

SUSTAINING MASS TOURISM AS A CHALLENGE FOR ENVIRONMENTAL MANAGEMENT – EXPLORATORY STUDY

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Introduction

Tourism, especially the mass one, constitute the cause of many threats to the natural environment. Such an observation became the impetus to undertake research in the area covered by the topic of this article. Paradoxically, being closely dependent on the natural environment, tourism also causes its regressive transformations and even degradation, which results from the fact that it is primarily oriented towards generating economic profit. Mass tourism, expressed under, so-called: the 3S formula (sun, sea and sand), is harmful to the planet Earth and contributes, among other things, to the phenomenon of global warming. According to research, the largest part of CO₂ emissions, accounting for 75% of total carbon dioxide emissions, is generated by transport which is widely used in tourism (Cavallaro et al., 2017, p. 317). Some cruise ships are hundreds of meters long and are compared to floating cities. These units are the source of large amounts of sewage, ballast water and solid waste. It is estimated that their passengers statistically produce up to 40 liters of sewage and 340 liters of dirty water per person per day (Milert, 2021). Perhaps that is why, the topic of sustainable development in tourism is often considered in the context of research on water transport (Hoarau-Heemstra et al., 2023, pp. 1–9). However, the other transport branches also leave a significant ecological footprint (Becken, 2007, pp. 351–355).

Apart from previously mentioned, mass tourism has also other, negative ecological and social effects. These are primarily: changes in the landscape, trampling and degradation of nature, pollution of water and land environments, huge energy consumption, spread of diseases, disappearance of traditional hospitality, growing conflicts, increase in consumer attitudes and social pathology (e.g. crime), commercialization of regional culture. In the areas of tourist reception, with a strong intensity of mass tourism, researchers have identified unfavorable social changes in lifestyle and behavioral patterns. These are: social trends regarding early marriage and early childbearing, deterioration of family relationship, peer pressure / jealousy, loss of local / traditional businesses (Lei et al., 2023, pp. 1–10). The destruction process also affects tourist attractions themselves and even entire natural and cultural landscapes. This is how, so-called:

last-chance tourism (LCT) is developing, the essence of which is traveling to places or tourist reception areas at risk of destruction due to ongoing climate change or other factors. Tourists, who want to visit endangered places or landscapes, do not realize that by traveling en masse and in an unsustainable way, they fuel the spiral of destruction themselves (Zajac, 2018).

In response to the dysfunctions of mass tourism, in 1997 UNWTO presented a forecast in which it contrasted mass 3xS tourism with ambitious, active, and even, according to researchers, “creative” 3E tourism (*education, excitement, entertainment*) (Kowalczyk, 2014, p. 55). The leading idea (also meaning and challenge) of 3xE tourism is to change tourist and recreational behavior and motivation to travel, achieved as a result of tourists acquiring or expanding knowledge, as well as ethical behavior, care for nature and respect for the culture of the reception areas. Optionally for the 3E model, a quite similar in content 4L tourism formula (Figure 1), compatible with the idea of sustainable tourism, has also appeared in the literature (Franch et al., 2008, pp. 4–14).

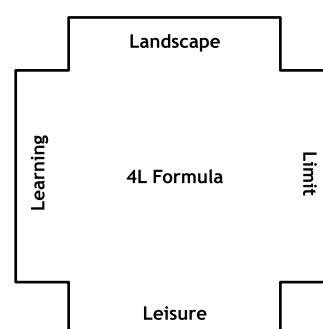


Figure 1. 4L tourism formula

Source: own elaboration based on Franch et al., 2008, pp. 4-14

However, the concept of sustainable tourism, already, which is the result of the implementation of sustainable development goals into the sphere of tourism activities, has gained practical importance and large interest of researchers from all over the world. It is because sustainable tourism encompasses all the positive aspects of thinking about tourism. The sustainable development model itself

was firstly defined in the declaration of the United Nations' convention (1972), and finally clarified in 1987 by the World Commission on Environment and Development in the report "Our common future": „the sustainability concept began in 1987 with the work of the Brundtland Commission, which was formed by the United Nations. The commission's report warned about the reality of the reduction in the earth's capacity to sustain life because of overwhelming growth in world population" (Prihatinah, 2020, p. 1). „The publication of „Our Common Future" in 1987 marked a watershed in thinking on environment, development, and governance" (Sneddon et al., 2006, pp. 253–261).

On 25 September 2015, United Nations leaders adopted the 2030 Agenda for Sustainable Development, and on 1 December 2022, the Council of the European Union adopted conclusions establishing 2030 European Agenda for Tourism. Its aim is to help member states, public authorities and included stakeholders making the tourism sector greener, more sustainable, more resilient as well as digital (Council of the EU). A 212-page guide published in 2005 is also helpful for decision-makers in formulating and implementing sustainable tourism policy. Its content is a summary of the previous work of UNWTO and the UN Environment Program: UNEP. The document formulates 12 basic policy implications of sustainable tourism Agenda: economic viability, Local Prosperity, Employment Quality, Social Equity, Visitor Fulfillment, Local Control, Community Wellbeing, Cultural Richness, Physical Integrity, Biological Diversity, Resource Efficiency, Environmental Purity (UNWTO, *Sustainable development*). Currently UN Tourism strives to promote tourism development that supports, in equal measure, the conservation of biodiversity, the social welfare and the economic security of the host countries and communities (UNWTO, *Making tourism more sustainable*).

In the current situation of searching for and implementing sustainable solutions in the practice of the tourism economy (as well as related expectations that as a result of them the activities of tour operators and travel patterns will change for the better), further multi-faceted research is needed, conducted from the perspective of various scientific disciplines. This is facilitated by the popularization of the cognitive method based on a systemic and/or holistic approach, assuming that reality consists of interconnected elements. In this context, the aim of this article is to determine, in the light of our own research, the potential and prospects for the development of sustainable tourism and to present specific recommendations regarding the need to implement chosen principles of environmental management into the business practice of tourism enterprises. The authors emphasize that mass tourism requires sustainability through the implementation of specific environmental solutions, proposed later in the article.

The introduction to the considerations is a diagnosis of the current state of development and scope of practical implementation of the assumptions of sustainable

development in the tourism economy, and that it justifies the need to introduce new preventive solutions. Later authors prove that the implementation of environmental management principles into tourism economy makes great sense and may contribute to change in the paradigm of mass tourism into sustainable one. Such a change will result in eliminating many threats to the world resulting from mass tourism. The most important results achieved include organizing knowledge regarding the state of sustainable tourism, determining the main directions of activities in the field of environmental management, which, when used in practice by tourism organizers, will prevent the dysfunctions of modern tourism as well as will serve to maintain balance in the field of ecology, social well-being and the tourism economy, finally, transferring specific recommendations in the field of environmental management.

Literature review

Environmental management is generally based on the concept of continuous improvement developed by E.W. Deming with the so-called Deming's cycle: P-D-S-A (Plan-Do-Study-Act). According to the definition, it can be considered in terms of knowledge supplies, skills and techniques of enterprise management that lead to achieve high economic efficiency of production and services, minimal burden on the natural environment and good working comfort of the enterprise's Staff (Bąk, 2021, p. 16). In this context, it is a practical science. At the same time, environmental management is a relatively new field in management theory and practice, so the possibility of direct implementation of its principles in tourism has not been considered widely so far. In recent studies, researchers show, for example, a positive relationship between Environmental management accounting (EMA) and the results of tourism companies (Gerged et al., 2023, pp. 1–16) or signal the need for broader integration of CSR and green financial behavior as a path to achieve sustainable tourism practices. However, these are not findings that have their source in the achievements of environmental management, and according to the authors, the implementation of its principles into the activities of tourism organizers will effectively facilitate the transformation of mass tourism into its sustainable equivalent that has source in sustainable development.

It is true that some researchers, in their bold interpretations, trace the origins of sustainable tourism (also called alternative, gentle, soft, environmentally friendly or sensible tourism) back to ancient times, deriving it from Aristotle's idea of *phronesis* already, understood as the virtue of practical wisdom, which should be contrasted with theoretical wisdom (*sophia*) and technical wisdom (*techné*). *Phronesis* concerns the truth related to man's finding himself and his place in the world as well as responsibility for the environment. However, in reality, the foundations of contemporary sustainable tourism are actually in the achievements of the already mentioned UN convention originating from 1972 and the World Commission on

Environment and Development. Based on it, it can be assumed that a person should act in such a way that he not only benefits himself, but also does not cause damage to the world around him (Kowalczyk, 2014, p. 10).

The analysis of documents shows that sustainable tourism, being a counterweight to mass tourism, means striving to achieve a balance between economic, social (human, cultural) as well as natural capital. All of that in order to ensure that future generations can also meet their own needs: what is most important in the concept of sustainable tourism is that it must meet social, ecological and economic criteria, „without forgetting about current and future generations” (Meyer, 2015, p. 5). Issues of economic and social efficiency and environmental protection are of key importance in this case. It is therefore a broadly understood theory of development of environmentally friendly tourism in both rural regions and cities, in small tourist centers and large entertainment and recreation centers. Therefore, it is a concept that applies to all known types of tourism after their appropriate greening (Zaręba, 2000, p. 35). Means respecting the cultural, social and natural values of the area where tourists stay, respecting and protecting natural and cultural resources, respecting identity, traditions and lifestyle of the members of local communities while using (primarily by the local community, to a lesser extent by external investors), the economic opportunity that tourism brings for the economic development of the region (Pawlikowska-Piechotka, 2009, p. 203). Sustainable tourism products exist in harmony with the local environment, community and culture, which therefore become beneficiaries rather than victims of tourism development (Jędrzyśiak, 2010, p. 25).

The development of sustainable tourism is also intended to determine the acceptable level of increase in the volume of tourist traffic that would not cause negative changes in the environment (Nijkamp, Verdonkschot, 2000, pp. 127–130). However, striving for the harmonious development of sustainable tourism is not about drastically reducing the number of tourists traveling around the world, because this would mean violating the values guaranteed by the legal system, civil liberties and the right to recreation and rest, but about economically managing the existing environmental, space and infrastructure resources to eliminate tourist overload. The prediction of the tourism carrying capacity of tourist attractions is of the key importance to avoid various tourism security problems, environmental problems and traffic problems (Zhou, 2023, p. 798). Crowding also negatively affects tourists' experiences, satisfaction and loyalty expressed by the ability to visit a tourist destination again (Pikkemaat et al., 2020, pp. 902–915; Yoon et al., 2021, pp. 1–21).

However, implementing the concept of sustainable development in relation to tourism is not easy. Researchers emphasize that despite advances in sustainable tourism research, our understanding is still limited regarding the role and significance of sustainable tourism in achieving the United Nations Agenda 2030 (Khizar et al., 2023, p. 2). Researchers explain this by the widespread and fragmentary nature of the literature, the use of various

concepts and theoretical frameworks borrowed from other disciplines in previous research, the lack of a common theoretical perspective and by the reporting of ambiguous conclusions from previous research regarding the role and importance of tourism entities in sustainable development (Khizar et al., 2023, p. 2). The situation is not made easier by the fact that, in practice, there are discrepancies between the idea of sustainability and the nature of tourist consumption (Mika, 2015, p. 11). Questions also arise concerning what measurement factors should be used, what priorities and what criteria for further, long-term development adopt, which concerns maintain a balance between the social, economic and ecological dimensions of existence (Marczak, 2015, p. 172).

When analyzing the state of sustainability in tourism, there is also a need to have extensive knowledge, e.g. about the visual values of the landscape and the possibilities of influencing these values, and to take into account factors such as the effects of climate change, however, it can be, generally assumed that in the case of caring for the natural environment, the tourism sector continues to show little progress in mitigating climate change (Peeters et al., 2024, p. 1). While other industries are moving towards zero emissions by 2050 (in line with the Paris Climate Agreement), in the case of tourism, emissions from this sphere are projected to triple over same period, seriously threatening the „very product” of tourism in the form of climate change (Peeters et al., 2024, p. 2). This is a very disturbing phenomenon, not only from the point of view of protecting our planet, but also because it has negative economic consequences. For example, with warming of +2°C, financial losses in the hotel industry related to the decline in ski tourism amount up to 10.1 million nights per season in Europe (Damm et al., 2017).

In this situation (and assuming a continuation of the growing demand for tourist services), further steps should be undertaken in order to create a framework for the development of tourism in the most environment-friendly manner possible (Pawlikowska-Piechotka, 2009, p. 203). Their expected effect is to minimize the negative impact of mass tourism on the natural environment, counteract climate changes, generate employment opportunities for local residents as well as protect regional and local cultural heritage. Therefore, the point for tourism is to be an economically vibrant sector, but at the same time, one that do not cause the destruction of resources, especially of the physical environment and the culture of local communities (on which it is, to some extent dependent, and on which its future development in a given area depends) (Swarbrooke, 1999).

One way to reduce the negative impact of tourism on the environment is to manage tourists' pro-environmental behavior (Bilynets, Knezevic Cvelbar, 2022, pp. 1–8). In the light of the research carried out by the authors of this article, the sustainability of mass tourism also (and perhaps above all), requires environmental management, the principles of which should be implemented by tour operators into their business practices. We present wider the research conclusions later in the article.

Method

This article is the result of joint research conducted by scientists from two university centers. The aim of the article is to present the results of these jointly conducted studies. The authors managed to determine the state of development of sustainable tourism and discover that it is necessary for its development to provide specific recommendations in the field of environmental management. The main research problem was, therefore, expressed in the form of a question: what management activities should be undertaken by tourism organizers in order to transform mass tourism into a sustainable one, taking at the same time, the form of a permanent trend.

The research was based on an interpretive paradigm associated with inductive reasoning. The research used triangulation of methods: critical analysis of the literature on the subject and specialist press, interviews as well as autopsy.

Secondary data analysis „has a rich intellectual tradition in the social sciences” (Frankfort-Nachmias 2001, p. 322). In this case, the literature research was carried out in accordance with the requirement of the rigor of the systematic review. It focuses on a clearly formulated research question and uses described, scientific methods to identify, evaluate and synthesize all sources relevant to the question that directs cognitive effort. In contrast to traditional reviews, a systematic one follows specific standards – takes the form of a sequence of actions undertaken by a researcher in order to eliminate the state of ignorance on a specific issue (Figure 2).

The review was conducted in January 2024. As part of the preparatory stage, databases were separated. Full-text databases were used: ProQuest, EBSCO and the academic search engine: scholar.google.com. Keywords were used: tourism, environmental issues, sustainable development, environmental management. Both domestic and foreign literature on the subject was used in the research. Information was obtained from various publications, including those of institutions monitoring ecological and/or social threats resulting from mass tourism. In the next step, the retrieved works were subjected to qualification process based on their in-depth review. This is, colloquially speaking, “database cleaning”, consisting in the application of exclusion criteria and removal of some publications (non-full-text form, repetitive and those that deserved exclusion due to failure to meet formal and methodological requirements – including those of journalistic character, book reviews and editorial introductions, industry releases – as they are supposed to focus on application value, etc.). Collecting and analyzing secondary data was carried out through compilation, mutual verification, comparison and processing of existing data. Conclusions drawn from the review are presented in the empirical part of the article. The currently obtained secondary data will be used for comparative purposes in the next research period because further, in-depth research on the issues under consideration is planned.

Informal (unstructured) interviews were also conducted at the beginning of 2024, with ten managers of non-identical firms from Polish tourism industry (travel agencies). They revealed opinion on the current state of sustainability in the tourism industry and whether they see the need to take further actions in this area. The majority of the interlocutors confirmed the need to implement the principles of environmental management into tourism economy. The respondents were selected using the snowball sampling method, a „popular method in of sampling in social research” (Pasikowski 2023, p. 105). Also known as chain (or network), snowball sampling begun with two study participants. Then it continued on the basis of referrals from them. Process continued until the desired sample had been reached.

A complementary, autopsy method had been also used, i.e. participant observation and experiences gained by the authors from travelling, together and separately, to countries such as Singapore, Japan, China, the countries of the Middle East, the countries of the Mediterranean basin and other destinations. The complementary observation method had been chosen because the literature emphasizes that it constitute “the basis of all research methods in the social and behavioral sciences” (Angrosino, 2010, p. 129). This observation has hidden character in order to be able to observe the natural behavior of tourists and the actions of tour operators, so that the fact of observation did not influence their behaviours.

The research was not conclusive, but only explanatory in their nature. Its order and direction was determined, from the beginning to the end, by the previously formulated problem. It was also assumed that the conducted research would be an introduction to further qualitative analyses being undertaken in the near future.

Results – the practice of implementing rules of environmental management into the sphere of tourism

According to the authors of this article, tourism in the aspect of sustainable development, can be analyzed in terms of:

- a) its impact on the natural environment, local culture and the achieved financial results,
- b) pro-ecological and/or pro-social and/or ethical behavior of tourists,
- c) the sustainability degree of the activities of leisure organizers and producers of tourist services, including travel agencies, operators of accommodation, transport, etc.

This article concerns the latter case, i.e. the possibility of developing the degree of sustainability of tourism companies (specifically those, in the form of travel agencies). This is justified because, as noted by Bogrena and Sörensson, sustainability issues have become increasingly important for many sectors in society, including tourism companies (Bogrena, Sörensson, 2021). Inter-university research conducted by the authors shows that, it is not only possible, but also necessary, to implement environmental management

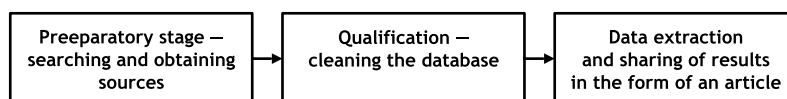


Figure 2. Phases of a systematic review
Source: own elaboration based on adopted methodological approach

rules into travel agencies' operations in order to make tourism sphere more sustainable. Specific recommendations include that, all conventional resources of travel agencies (human resources, office infrastructure and its equipment, transport machines, incoming and outgoing goods – products – Figure 3) should be balanced, i.e., become subject to pro-ecological and pro-social transformation.

Generally, environmental management consistent with the concept of sustainable development, must be characterized by the desire to transform the basic management functions in tourism companies into their sustainable equivalents, taking the form of: sustainable planning, sustainable organizing, sustainable leading, sustainable controlling. Environmental management also forces travel agencies to use specialized knowledge and experience in the field of sustainability, adapting to changing market and technological conditions, undertaking sustainable cooperation with the environment, as well as selecting co-operators and service providers who are also ecologically and socially sensitive and are trying to implement principle of sustainability into their business practice. Finally, it requires defining pro-ecological and pro-social goals, which should be reflected in the mission and in the strategic, tactical and operational plans of travel organizers.

Below, we will discuss how to shape the main elements of a travel agency so that the activities of such an entity may contribute to balance tourism industry in accordance with the concept of environmental management. Conventional resources that should be firstly subject to pro-ecological and pro-social transformation can be divided into the following types:

- people (employed in managerial and non-managerial positions),
- basic goods (construction infrastructure, buildings or just rented premises with all the equipment of buildings and rooms),
- transportation machines,
- incoming (input) goods, i.e. products that are used in current operations than transformed into end products.

As 8 of 10 interviewees agreed, human resources is the most important component of a sustainable travel agency. The staff consists of people holding managerial and non-managerial positions at various levels of the organizational structure. In line with environmental management, tourism sustaining is not possible without the sustainability assertion being present in the minds of employees. Apart from financial resources, it is human resources that have the greatest impact on the ability to implement sustainability programs. It means, that they must be balanced.

The target goal in this case is to develop managers who can implement, and in reality, introduce the principles of sustainability into management practice – those who can be called: sustainable managers. These are people who strive not only to achieve economic goals, but also ecological and social ones. According to the model profile, a sustainable manager should be genuinely sensitive to ecological and social problems. Must have knowledge about sustainable development and require the same from subordinates. He should comply with ethical standards, be able to implement pro-environmental and pro-social innovations as well as appropriately realize managerial functions: be able to plan, organize, motivate and control in a sustainable manner. Among the interviewed managers were such people: for example, one of the interviewees stated that he strongly promotes waste segregation, both privately and at work. By the way, thanks to the conversations, the authors noted that the most predisposed to fulfill managerial roles are people who, in addition to their leadership qualities, are genuinely aware of ecological and social threats and consequently there is no need to convince or force them to take the path of sustainable development.

Factors that favor staff involvement in sustainable development include:

- acquired knowledge in the field of sustainability,
- socio-ecological sensitivity,
- openness to new solutions,
- personal creativity and innovativeness.

In the case of managers and executive employees, however, the forms and directions of this activity will differ,

Sustainable tourism agency			
Sustainable personnel	Sustainable basic goods (e.g. buildings and their equipment)	Sustainable incomes (e.g. raw materials, parts, office supplies)	Sustainable products in the form of an offer of tourist event
Sustainable activities aimed at designing and implementing a tourist event			

Figure 3. The concept of a sustainable travel agency's structure
Source: own elaboration based on research results

because they play different roles within the organization of tourism service producers. Managers managing the company work with people, making various decisions. Therefore, their main task should be to convince and motivate subordinate staff to implement the principles of sustainability at work, as well as to take care of the development and formalize activities in this area. Executive employees, cooperating with their managers, can however, contribute to improving the state of the natural environment and eliminating social problems by initiating changes regarding:

- a) equipment for workstations, e.g. by applying for the purchase of ecological computers, furniture, office accessories for a travel agency etc.,
- b) the way of doing work, e.g. using office materials sparingly,
- c) the surroundings of workstations, e.g. suggesting replacing light bulbs with energy-saving ones.

It is also important for managers and executive employees to get involved in public campaigns that are aimed at counteracting social pathological phenomena or are aimed at helping people who require special care, e.g. people with disabilities, illnesses or victims of natural disasters. Specialized training should be used in order to strengthen this type of attitudes. According to interviews conducted with managers of tourism enterprises, some of their firms are already undertaking specific initiatives aimed at the development of the social and natural environment. For example, Interviewee 1 said, about the initiative of the owners of the company where he works, who took care of orphaned children. Taking such initiatives is very important because, as A. B. Carol and A. K. Buchholtz notes, a this kind of responsible behavior can always effectively influence people around to start acting in an equally beneficial way (Buchholtz et al., 2022). Companies and institutions that support communities also set a good example for other enterprises (Leśna-Wierszółowicz, 2016, p. 66).

Another important component of a travel agency constitute sustainable primary goods, mainly buildings where daily operations and sales of tourist events are conducted. The managers interviewed stated that such buildings are often traditional and even in poor condition (according to 2 interviewers who would like to work in a more favorable environment). Meanwhile, the buildings used by such companies should be energy-efficient, constructed as a result of clean production processes based on natural, renewable and healthy materials of local origin (e.g. wood, brick). They should have a simple and light structure, should not disturb the landscape, and after the end of their operations, the elements from which they are made should be subject to reusing and recycling processes. Such sustainable constructions have already been recognized by the European Commission as a leading sector with high innovation potential and key importance for the development of a modern European economy.

According to the idea of environmental management, every producer of tourist service should, regardless of the

type of business conducted (or the amount of revenue generated), strive to locate its activities in facilities that meet sustainable criteria. Building construction has an important role in balancing: „it is not only due to participation in national economy, but it is due to fact that constructed environment has great influence on life quality, comfort, security, health, etc.” (Zabihi et al., 2012, p. 570). To achieve the goal being described, it is possible to make usage of the following options:

- a) construct new buildings with sustainable features,
- b) transfer activities to this type of construction facilities,
- c) modernize the existing ones in an appropriate manner.

At this point it is necessary to explain what the characteristics of sustainable construction infrastructure should be. In the sphere of sustainable development higher forms of sustainable construction are preferred in the form of passive and, preferably, autonomous buildings. Autonomous buildings facilitate shift toward a circular economy by minimizing waste and maximizing resource efficiency. They do not have any connections to external infrastructure. Operate based on their own sources of electricity, heat and water and do not require storm sewage and sewage disposal to external installations. They are therefore self-sufficient, and this requires the installation of many technically advanced devices. This is possible thanks to the use of modern insulation systems for walls, windows and roofs and the use of renewable energy: solar, wind and from the ground. Solar collectors and cells (solarthermia) enable the transformation of sunlight into heat, which can be later used to heat domestic water and operate central heating. Wind turbines or photovoltaic cells, which convert solar energy into electricity, can be used to generate electricity. It is also possible to make usage of geothermal energy sources and on-site biogas plants. Modern solutions should also include equipping buildings with rainwater tanks (rainwater utilization and reuse) as well as water purification and treatment stations (used water can be returned to circulation). Water from these sources is usually used to irrigate plants and flush toilets. It is also advisable for the building to have biologically active surfaces (e.g. green roofs, facades).

Not only the construction of a sustainable building is important, but also its equipment. Environmental response design includes choosing appropriate interior furnishing elements. They should be made of natural materials of local origin, as well as recycled materials, covered with ecological paints and varnishes. Energy-saving zone lighting should be used, based on motion and twilight sensors, and enabling regulation of light intensity and color. Creative usage of natural lighting with appropriate sky courts and vertical landscapes can reduce the energy demand considerably. The internal surfaces of buildings should be biologically active, made of natural plants, which helps create a friendly “green” working environment. Furniture and other equipment used in tourist work should be made of natural materials or recycled materials, as well as, should interior decorations. An example may be the so-called sustainable/

ecological furniture that are produced from renewable materials of domestic origin. Should be also ecological: fillers (e.g. sheep's wool, rubber latex, shredded straw), upholstery fabrics (e.g. organic cotton, linen, silk) and adhesives used to connect the parts that make up the furniture (natural instead of synthetic).

The second important element of building equipment constitutes various types of devices that are used at work and that can be used by clients on, an ad hoc, basis. They are usually located in offices, public spaces, restaurants, cafes, recreational and sports spaces. Personal computers are the example. While in common use, they are neither pro-ecological, and therefore also non-social. Producing one new laptop requires over 240 kg of fuel, 22 kg of chemicals as well as 150,000 liters of water supply. Over 1,000 different materials are used in the production processes of laptops, including toxic ones. Computer chips contain lead and cadmium, computer monitors contain mercury and barium, and batteries contain lithium and nickel-cadmium. Also, valuable metals used to produce laptops, such as gold or silver, become impossible to recover, which leads to environmental degradation. Moreover, manufacturers of electronic equipment (looking for savings), sometimes use the resources and labor of poor countries in Africa, South America and Asia, although this has recently begun to change to advantage. This becomes a source of social problems such as inhumane working conditions, too long working hours, low wages, child labor. Therefore, in tourism activities, one should avoid conventional equipment, but try to use ecological computer equipment produced by companies with a pro-ecological and pro-social attitude. Such equipment is already starting to appear on the market. This is certified equipment (TCO Development – an ecological mark intended for computer equipment). The condition for granting the certificate is meeting the requirements of ISO 14001 and / or EMAS, as well as energy efficiency, low content of heavy metals and safety in use. Another way is to use used, second-hand, post-lease and refurbished electronic equipment. What is important to note is that in this case, the managers interviewed generally did not complain. They are generally of the opinion that the equipment used is efficient, modern and not too harmful to the environment.

Transport is indispensable and ubiquitous in tourism. Various means of communication are used in order to transport tourists, but also for the current activities related to the management of tourist entities. As shown by conversations with managers, main barrier to the tourists' transportation greening are finances. In order to reduce costs, and therefore also prices, carriers use means of transport that, in most cases, cannot be classified as the most modern. For example, planes are not chartered from aviation market leaders with the best equipment, but often from low-budget carriers. According to environmental management, such a situation is difficult to accept. Ecological transport should be used, especially as it will be more profitable in the long run. It should be also estimated that, in the near future, the possibilities of

using sustainable transport will increase as well. Even today, transport companies have many opportunities to re-organize their transport base in a pro-ecological manner, already. They should therefore replace traditional means of transport with such their variants as: considered zero-emission – electric vehicles or hydrogen-powered vehicles. Although in this case a major difficulty is the common lack of stations with this type of fuel. Finally they can also use biofuels produced from plant waste (biomass).

Another way may be to purchase or charter more modern means of transport with improved drive mode, which are characterized by lower fuel consumption and thus reduce entrepreneur's costs as well as lower emission levels. Environmental management of transport also requires, among others: optimization of routes, optimal usage of vehicle capacity, elimination of empty runs, reduction of fuel and tire consumption, thanks to e.g. proper driving technique.

Finally, in the activities of travel agencies, it is also important to use sustainable incoming goods (see Figure 3), in the form of raw materials, fabrics and parts. Materials, being used should meet high ecological and social standards. This requires the appropriate selection of suppliers, i.e. those who also respect the principles of sustainable development and try to implement them into practice. The materials provided by cooperators should not contain harmful substances. They should also be produced in conditions that respect employee rights and ethical principles.

The most common raw material being used in paper production is wood, the harvesting of which reduces the size of forest areas and destroys natural ecosystems. In addition to this raw material, paper factories and printing houses use energy, water and many other components, and also operate technological lines and carry out transportation and storage operations. Fortunately, interviewers declared, that they travel agencies, generally, not only purchase products made of ecological paper, but also minimize its general consumption. For Interviewee, 5 it seems „to be a truism to remind people to segregate waste and use reusable things”. Nevertheless, although it seems obvious at the current stage of ecological awareness, we also mention it for the sake of appropriate text order.

With trained staff, green primary goods, green inputs, appropriate equipment, transport machines and facilities, a travel agency can already conduct sustainable operations in terms of planning, organizing, leadership and control. What should be also taken from environmental management principles, are:

- diagnostic tools, e.g. of life cycle (LCA), environmental audits, environmental impact assessments or systems of environmental metrics for assessing the functioning of the organization,
- implementation tools, including ecological marketing, ecolabelling and environmental management systems, for example ISO 14001, EMAS, Green Dragon Environmental Standard.

Research shows that in order to practically implement a more comprehensive sustainability strategy in an organization, it is worth seeking to supplement the ISO 14001 certificate with an SDG certificate, which allows for a much more comprehensive look at sustainability efforts compared to the traditional environmental management tools (Mosgaard, Kristensen, 2023, p. 9).

Pro-social aspects of organizing and performing work will be also important in the activities of travel agencies, such as: compliance with labor law regulations, implementation of “zero accidents” work organization systems, proper usage of the potential of various age groups, implementation of “work-life balance” programs, introducing flexible working time and the usage of remote work, implementation of health-promoting programs, compliance with work ethics, ecological and social education of employees, training them in crisis management as well as in intercultural communication.

Conclusions

Tourism as part of a modern global market has become an economic phenomenon. However, at the end of the 20th century, researchers wrote that tourism, which had been so successful over the last two decades, seems clearly doomed to radical changes. The fundamental change concerns transition from the 3S mass tourism paradigm through active and more complex 3E tourism towards sustainable tourism, the essence of which is the pursuit of implementing the goals and principles of sustainable development into tourism practice. Sustainable tourism should be identified primarily with the way of functioning, organizing and managing the broadly understood tourism economy in the tourist reception area (Mika, 2015, pp. 9–18).

Socially sustainable tourism aims to improve the lives of residents while reducing negative impacts on local culture and the environment (De Bruyn et al., 2023, p. 1). At the same time, it is difficult, not to agree with the statement that the research conducted so far is not sufficient, as it has not prepared the entire sector for the coming years of the effects of climate change and the transformation towards a decarbonized global economy (Scott, 2021, p. 2). In this context, the authors of this article demonstrate that it is worth examining not only tourists' behavior that influences the sustainable development of tourism, but that it is equally important to consider the possibilities of balancing tourism in terms of environmental management which directly refers to the theory of sustainable development. As the results show, environmental management can, among others, ensure the sustainable operation of travel agencies. After consultations with practitioners, the authors indicate that the principles of environmental management must be translated into basic areas: people (transforming managers into sustainable ones), basic goods (mainly transforming building infrastructure), transport means, incomes (in the form of raw materials, fabrics and parts) as well as products. As it results from the interviews, in the current situation, in many aspects there is still a lot to do.

It also worth mentioning, that in order to talk about sustainable tourism, there is a need for systemic solutions not only for the functioning of travel agencies (conversations with they managers showed that we are still far from the ideal), but also for all entities that cooperate with them (hotel units, catering and transport facilities as well as tourists themselves). Responsible tourism can be practiced by choosing partners who adopt sustainable practices, respect local culture and traditions, minimize carbon footprint and participate in activities that support the circular, local economy and environmental conservation. Therefore, environmental management should have holistic nature and, importantly, should be linked to IT support. This is all about a systemic scope of activities, processes and decisions, the application of which (in relation to resources, people and capital) will provide conditions for the effective functioning of tourism companies and allow them to achieve goals while maintaining a balance between the natural and social environment as well as economic results. All of these activities should be undertaken by managers of companies operating in the tourism industry, including travel agencies.

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Równoważenie turystyki masowej jako wyzwanie dla zarządzania środowiskowego – badania eksploracyjne

Streszczenie

Korzystając z wyników badań desk research oraz nieformalnych wywiadów z menedżerami firm działających w branży turystycznej, autorzy doszli do wniosku, że jedną ze skutecznych dróg realizacji postulatów zrównoważonego rozwoju, taką, która przyczyni się do transformacji turystyki masowej w zrównoważoną, jest wykorzystanie zasad zarządzania środowiskowego. Jest to koncepcja nowa, gdyż możliwość bezpośredniego zastosowania założeń jednej z najmłodszych problematycznych nauk o zarządzaniu (powstała w latach 90. XX w. jako rozwinięcie ekonomiki ochrony środowiska i ekonomiki

zasobów naturalnych) do innych dziedzin, w tym turystyki, dotychczas nie była szeroko rozważana. Powstało wiele badań z perspektywy zarządzania turystyką, natomiast niewiele jest opracowań poświęconych turystyce w kontekście wyzwań zarządzania środowiskowego, które bezpośrednio odwołują się do koncepcji zrównoważonego rozwoju. Artykuł podejmuje próbę częściowego wypełnienia tej swoistej luki badawczej poprzez przedstawienie wniosków i rekomendacji dotyczących konkretnych działań z zakresu zarządzania środowiskowego w turystyce, wynikających z przeprowadzonych badań.

Słowa kluczowe

zarządzanie środowiskowe, turystyka, zrównoważony rozwój, dysfunkcje turystyki masowej, degradacja środowiska naturalnego