider public transport (including taxi services) to be associated with high infection risk [14]

<sup>5</sup> In Poland, the COVID-19 pandemic has a visible impact on all modes of transport, railways included. According to the Office of Rail Transport in Poland (2021) report "Impact of the COVID-19 epidemic on railway market in Poland and Europe," in 2019 rail operators carried about 335 million passengers, while in 2020 there was a decline on an unprecedented scale as only 209.2 million passengers were transported. In 2021, although several restrictions were alleviated and the railway system operated as usual, passengers still remained reluctant to travel due to fear of infection [22].

and industry sectors (including hospitality) to relax lockdown measures.<sup>6</sup> We can observe this change and also differences in safety measures globally: for example, in some countries wearing a face mask on-board public transport is obligatory, while in others it is only recommended; in some countries the social distance is expected to be 1.5 metres (Poland), while in others 1.8 metres (US) or even 2.0 metres (UK) – according to the state rules introduced in order to reduce virus transmission. In consequence of national sanitary regulations, the capacity of public transport vehicles might drop by even 60%–90%. In UK, to secure proper distancing measures (2 metres), only 15 passengers could enter a city bus and only 30 passengers could travel in a rail wagon – it means that only 10% of a usual number of passengers could be transported.

As K. Gkiotsalitis [4] underlines, dramatic changes in travelling rules introduced in order to prevent the virus from spreading posed significant challenges to the public sector. Moreover, these changes, many of them occurring on the basis of ad-hock issued procedures, are the source of uncertainty due to the limited knowledge on the subject. For example, the recommended physical distance between individuals to secure public safety and minimize the risk of infection is still a contested topic (empirical evidence is inconclusive) and that explains why governments developed different distancing recommendations [4].

Undeniably, further surveys are crucial and they should focus on epidemiological issues and safety measures to limit the virus transmission, e.g. transport capacity limitations, as well as on passengers' behavioural responses to travel regulations (i.e. 'corona fatigue' symptoms consequences) [4]. As there are many countries where vaccines are not available and others in which large population groups refuse to get vaccinated (in Poland about 46% of population), probably the global pandemic problem will not be mastered in the near future [18, 19].

Since 2020 social interaction and tourist travels have been reduced significantly, however many essential activities require mobility. There are various government and state regulations issued to secure travelling in health safety. For example, so the called 'PASS' approach, developed and recommended by UN WHO and UN WTO [18, 19]:

"P": prepare – protect – provide; prepare public transport (rigid cleaning of vehicles, ventilation, disinfection, information, installation of dispensaries for

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<sup>6</sup> It is underlined by researchers from various countries, e.g. Brooks [12], Dam [2], Fountain [3], Laverty [7] that the pandemic crisis has affected people's mental well-being. Especially after a lockdown or quarantine individuals are more prone to develop a spectrum of mental illness whose symptoms are mood swings, confusion, irritability, numbness, stress disorders, sadness, anger, anxiety, grief, depression, insomnia, accompanied by boredom, frustration, exhaustion, social separation (loneliness), helplessness, domestic violence, stigma, fear of death (thanatophobia) and fear of a financial crisis.



hand sanitizing),<sup>7</sup> protect service staff (face masks, vaccination, education, temperature checks), protect passengers (face masks, physical distancing, body temperature checks, COVID-19 passports check), provide sanitary safe terminals (disinfection, ventilation, physical distance, protective shields for staff), provide guidance and information, financial support and anti-virus services;

“A”: avoid – adjust; avoid non-scientific and demagogic policy decisions, crowded platforms, vehicles and terminals, unnecessary and non-urgent travels; adjust policy making process, service operations, activity – travel schedules, logistic supply chains to minimize transport;

“S”: shift – share; shared mobility (car and bicycle sharing), shared information shift from hypermobile to sustainable transport (slow transport, cycling or walking);

“S”: substitute – stop; substitution of transport activity by virtual communication, substitution of face to face procedures by online procedures to minimize transport, stop of services (‘stay at home policy’, stop air-condition systems in vehicles if only possible).<sup>8</sup>

Clearly, the COVID-19 crisis has reduced travels, regardless of means of public transport. At present, it remains unknown whether the pandemic will have long-lasting effects on tourism transport. Past experiences have taught us that large-scale crises (e.g. the 9/11 terror attacks) did not fundamentally change travel patterns, but initiated a series of innovations and security changes. Nevertheless, as K. Gkiotsalities underlines [4], we cannot be sure if the post-pandemic ‘new normal’ is going to be the same as pre-pandemic ‘normal’.<sup>9</sup>

On the other hand, despite its serious negative economic and social impact (also on tourism), the COVID-19 pandemic has generated an improving environmental effect around the world. Within a year, the emission of CO<sub>2</sub> was reduced worldwide by 6.5% in 2020, in comparison to 2019 [10, 14, 15]. We mostly owe

<sup>7</sup> Rigid cleaning of vehicle interior should include: handrails, ticket machines, smart-card machines, doors, handles, windows, panels, floors, seats, steps, ceiling, windows, in case of long distance crafts also tables and lavatories – all areas that can host infectious viruses [9].

<sup>8</sup> Scholars indicated an increased risk of infection for passengers travelling too close to the infected passenger (prolonged exposure) and in the vehicle with poorly operating (too weak filters) air recirculation system (for example, Brooks, Nizetic) [1, 10]. Moreover, researchers highlighted the importance of cleaning and disinfecting vehicle interior (to remove viruses on surfaces) with the use of chemicals, which are medically accepted and recommended by sanitary inspectorates. Generally, it is agreed that the most effective safety measures to limit the level of virus transmission are: sanitation (cleaning surfaces, where the virus can live even for days on hard surface), ventilation and passengers’ discipline (face mask wearing, hand disinfection, physical distancing of about 20 metres, hygiene) [18, 19].

<sup>9</sup> Possibly, as many scholars underlined, designing public transport services to avoid crowded conditions is believed to be a crucial element in the future policy developed with the aim of limiting the spread of the virus (for example, responding to the capacity limits ratio) [4].

this improvement to the drastically reduced air mobility. Tourists were either forbidden to travel (the borders of their destination country were closed) or discouraged to travel due to severe formalities and sanitary restrictions in the destination countries (e.g. obligatory quarantine, mandatory COVID-19 vaccination passports or/and COVID-19 tests, etc.). Overall, in 2020 and in 2021, as international travels were mostly limited to business travels, tourist mobility was significantly reduced [10].<sup>10</sup>

## Conclusion and discussion

The year 2021 was still a year of restrictions in travelling and sadly we cannot predict transport changes neither in the near future nor in the long-term perspective. Possibly, the pandemic will not vanish abruptly, new COVID-19 virus variants might occur, and precaution measures will be needed for some more time [18, 19]. Temporary relief of the COVID-19 pandemic and fewer registered cases (summer months of 2020 and 2021) are not a basis for over-optimism and certainly should not encourage people to return to their preferred lifestyles and joy of long-haul travelling in the next year.

It is not possible to plan coming winter or summer holidays abroad, as the pandemic situation constantly evolves and governments have different approaches on how to deal with tourists. In November 2021, still there were no globally unified and worldwide-accepted directives for safety measures and procedures. For example, in the EU, the 'Schengen Agreement' guarantees free movement of people within the EU countries, but during the COVID-19 pandemic the member countries had different regulations on how to treat tourists at their border. Undeniably, the international coordination of travel procedures such as arriving passengers' quarantine requirements is essential to formulate standard criteria, to make travelling more predictive and to minimize the infection risk (and to achieve this, undeniably, the cross-section joint efforts are required) [15].

Nevertheless, in a few years' time, as it is expected on the basis of two facts, i.e. world-wide herd immunity and mass vaccination, tourism and travels might return to the pre-pandemic growth path. However, as it should be underlined, it might be difficult to re-gain people's confidence in public transport. Possibly, the transport sanitary restrictions including the reduction of seat occupancy (25%–50%), wearing face masks, physical distancing, hygiene rules might be mandatory also in the post-pandemic time to help regaining tourists' trust in public transport safety.

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<sup>10</sup> In April 2020, in Europe, as many as 157 964 flights were cancelled (it is about of 90% of usually operating flights) [10].

The COVID-19 virus belongs to the category of coronaviruses, which are highly contagious respiratory pathogens and safety protocols aiming at health protection in various means of transport are crucial. Possibly more changes and innovations in public transport will be applied to respond to the pandemic challenges, however, now there is a severe lack of knowledge regarding public transport models in the future [4, 15]. For example, a possible future scenario is that individuals and companies will adjust their plans to more sustainable trajectories, with more concern to climate changes (in accordance to the Paris Climate Agreement).<sup>11</sup> As some of the researchers predicted, for example, prof. J. Fountain from New Zealand, this scenario may also include the willingness to support local economies (domestic tourism and rural locations rather than international destinations and luxury resorts)[3], which might mean the turning point in our approach to tourism development and directions concerning re-organization of tourism policies. This may include the following aspects:

- a) Environmental concerns: reducing hypermobility, minimizing long-haul transport, reducing air transport and long-haul coach-bus travels, relying more on railway transport and 'slow mobility',
- b) Re-organizing tourism: domestic destinations rather than international ones, 'active mobility' with the use of bicycle, horse riding, sailing, kayaking or walking within a destination area, virtual conferences (re-organizing business tourism).<sup>12</sup>

The positive outcome of re-thinking transport in tourism, development of trajectories geared towards 'slow mobility' and limited hypermobility is health: active mobility (walking, cycling), reduction of pollution, environment improvement, possibly even fewer road traffic injuries. It is true that this scenario may lead to slower recovery of transport and tourism in the short-term, yet, hopefully in the long-term perspective, the sustainability and the mitigation of climate change shall increase economic stability and resilience of tourism.

Moreover, it shall follow directives of the European Commission 'Green Deal Pact', which includes a path towards a carbon-free economy to be achieved until 2050, connected with the 'Strategy for smart and sustainable mobility'.<sup>13</sup> Possi-

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<sup>11</sup> The Paris Climate Agreement (Accord de Paris) is an international agreement on climate change adopted in 2015. It covers climate change, mitigation, adaptation, and finance. The Agreement was negotiated by 196 parties at the 2015 United Nations Climate Change Conference, Paris [16].

<sup>12</sup> After the COVID-19 pandemic outbreak many companies and many scholars learnt that it is possible to reduce travels and instead use applications allowing to organize online meetings [18, 19].

<sup>13</sup> The European Green Deal is a strategy developed in response to climate change and environmental degradation, understood as an existential threat to Europe and the world. To overcome these challenges the European Green Deal will transform the EU into a modern, resource-efficient economy, ensuring: a) the greenhouse gases reduction by 2050, b) economic growth decoupled from resource use, no person and no place left behind [21].

bly, long-term impacts of the COVID-19 pandemic on transport and tourism will depend on passenger preferences and confidence in public transport. More thoughtful behaviour and reflection might bring sustainability and resilience in the long term, supporting the 'zero carbon option'.

Unfortunately, most likely we will not be free from the COVID-19 virus and its changing versions (i.e. Delta, Omicron, BA.2, etc.) in the near future, but there are ways not to allow this pandemic to control our lives totally. However, as it should be underlined, considering various uncertainties and un-knows about the virus, its transmission, its impact (especially long-term consequences), it is critical to continue survey on various aspects of the COVID-19 and their implications for tourism.

In our opinion, based on the critical analysis and interpretation of collected secondary data, further research might include a variety of perspectives:

- research on smart technologies in transport,
- research of new tourist forms,
- research on tourist preferences in the 'new normal',
- research on sustainable lifestyle and 'slow tourism', 'slow mobility', 'active mobility' (active travelling in the neighbourhood),
- research on new tourist destinations.

We acknowledge that due to objective limitations this paper cannot provide a comprehensive and more profound analysis of tourism, transport and COVID-19 crisis issues.

However, as tourism transport from the perspective of the pandemic is still chosen rather rarely as a theme in academic texts, we hope that this paper could be found useful, exploring approaches to tourism from this new and interesting angle.

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#### STATEMENT OF ETHICS

This study was conducted in accordance with the World Medical Association Declaration of Helsinki. The study was conducted at Józef Pilsudski University of Physical Education in Warsaw (Poland). However the study character did not require the approval from the part of the university ethic committee and was conducted on the base of the secondary data (there were no other participants than authors involved).

#### DECLARATION OF CONFLICTING INTERESTS

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